29 White Papers

2021

Mark Arnold (Chief Investment Officer) & Jason Orthman (Deputy Chief Investment Officer)

HYPERION
ASSET MANAGEMENT
a different horizon...

Contents

HYPERION
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The difficult quest for long-term alpha after fees revisited

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Experience and academic research indicate that it is difficult for even the most skillful fund managers to produce net (after fees) alpha over the long term. We have included in the appendix the performance of equity managers over various categories and time periods according to the SPIVA U.S. and Australia Scorecards. It confirms most active fund managers fail to outperform their index. For example, according to the Australian Scorecard, approximately 90% and 93% of international equity managers under-performed over ten and fifteen years to December 2020, respectively.

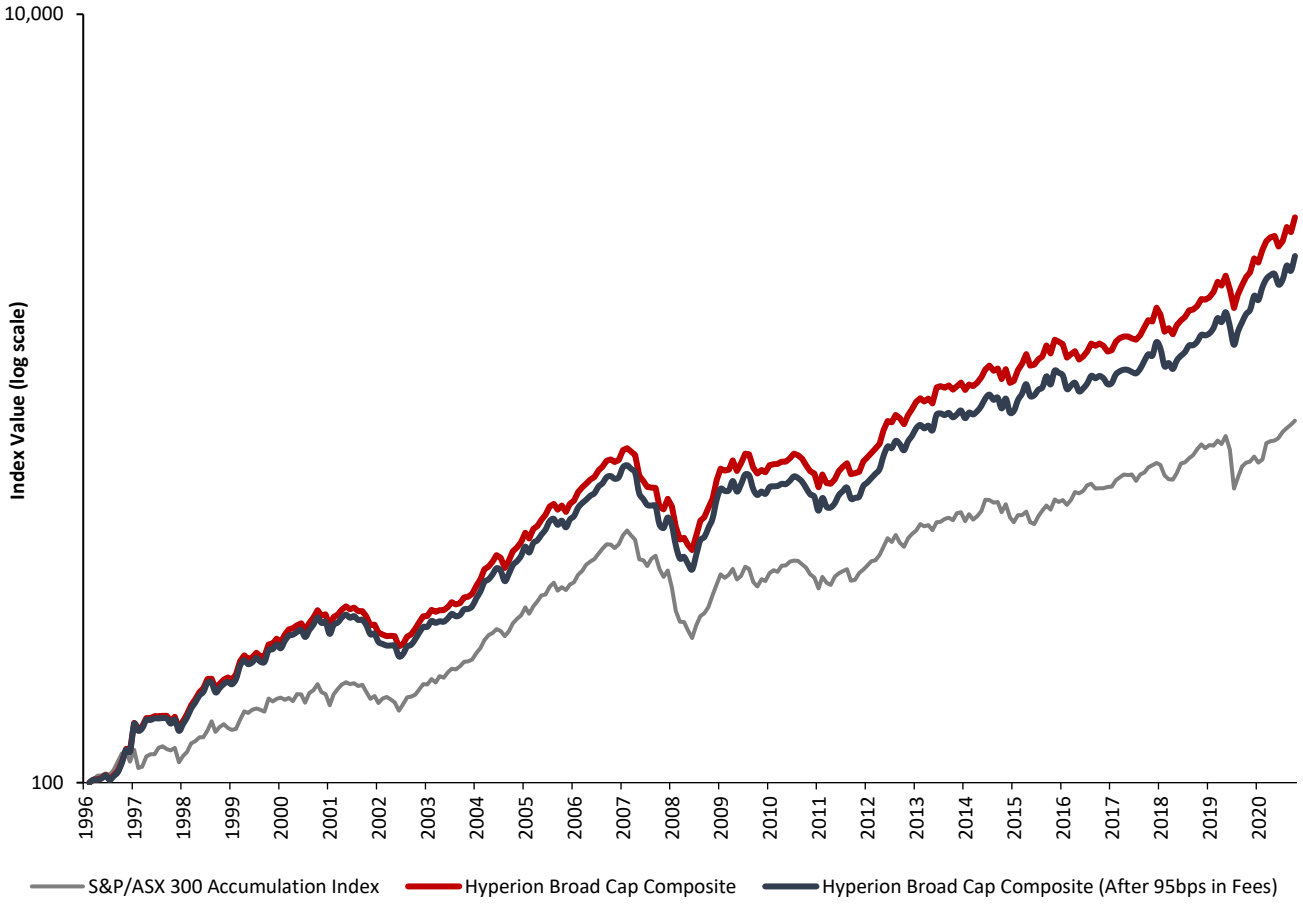
Hyperion has produced net alpha since inception across its three key products. This is rare and valuable. We believe we are well placed to continue to extract long-term alpha after fees across all our products including the Hyperion Global Growth Companies Fund (Managed Fund)[1].

Many active fund managers fail to outperform the relevant benchmark over the long term, particularly after fees. In addition, many active managers have high rates of portfolio turnover that can result in higher trading related costs and higher income and capital gains tax expense than would be incurred using more long-term or passive investment styles. High portfolio turnover levels and negative long-term alpha generation are the key reasons for the secular trend towards passive or index-based equity investing. However, by indexing, investors' risk forgoing the benefits of achieving above benchmark returns over the long term.

The magic of growing superior net returns over long time periods is illustrated in the chart below. Since October 1996, the Hyperion Broad-Cap Equities Composite has returned 13.6% p.a. (after assumed fees of 95 bps p.a.). This return from Hyperion compares with the S&P/ASX 300 Accumulation Index return over the same time of 9.2% p.a. As at 30 June 2021, this strong long-term investment performance of the Hyperion Broad-Cap Equities Composite equates to average excess returns above the benchmark of 4.5% p.a. (after fees) over almost 25 years.

[1] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

Figure 1: Hyperion Broad Cap Composite vs. S&P/ASX 300 Accumulation Index (log scale)



Source: *Hyperion*

Since October 2002, the Hyperion Small Growth Companies Fund has produced average net alpha of 8.3% p.a.

Since inception in May 2014, the Hyperion Global Growth Companies Fund (Managed Fund)[2] has produced net alpha of 9.5% p.a.

The wisdom of crowds makes the market a difficult competitor over long time periods, as history suggests the "average view" is better than that of an individual. Hyperion has historically identified multiple market inefficiencies, and we will strive to continue to exploit these going forward, including in the Hyperion Global Growth Companies Fund (Managed Fund)[2].

Table 1: Hyperion Composite and Fund Performance Since Inception

As at 30th June 2021	**Inception Return (%) p.a.**
From Oct 1996	
Hyperion Broad-Cap Equities Composite (Gross)	14.7

[2] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

Excess Performance (Gross)	**5.5**
From May 2003	
Hyperion ASX 300 Equities Composite (Gross)	14.8
Excess Performance (Gross)	**5.2**
From June 2014	
Hyperion Global Growth Composite (Gross)	26.8
Excess Performance (Gross)	**12.5**
From Oct 2002	
Hyperion Small Growth Companies Fund (Net)	16.2
Excess Performance (Net)	**8.3**
From Oct 2002	
Hyperion Australian Growth Companies Fund (Net)	13.1
Excess Performance (Net)	**3.6**
From June 2014	
Hyperion Global Growth Companies Fund (Managed Fund) (Net)[2]	23.8
Excess Performance (Net)	**9.5**

Source: *Hyperion. Past performance is not a reliable indicator of future performance. All returns in AUD. All returns presented are annualised. Performance data as at 30th June 2021. [2]The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.*

Research suggests some managers have the skill to produce long-term alpha before fees, but the cost of producing this alpha is too high, resulting in net alpha that is typically negative. The "paradox of skill" is that as the skill and quality of the analysis of investment professionals has risen, the ability to produce strong excess returns of yesteryear is much more difficult. Put simply, competition has intensified. In fact, the world is moving towards a winner-take-all competitive dynamic because of globalisation. The rewards of winning accrue to a few businesses, whilst most industry participants end up producing average quality products and as a result are in various stages of economic failure.

Low fees and trading costs can reduce this alpha hurdle and improve the probability of translating gross alpha into net alpha. It is only net (after fees and costs) alpha that is relevant to clients, because this is the return they receive. Mauboussin suggests that costs are a key factor in separating the best performing from worst performing funds. The Hyperion Global Growth Companies Fund (Managed Fund)[3] has a base management fee of 70bps p.a. We believe this fee is lower than most of our peers. A performance fee in the Hyperion Global Growth Companies Fund (Managed Fund)[3] of 20% of outperformance against its benchmark ensures Hyperion only enjoys higher fees when the unit holders also do well. That is, the performance fee structure helps improve the economic alignment of Hyperion with client investment return outcomes. The performance fee is subject to high water marks and is only payable on positive absolute returns.

Hyperion's stock portfolio turnover is typically in the 20% to 25% p.a. range. This level of portfolio turnover is well below both the market average and the average active fund manager that often approaches 100% p.a. Low portfolio turnover helps improve our clients' after-tax and after transaction cost returns. This is in stark

[3] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

contrast to many active fund managers that have extremely high turnover because they are trying to chase short-term alpha. Chasing short-term alpha is extremely difficult to achieve successfully over long time periods and can be expensive in terms of after-tax and after-cost returns. The avoidance of over-trading is another way to lower the cost hurdles needed to produce net alpha. We believe we do some simple, logical things that increase our odds of out-performing. For example, we only change our portfolio weights in response to share price moves that we believe are meaningful and non-fundamentally driven.

Alpha is a zero-sum game where the winners (out-performers) are accruing returns at the expense of the losers (the under-performers). To outperform, the mistakes of others need to be exploited. Historically the "victims" were individuals or some poor performing institutional funds. However, investors that tend to perform poorly eventually give up. According to Larry Swedroe and Andrew Berkin in their book "The Incredible Shrinking Alpha," U.S. households held more than 90% of U.S. corporate equity at the end of WWII. This declined to 48% by 1980 and 20% by 2008. Similarly, institutional funds have struggled to survive, and dollars have flowed to passive managers. Swedroe and Berkin also cite research from John Bogle who found that about 7% of mutual funds "died" each year between 2001 and 2012. This is supported by fund survivorship data from SPIVA (2021) that shows the number of active fund managers in their data sample sets declining by mid-single digits per annum over long time periods. In fact, over 7% of Australian equity general funds were liquidated in 2020, although this rate was higher than typical. In terms of the US Scorecard, between 5% to 10% of funds did not survive in 2020, consistent with recent years.

Evidence suggests the proportion of professional investors accruing alpha after fees is shrinking. Swedroe and Berkin referenced academic studies by Mike Sebastian and Eugene Fama that suggest that only the top 1% to 2% of funds showed statistically significant skill (alpha).

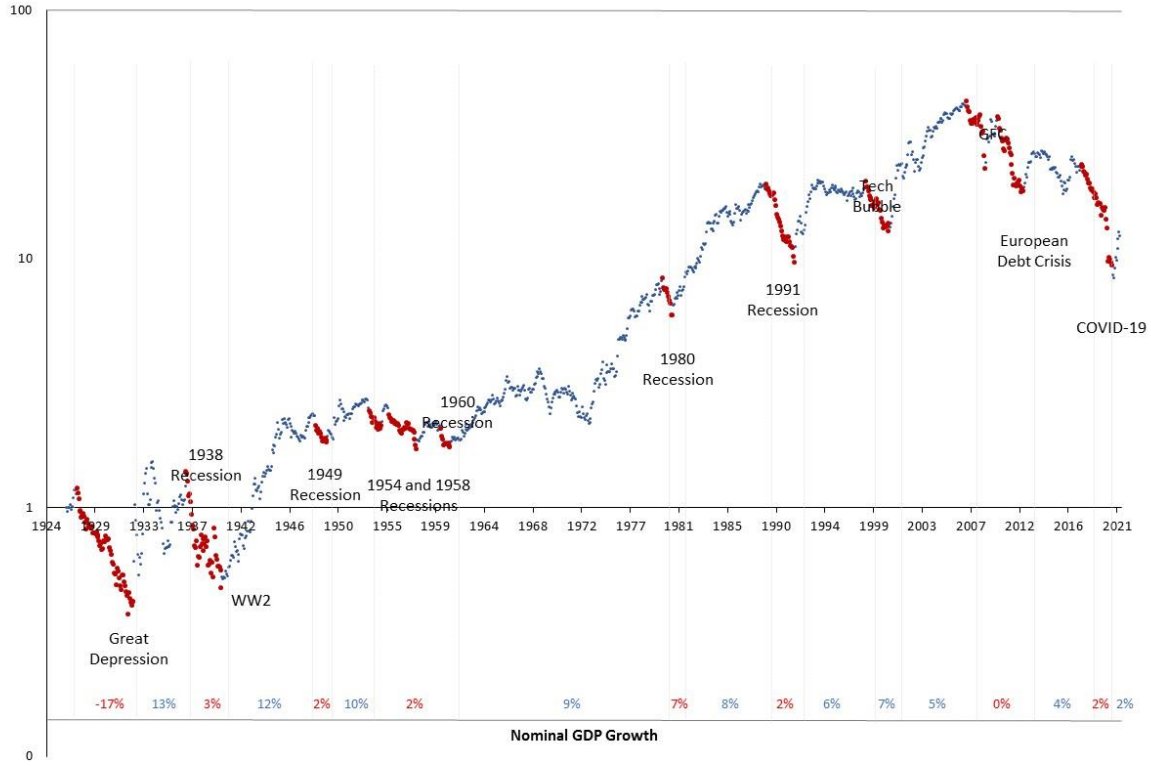
John Bogle (2018) highlighted the proportion of active managers who underperformed the market has increased over time. Further analysis from Verheyden et al. (2016), who developed a framework to assess whether participants successfully capitalise on market inefficiencies, found that not only are most funds "unable to outperform the market systematically," but only a small sample can generate alpha and gains from inefficient markets. However, successful managers can manage drawdown periods well in market downturns and distress, as well as take advantage of when a market may return to equilibrium stability through what they call "learning effects maximisation." History suggests Hyperion's best alpha capture periods are through a crisis where markets dislocate such as the GFC and COVID-19.

In our first edition of "The difficult quest for long-term alpha after fees" (2018), we referenced Charlie Munger, who has been widely quoted over the years saying, "the top three or four percent of the investment management world will do fine." We believe this now applies to hedge funds, where the performance of the average manager appears to have declined materially over the past decade. This is supported by Bollen et al. (2021) that documents a clear decline in performance since the GFC. Using an equal-weighted hedge fund index, they observe total cumulative returns of just 25% over the eight-year period from 2008 to 2016, a stark contrast from the 225% return for the ten-year period from 1997 to 2007.

It is likely that this decline in returns post the GFC at least partly relates to the fact that many hedge funds have a value style bias. Using Fama French data, Hyperion research indicates that value style managers have significantly underperformed since the GFC (refer Figure 2). Many hedge fund managers have a value style philosophy and investment approach. We believe a key reason why value style investing has performed poorly since the GFC relates to the lower economic growth environment and higher levels of globalised competition because of the internet and smart phones. It appears likely economic growth rates and inflation will remain

low over the next decade. This is because of ageing populations, declining population growth rates, high debt levels, the hollowing out of the middle-class, increasing technology-based innovation and higher levels of natural resource constraints and disruption. In addition, the internet, smart phones and ecommerce will ensure continuing high levels of price-based competition. We believe a low growth, highly competitive and disrupted environment is likely to make it difficult for traditional value style investors and, therefore, most hedge funds to produce alpha over the long run.

Figure 2: Fama French HML Index updated for COVID-19 – Value Underperforms in Low Growth, Low Inflation, Low Confidence Environments



Source: *Kenneth R. French U.S. Research Returns Data (2021) Portfolios Formed on Book-to-Market*
http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html#Benchmarks

The proportion of participants achieving net alpha has declined over time. However, we believe the number of winners will be higher in certain markets. For example, "small cap" funds can exploit the fact that many smaller stocks are under-researched or too illiquid for many institutional investors. These small cap funds can employ investment processes that successfully avoid those stocks that are most likely to suffer permanent value destruction from speculative or low-quality business models with unsustainable economics. However, it is extremely difficult to achieve sustained, meaningful alpha in the small cap space because of this lack of liquidity. With limited opportunities, the absolute dollar size of the alpha is highly constrained in the small cap space.

Global funds should be able to exploit specific factors, sectors and stocks in a huge universe of tens of thousands of listed securities. However, it takes skill and insight to filter and analyse such a large universe effectively. You also need to be clear on what inefficiencies your investment process and team can exploit.

Hyperion exploits multiple market inefficiencies and behavioural biases, including short-termism, time arbitrage, recency bias, loss aversion, impatience (driven by a combination of the fund managers themselves and their direct intermediary/institutional and/or retail clients), over-diversification, specialisation biases, herding (including fear of being wrong or being perceived to be wrong by third parties), and the "quality anomaly."

Achieving alpha has become difficult, but there are some reasons to be optimistic as to why accruing alpha could become easier over time. The ever-increasing focus on short-term results, catalysts and share price movements help ensure those that take a longer-term view tend to be competing in a much less crowded space. Growing data availability, accountability, measurement, transparency and specialisation are perversely increasing short-termism and decreasing conviction in the market. The trend towards indexing and passive investing means the proportion of "dumb" money is rising. Eventually, the level of analysis and insight on individual stocks is likely to decline and lead to increased mispricing of stocks. It is likely that a new source of "victims" will eventually emerge.

In conclusion, Hyperion has a track record of being able to produce long-term alpha after fees. This contrasts with most fund managers that struggle to produce positive alpha over long time periods. The evidence that this statement is true is provided by industry league tables (after adjusting for fees and survivorship biases) and many academic studies. Long-term alpha generating track records are valuable and meaningful.

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July 2021

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Appendix Tables

SPIVA AUSTRALIA SCORECARD

Table 2: Percentage of Funds Outperformed by the Index (Based on Absolute Return)

	15 Year (%)	10 Year (%)	5 Year (%)
International Equity General	93.4	90.3	81.8
Australian Equity General	86.3	79.3	81.7
Australian Equity Mid- and Small-Cap	48.8	50.5	75.2

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2020. All returns in AUD. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. The fund returns used are net of fees, excluding loads.

Table 3: Average Fund Performance (Equal-Weighted)

	15 Year Annualised (%)	10 Year Annualised (%)	5 Year Annualised (%)
International Equity General			
Average Fund	6.1	11.6	10.1
First Quartile	*7.0*	*12.9*	*11.5*
Hyperion Global Growth Companies Fund (Managed Fund) (Net) ^	**N/A**	**N/A**	**22.8**
Australian Equity General			
Average Fund	6.1	7.2	7.2
First Quartile	*6.7*	*8.2*	*8.7*
Hyperion Australian Growth Companies Fund	**11.4**	**13.2**	**13.8**
Australian Equity Mid- and Small-Cap			
Average Fund	9.4	9.9	11.6
First Quartile	*9.8*	*11.0*	*12.5*
Hyperion Small Growth Companies Fund	**14.3**	**15.9**	**12.8**

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2020. All returns in AUD. Returns shown are annualized. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. The fund returns used are net of fees, excluding loads. Equal-weighted returns for a particular style category are determined by calculating a simple average return of all active funds in that category in a particular month. The p^{th} percentile for a set of data is the value that is greater than or equal to p% of the data, but is less than or

equal to (100-p) % of the data. In other words, it is a value that divides the data into two parts: the lower p% of the values and the upper (100-p)% of the values. The first quartile is the 75th percentile, the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50th percentile and the third quartile is the 25th percentile. For fund category quartiles in a particular time horizon, the data used is the return of the largest share class of the fund net of fees, excluding loads. ^The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

SPIVA Disclaimer

In this scorecard, SPIVA evaluated returns of over 897 Australian equity funds (large, mid, and small cap, as well as A-REIT), 475 international equity funds, and 112 Australian bond funds.

Survivorship Bias Correction

Many funds might be liquidated or merged during a period of study. However, for someone making an investment decision at the beginning of the period, these funds are part of the opportunity set. Unlike other commonly available comparison reports, SPIVA Scorecards account for the entire opportunity set—not just the survivors—thereby eliminating survivorship bias.

Morningstar Classification

Data from Morningstar is obtained for all managed funds domiciled in Australia for which month-end data is available during the performance period. The data include the most comprehensive Australian fund data on active and finalized (merged or liquidated) funds over the chosen period. Funds are classified based on the Morningstar fund classification system, and the SPIVA Australia Scorecard covers the Australian Equity General (large-cap equity), Australian Equity Mid- and Small-Cap, International Equity General, Australian Bonds, and Australian Equity A-REIT categories. The Morningstar classification system produces narrow, style-based classifications for Australian equity funds. S&P Dow Jones Indices has consolidated the style-based categories in order to generate a larger sample size and develop a broad-market comparison to market-based benchmarks. A narrow, style-based comparison would yield a limited sample size, given value and growth style segments are not consistently discernible over the past five years.

Morningstar categories have been mapped to SPIVA peer groups in the following manner:

SPIVA category Australian Equity General is mapped from Morningstar categories Australia Fund Equity - Australia Large Blend, Australia Fund Equity - Australia Large Growth and Australia Fund Equity - Australia Large Value.

SPIVA category Australian Equity Mid- and Small-Cap is mapped from Morningstar categories Australia Fund Equity - Australia Mid/Small Blend, Australia Fund Equity - Australia Mid/Small Growth and Australia Fund Equity - Australia Mid/Small Value.

SPIVA category International Equity General is mapped from Morningstar categories Australia Fund Equity - World Large Blend, Australia Fund Equity - World Large Growth and Australia Fund Equity - World Large Value.

SPIVA U.S. SCORECARD

Table 4: Percentage of U.S. and International Equity Funds Underperforming Their Benchmarks

	20 Year (%)	10 Year (%)	5 Year (%)
All Domestic Funds	86.01	83.22	72.80
All Large-Cap Funds	94.00	82.32	75.27
All Small-Cap Funds	88.06	76.31	65.12
Global Funds*	86.55	82.63	70.00
International Funds*	91.25	79.51	74.37

Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2020. All returns in USD. Past performance is no guarantee of future results. Table is provided for illustrative purposes. *Represent International Equity Funds.

Table 5: Average International Equity Fund Performance (Equal-Weighted)

	10 Year Annualised (%)	5 Year Annualised (%)	3 Year Annualised (%)	1 Year (%)
Global Funds				
Average Fund	8.40	11.64	10.39	18.01
First Quartile	*10.90*	*14.85*	*14.70*	*27.38*
Hyperion Global Growth Companies Fund (Managed Fund) (Net) ^	**N/A**	**24.28**	**29.19**	**60.33**
International Funds				
Average Fund	5.49	8.62	6.09	12.05
First Quartile	*6.60*	*10.31*	*8.40*	*19.11*
Hyperion Global Growth Companies Fund (Managed Fund)^	**N/A**	**24.28**	**29.19**	**60.33**

Source: Hyperion, S&P Dow Jones Indices LLC. Data as of Dec. 31, 2020. All returns in USD. Returns shown are annualized. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. The fund returns used are net of fees, excluding loads. Equal-weighted returns for a particular style category are determined by calculating a simple average return of all active funds in that category in a particular month. The p^{th} percentile for a set of data is the value that is greater than or equal to p% of the data, but is less than or equal to (100-p)% of the data. In other words, it is a value that divides the data into two parts: the lower p% of the values and the upper (100-p)% of the values. The first quartile is the 75th percentile, the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50th percentile and the third quartile is the 25th percentile. For fund category quartiles in a particular time horizon, the data used is the return of the largest share class of the fund net of fees, excluding loads. ^The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

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SPIVA Styles and Lipper Fund Classifications

The CRSP Survivor-Bias-Free US Mutual Fund Database is the only complete database of both active and liquidated or merged mutual funds. It was created in 1995 and contains fund data from December 1961. Current and historical data from August 1998 has been supplied by Lipper and Thomson Reuters. The fund classifications are based upon the Lipper fund classification system. The SPIVA Scorecard covers domestic equity, global equity, and global fixed income categories.

SPIVA covers major capitalization levels (large-, mid-, small-, and multi-cap funds) and investment styles (growth, core, and value). S&P Dow Jones Indices uses the Lipper fund classifications, which determine a fund portfolio's capitalization and investment style assignments. Lipper assigns a market capitalization to each fund based on the percentages of a fund's three-year weighted equity assets that fall into each of Lipper's three defined market capitalization slices. The market capitalization breakpoints are calculated using all common stocks, excluding all non-U.S. domiciled stocks and ADRs, trading on the NYSE, AMEX, and NASDAQ. Funds are assigned to the capitalization level in which they have a 75% or higher weighting. Any fund that has less than 75% of its three-year weighted allocation in any of the three market capitalization ranges is classified as a multi-cap fund.

For international equity, SPIVA reports on four major categories (global, international, international small-cap, and emerging markets) of interest to global asset allocators. These categories also include multiple Lipper capitalization and style classifications.

SPIVA Global Funds include Lipper Funds classified as Global Large-Cap Growth Funds, Global Large-Cap Core Funds, Global Large-Cap Value Funds, Global Multi-Cap Growth Funds, Global Multi-Cap Core Funds and Global Multi-Cap Value Funds.

SPIVA International Funds include Lipper Funds classified as International Large-Cap Growth Funds, International Large-Cap Core Funds, International Large-Cap Value Funds, International Multi-Cap Growth Funds, International Multi-Cap Core Funds and International Multi-Cap Value Funds.

Revisiting a low growth, low interest rate, low inflation world through COVID-19

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Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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In this white paper series, we examine whether inflation is likely to stay at low levels over the next decade. We also examine how future inflation and overall economic growth rates will impact the attractiveness of the returns Hyperion's global equity strategy is likely to produce in the long run. The main topics covered in this series are addressed in five interrelated papers:

Executive Summary

Part 1 - Why the recent increase in inflation and growth is temporary;

Part 2 - Why the rotation to lower quality value stocks will not be sustained;

Part 3 - The relationship between growth, inflation, interest rates and valuations;

Part 4 - Why high-quality businesses can handle high inflation better than most other investments; and

Part 5 - What if our views on inflation turn out to be wrong?

HYPERION ASSET MANAGEMENT
a different horizon...

Revisiting a low growth, low interest rate, low inflation world through COVID-19 – Executive Summary

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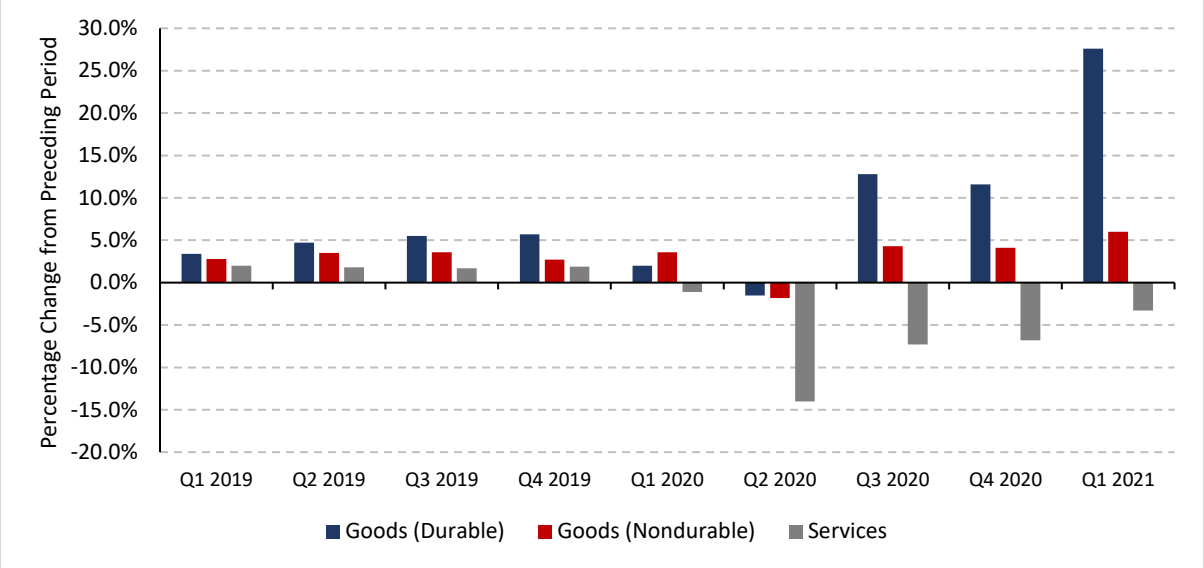
Long-dated government bond yields have increased over the past year as the economic outlook has improved and inflation expectations have increased. Recently, the 10-year U.S. government bond yield has risen sharply and is now approximately 136bps compared to a low of 50bps last year. We continue to believe that inflation (and interest rates) will remain lower for longer, with our base assumption of 10-year U.S. bond rates to average 250bps over the next 10 years. It is worth noting that this yield is above the average since the Great Recession of approximately 230bps. **Technology-based innovation and disruption is by its very nature deflationary** because it results in better products at lower prices. In fact, we believe we are at the onset of radical technological disruption, and the cadence of innovative product launches should increase. We anticipate that any meaningful inflation will be transitory and any inflationary influences, including "base effects," will fade over the next twelve months.

Hyperion believes the world is facing a **very high level of innovation and disruption** over the next decade. Advancements in artificial intelligence ("AI"), machine learning ("ML") and robots will disrupt human capital markets and reduce the pricing power of labour. Renewable energy technology, distributed power grids, electric vehicles, and autonomous driving software and hardware will make the cost of energy and transportation significantly less expensive. The ongoing influence of the internet, smart phones and e-commerce platforms will also continue to apply downward pressure on profit margins for many businesses and help keep prices low. The effect of ongoing innovation will result in most legacy businesses being forced to discount their products and services in a futile attempt to maintain their market share and sales in the face of superior, more relevant products from innovative companies.

In addition, Hyperion believes **aggregate demand growth is likely to stay subdued in the long term** because of high debt levels, ageing populations, lower population growth rates, rising wealth inequality/hollowing out of the middle class, and environmental constraints and disruption. During the COVID-19 crisis, most consumer-based expenditure has been directed away from services like travel and restaurants towards goods. This is shown below in Figure 1. This reallocation of consumer spending away from services and towards goods is temporary and likely to reverse over the next twelve months as global economies reopen and transfer payments recede.

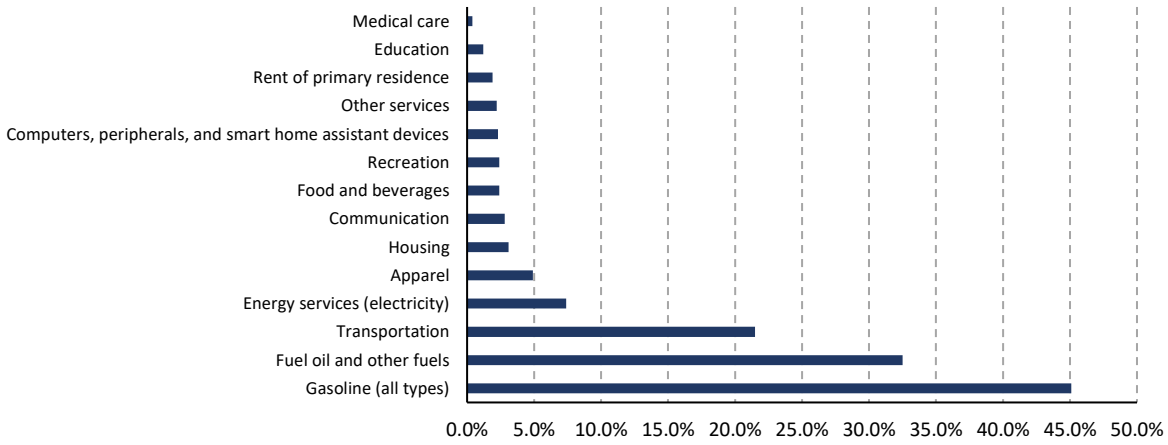
Figure 1: Quarterly U.S. personal consumption expenditures percentage change from preceding period



Source: *U.S. Bureau of Economic Analysis (2021). Note: Q1 2021 is a revised estimate. Data from latest U.S. Bureau of Economic Analysis released on 24 June 2021.*

Inflation has picked up in the U.S. over recent months, but this is likely to be temporary because it is being driven by strong demand from the cyclical recovery post the COVID-19 economic downturn. The demand for transportation and travel has gone from very low levels during the worst of the COVID-19 lockdowns to a more normalised level of demand currently. This has contributed to temporary price increases in used cars, gasoline and certain airline tickets.

Figure 2: Consumer Price Index by expenditure category in the U.S. (12-month percent change) for June 2021

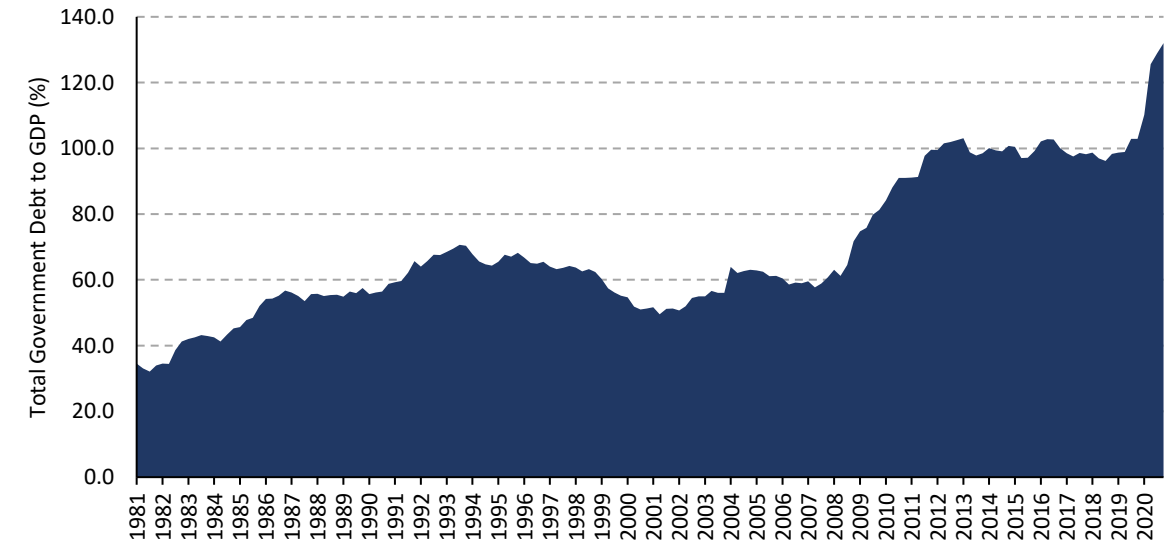


Consumer Price Index by Expenditure Category (12 month percent change) for June 2021

Source: *U.S. Bureau of Labor Statistics. Data published in July 2021.*

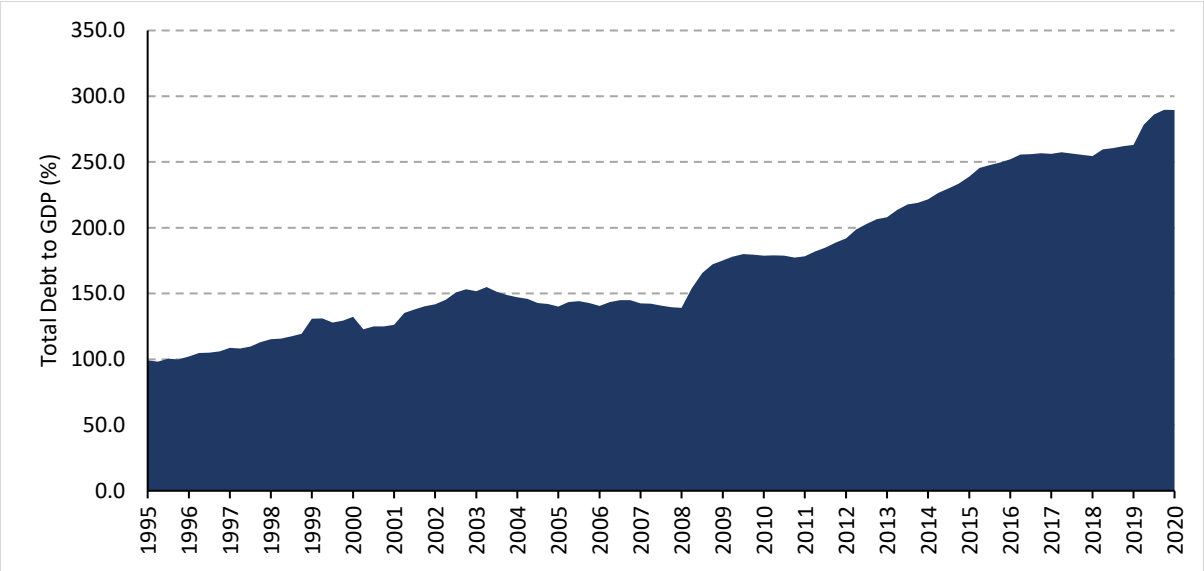
We believe there are **diminishing returns from increasing use of debt.** The financialisation of society over the past half century has accelerated historical economic growth rates. Most major economies have used debt to help boost historical growth rates. In the U.S. total debt to GDP, where debt equates to total credit to the non-financial sector, has increased from 133% in June 1981 to 296% in December 2020. Over the same time period, U.S. government debt to GDP has increased dramatically from 33% to 132%.

Figure 3: Government debt to GDP - U.S. (%)



Source: *BIS (2020) United States credit to general government as percentage of GDP (Adjusted for breaks)*

Figure 4: Total Debt to GDP – China (%)



Source: *BIS (2020) China credit as percentage of GDP (Adjusted for breaks)*

Stocks that have sustainable business models tend to have longer durations compared to lower quality, less sustainable stocks. That is, they sell on higher short-term price earnings ratios, and therefore, more of their expected future free cash flows are further out in the future. All other things being equal, longer duration assets, including stocks, tend to be more sensitive to changes in long-term bond yields and discount rates. However, the duration of a stock as a measure of its share price sensitivity to changes in interest rates is only valid if the nominal growth rates in the future free cash flows do not change by a similar degree to broadly match the change in long-term bond yields and discount rates.

If our views on higher inflation being transitory turn out to be incorrect, then we believe that allocating capital to high quality businesses that have pricing power and high levels of structural growth will help protect against high inflation levels. We believe most of the companies in our portfolios can pass on cost inflation to their customers, thus enabling them to retain their future earnings and cash flows in "real" (inflation-adjusted) terms. The ability of the stocks in our portfolios to maintain the real value of their future earnings should allow them to minimise the negative impacts of higher inflation over the long term.

In addition, extremely high structural growth stocks are in a better position to handle high levels of inflation compared with stocks with a more modest growth rate. Even if we assume these high-quality stocks are not in a position to increase the nominal value of their future free cash flows and thus retain the real value of those free cash flows, the relative impact on the cash flow is lower.

In a relative sense, the higher the nominal structural growth rate for a company, the less the real growth rate declines for any given increase in inflation. A business with a 40% structural growth rate with 10% inflation suffers a 25% decline in real structural growth (compared to a zero-inflation situation). Contrast that with a 20% nominal growth rate company that would suffer a 50% decline in real growth from a move in inflation from 0% to 10%.

Businesses that can sustain high real growth rates typically have the following attributes:

1) strong and sustainable value propositions;

2) innovative cultures that actively improve the features and quality of the existing products and create new products over time;

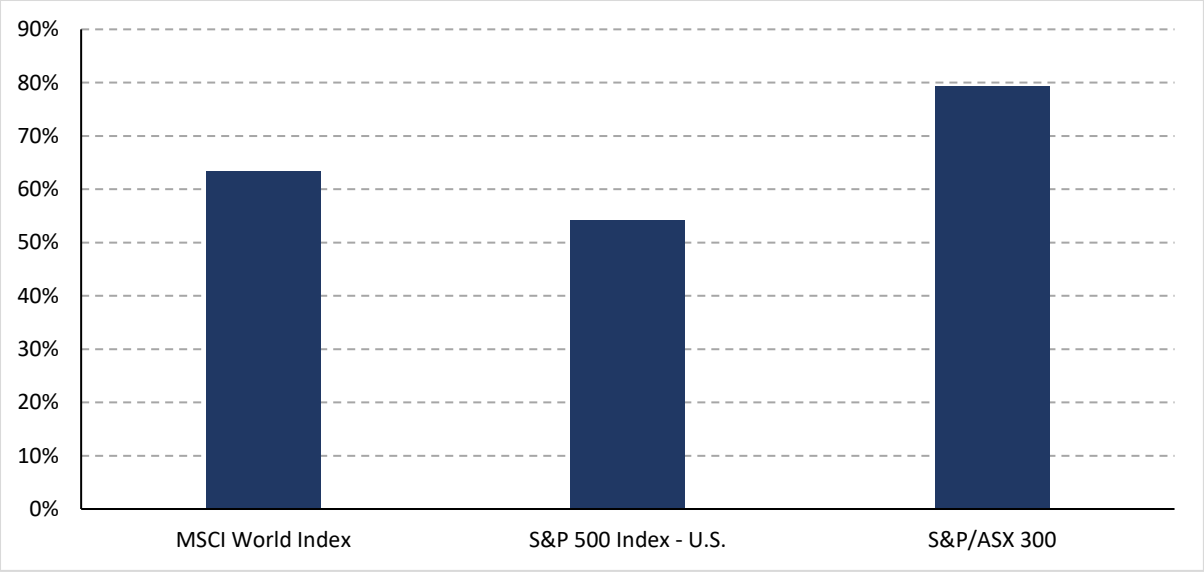
3) yet to fully monetise the value of their existing product offering; and

4) revenues that are small relative to the size of their total addressable market ("TAM").

Low quality businesses will suffer the most in a sustained high inflation environment, because many of these businesses will be unable to pass the cost inflation they experience on to their customers. High quality, structural growth companies should perform better in a relative sense than broader equity benchmarks, which are dominated by "old world" businesses. We define old world businesses as those that are no or low growth and/or are being disrupted by a far superior product or service.

Hyperion estimates 79% of the stocks (by index weight) in the Australian S&P/ASX300 Index can be categorised as old world. Outside Australia, 63% of the MSCI World Index and 54% of the U.S. S&P 500 Index have old world characteristics. This means the level of fundamental risk in the main benchmarks globally is high, as they are dominated by low growth businesses that are being disrupted by higher growth, more modern challengers. This disruption is being driven by the stronger value propositions that these modern businesses offer consumers. Over the next decade, we anticipate that there will be significant levels of "creative destruction" as this transition from incumbents to challengers progresses. In this highly competitive environment, it will be difficult for these large, listed businesses to pass on any input cost pressures in the form of higher prices.

Figure 5: Proportion of benchmarks that are "old world"



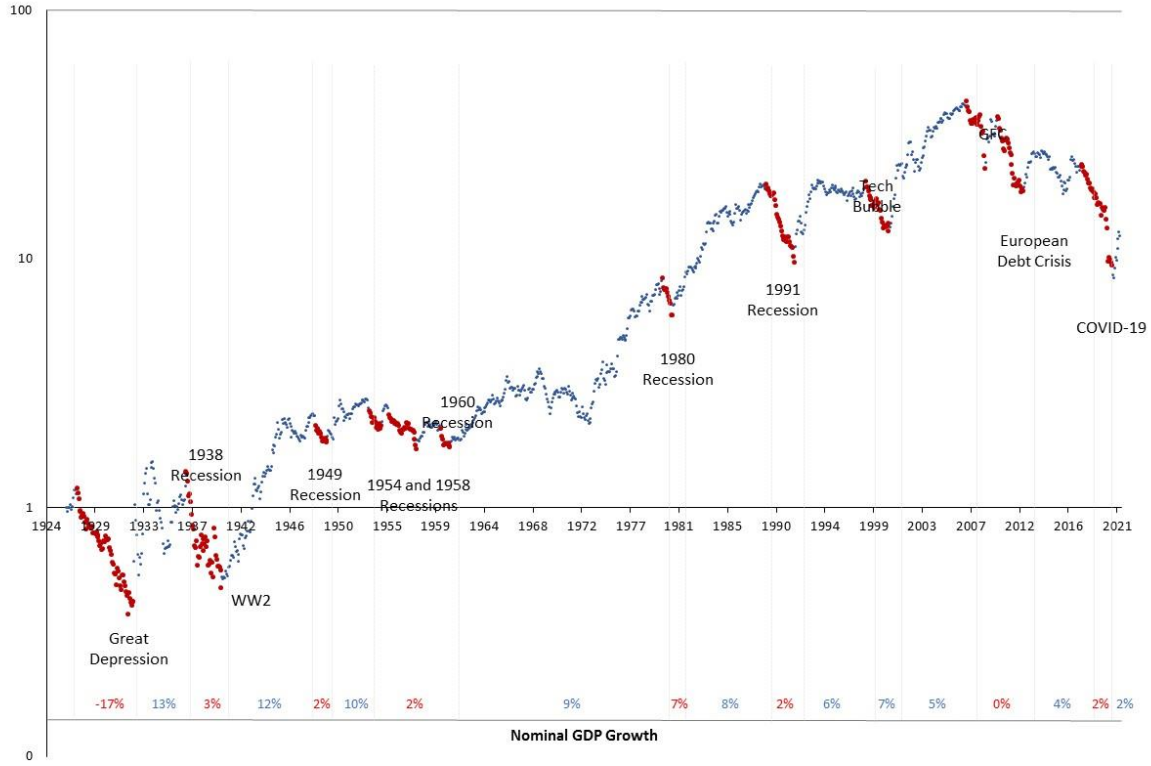
Source: *FactSet, Hyperion. Hyperion has assigned companies with no or low expected EPS growth and/or with risk of permanent business model disruption as old world.*

Historically, some commodities and non-fiat currencies such as gold have been considered good inflation hedges. However, we believe **software companies will be identified as more effective, modern inflation hedges** going forward. These companies typically have software that is absorbed in the workflow of an

organisation, which means there are high switching costs. Often the software is under-monetised relative to its value as the focus has been growing its user base and capturing the addressable market opportunity rather than optimising pricing. Companies that have strong market positions with a loyal user base that are paying relatively low monthly subscription fees could substantially increase their prices.

We estimate software represents less than 30% of developed global equities. Information Technology and Communication Services sectors currently have weights of 22% and 9%, respectively, in the MSCI World Index. We believe Hyperion's portfolio is relatively well positioned as an inflation hedge with strong pricing power and organic growth levers.

Figure 6: Fama French HML Index - Value Underperforms in Low Growth, Low Inflation, Low Confidence Environments



Source: *Kenneth R. French U.S. Research Returns Data (2021) Portfolios Formed on Book-to-Market* http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html#Benchmarks

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

July 2021

Revisiting a low growth, low interest rate, low inflation world through COVID-19

Part 1 - Why the recent increase in inflation and growth is temporary

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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We believe higher inflation will be transitory in nature and inflation will remain low in the long term.

There are several reasons that suggest the recent increase in inflation (and economic growth rates) will be short-lived and that these inflationary influences will fade over the next twelve months. Furthermore, once inflation returns to lower levels (likely in 2022), there are several key structural factors that should result in inflation (and economic growth rates) remaining at low levels over longer time periods.

The recent increase in inflation (and associated strong economic growth) has been driven by several transitory factors, including:

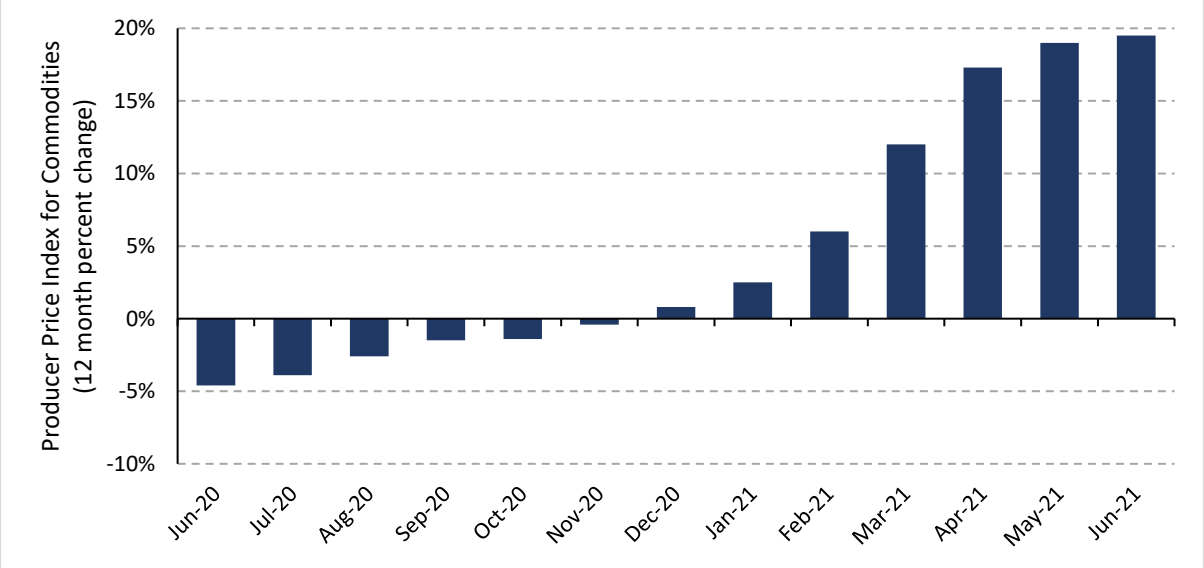
1) The "base effect" from depressed commodity and product-related pricing and negative demand growth during the early stages of the COVID-19 crisis;
2) The "broken window fallacy";
3) Distortions in consumer spending patterns, during the initial COVID-19 lockdowns, leading to unsustainable increases in demand for durable and non-durable goods;
4) Increased government spending on transfer payments boosting short-term consumer expenditures;
5) Unsustainably strong credit growth in China; and
6) Increased short-term demand and related price increases for transport and travel-related services and products as economies recover from the COVID-19 crisis.

The "base effect"

There has been a large increase in commodity prices over the past twelve months as shown in Figure 1.

Part of the year-over-year increase in commodity prices has been influenced by a "base effect." That is, twelve months ago commodity prices were very depressed because of the initial impact of the COVID-19 crisis.

Figure 7: Producer Price Index for commodities in the U.S. (12-month percent change)



Source: *U.S. Bureau of Labor Statistics. Data published in July 2021. Note: The data is not seasonally adjusted.*

The base effect also applies to inflation statistics and reported economic growth figures.

The "broken window fallacy"

The recent economic growth statistics overstate the real economic improvement over the past twelve months. The "broken window fallacy" states that simply replacing a damaged or destroyed good, service or income with the same or similar quality attributes does not result in true economic growth. Simply replacing the businesses and associated incomes, products and services that were destroyed during the COVID-19 crisis with similar businesses, incomes, products, and services does not equate to true economic progress. The new business and wage incomes and related goods and services are included in the GDP statistics, but these figures overstate the true economic growth since the COVID-19 crisis began. This overstatement of true economic growth is supportive of lower than stated underlying aggregate demand growth. A lower than stated level of true economic growth is less supportive of demand-pull inflationary pressures where "too much money is chasing too few goods."

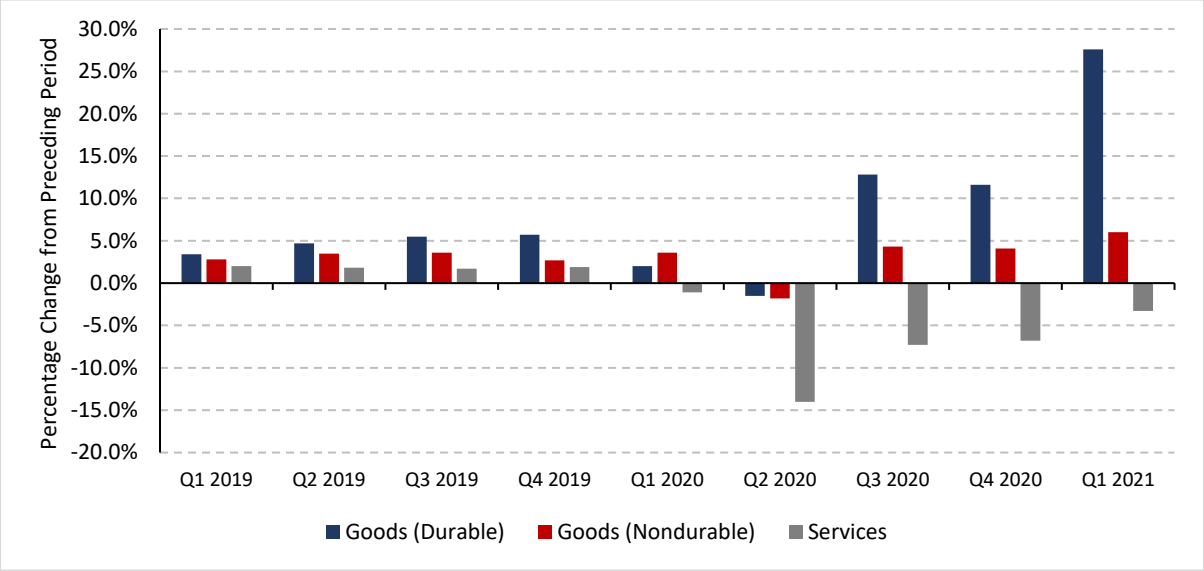
Unsustainably strong demand for durable and non-durable goods

The single largest component of the U.S. economy is consumer-based personal expenditures. In recent times, total personal expenditures have represented approximately 70% of U.S. GDP. Personal expenditures comprise both services expenditures and goods expenditures.

Prior to the COVID-19 crisis, services-based expenditures represented 44% of GDP. In March 2021, expenditures on services had declined to only 42% of GDP. At the same time goods-based expenditures increased from approximately 26% of GDP prior to the lockdowns to 29% in March 2021. Durable goods expenditures increased by 28% in the twelve months to March 2021 and non-durable goods increased by 6% over the same period. On the other hand, services-based expenditures decreased 3% over the 12 months to March 2021. The large increase in demand for durable and non-durable goods was a direct result of the lockdowns preventing people from being able to spend on services. During the COVID-19 crisis most

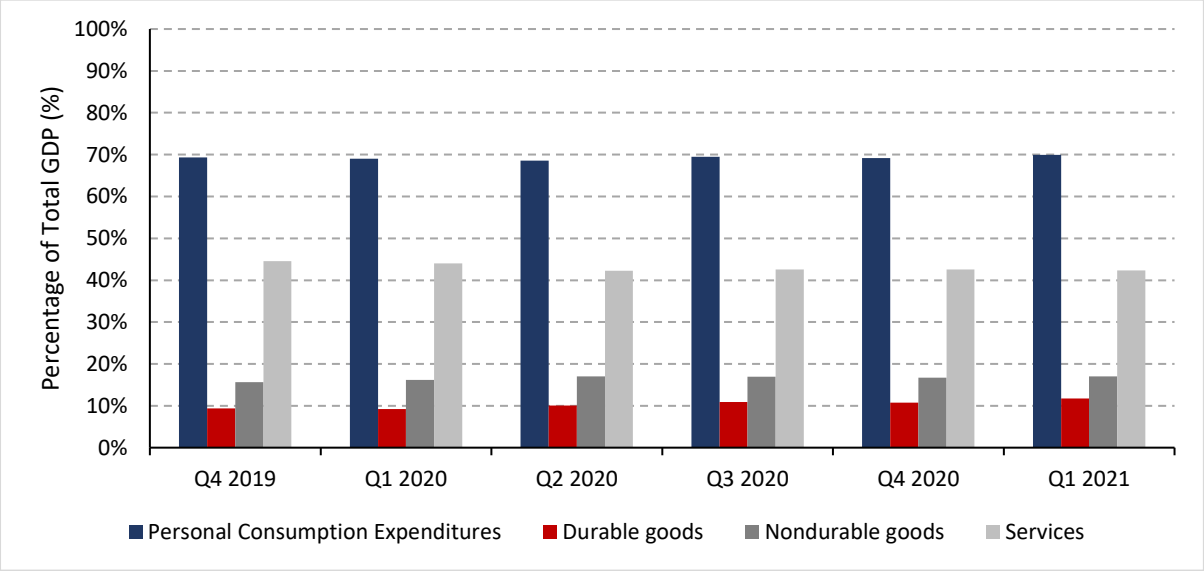
consumer-based expenditure has been directed away from services like travel and restaurants towards goods. This is shown below in Figure 2 and further supported by the tabulated data in Appendix 1.

Figure 8: Quarterly U.S. personal consumption expenditures percentage change from preceding period



Source: *U.S. Bureau of Economic Analysis (2021). Note: Q1 2021 is a revised estimate. Data from latest U.S. Bureau of Economic Analysis released on 24 June 2021. See Appendix 1 for underlying data.*

Figure 9: Quarterly U.S. personal consumption expenditures proportions of U.S. GDP in billions of chained (2012) U.S. dollars



Source: *U.S. Bureau of Economic Analysis (2021). Note: Q1 2021 is a revised estimate. Data from latest U.S. Bureau of Economic Analysis released on 24 June 2021. See Appendix 1 for underlying data.*

This reallocation of consumer spending away from services and towards goods is temporary and likely to reverse over the next twelve months as global economies reopen and transfer payments recede.

This short-term increase in demand for goods has, in turn, increased demand for the commodities and raw materials used to manufacture those goods. At the same time, global supply chains were disrupted by the COVID-19 crisis, as distributors initially cancelled orders with their suppliers. It has taken time for manufacturers to increase production levels to meet the unexpected increase in demand for physical goods because of the COVID-19 lockdowns.

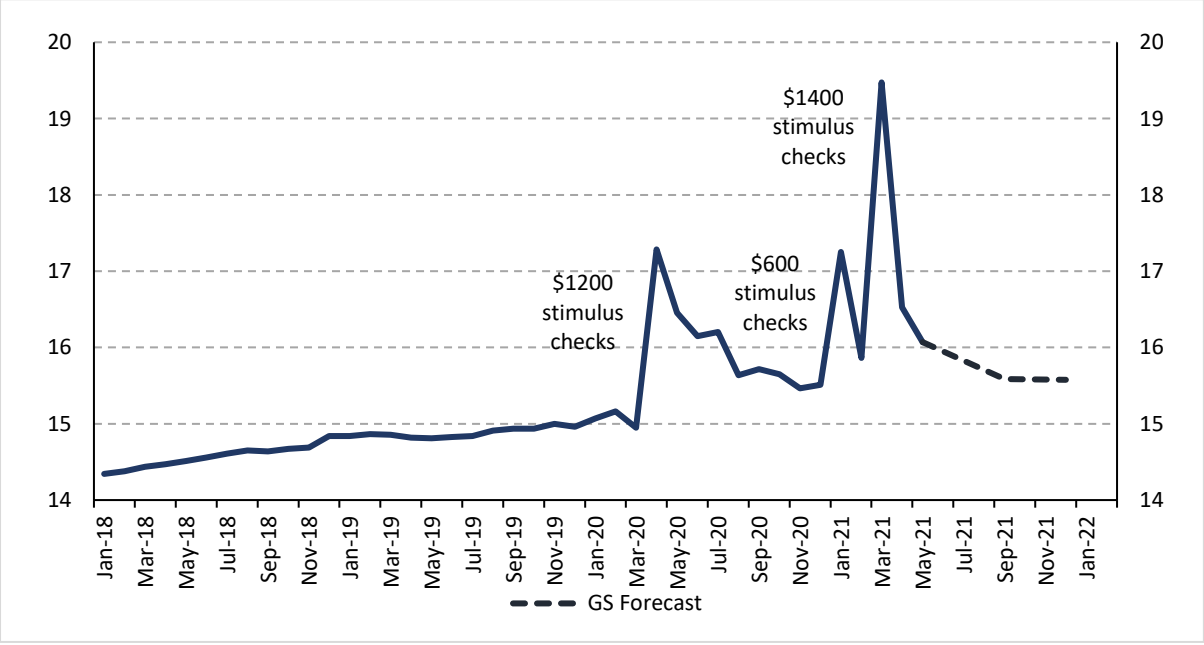
The increased demand for both durable and non-durable goods and the disruption of global manufacturing and distribution networks has caused shortages of many goods. These stock shortages have resulted in buyers of goods in most global supply chains arguably over-ordering to prevent future lost sales from lack of inventory. This over-ordering from distributors and manufacturers has exacerbated the shortages of goods in global supply chains and helped boost current commodity prices.

However, as consumer expenditures start to normalise over the next 6-12 months, because of vaccine rollouts and the ending of lockdowns, consumer demand for both durable and non-durable goods is likely to decline. In fact, manufacturers and distributers of goods that have been over-ordering, are likely to find that they will end up with excess inventories that will be difficult to sell without resorting to price discounting (to clear this surplus stock).

Increased Government spending on transfer payments

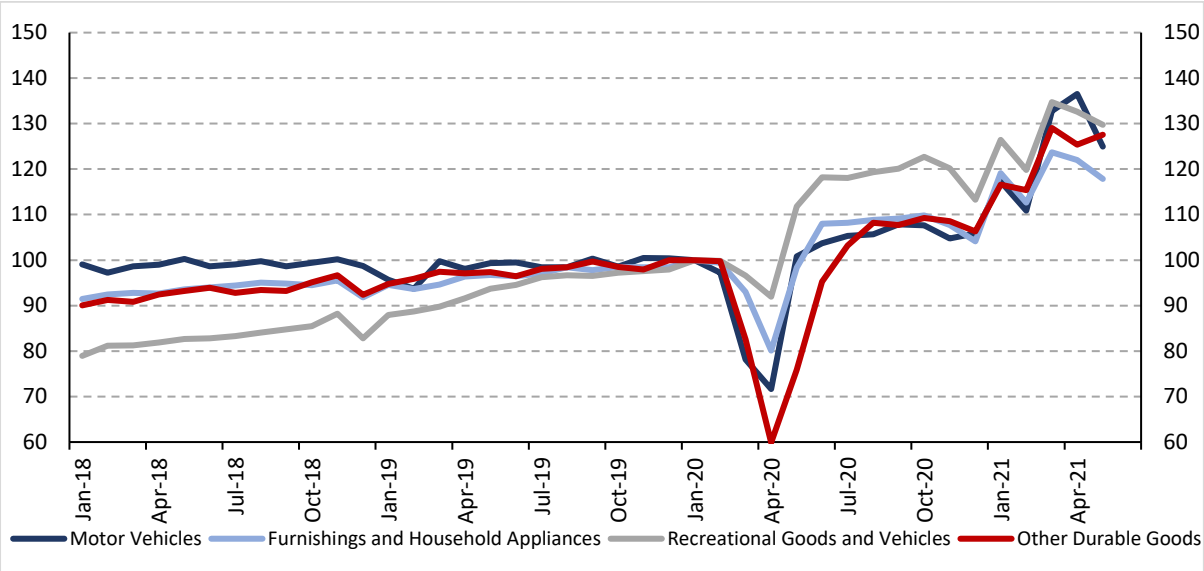
Governments around the world have expended significant additional amounts on welfare and other related transfer payments in reaction to the increase in unemployment and negative economic growth because of the onset of the COVID-19 crisis.

Figure 10: U.S. real disposable income has been temporarily boosted by government transfer payments - U.S. real disposable income (Trillions of 2012 U.S. dollars, annualised)



Source: *Goldman Sachs Global Investment Research, U.S. Department of Commerce, U.S. Bureau of Economic Analysis (BEA) (2021).*

Figure 11: U.S. real consumer spending index (Index, January 2020 = 100)



Source: *Goldman Sachs Global Investment Research, U.S. Department of Commerce, U.S. Bureau of Economic Analysis (BEA) (2021). Consumer Spending data indexed from January 2020 (=100).*

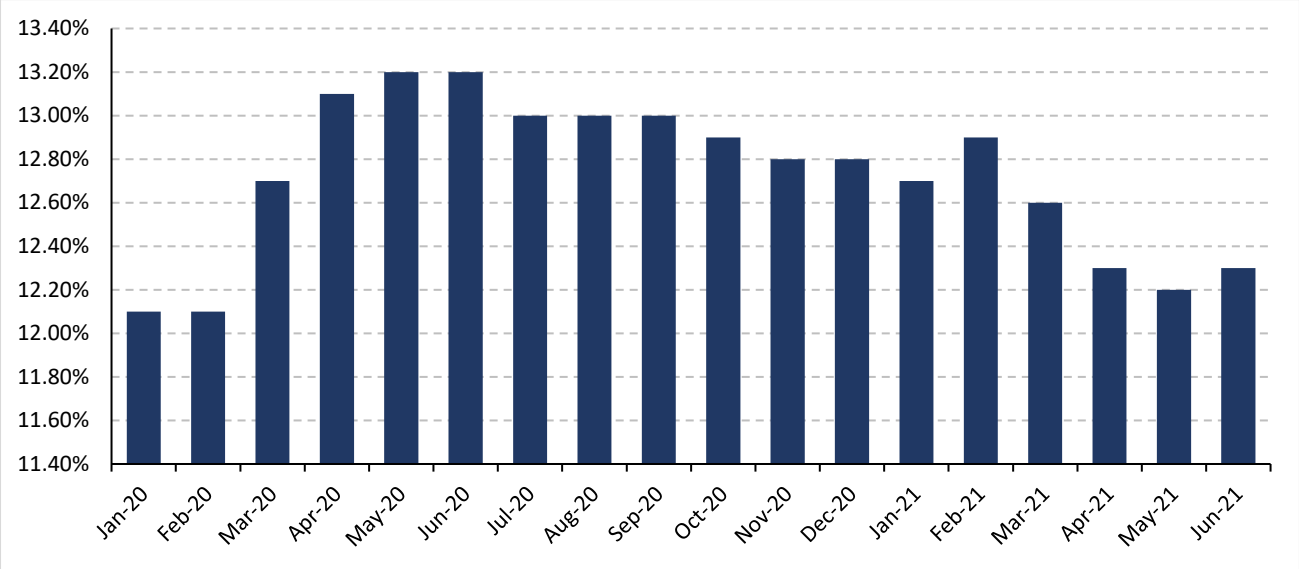
This large amount of additional government spending has been primarily funded by debt. The significantly higher levels of government spending have reduced the short-term negative economic impact of the COVID-19 crisis. This increase in welfare payments has allowed consumers to continue to spend even though many have been made unemployed during the crisis. This government spending has boosted short-term aggregate demand that in turn has temporarily helped to support higher pricing for some goods and services. Most of these additional government transfer payments will end in the next few months. Therefore, Hyperion believe the benefit to aggregate demand from these abnormally large government payments will start to fade in the second half of 2021 and into 2022.

The reduction in the level of welfare payments is likely to lead to lower levels of growth in both real economic activity and inflationary pressures over the next eighteen months.

Strong credit growth in China is fading

China is a key driver of global economic growth and has further stimulated its economy in reaction to the COVID-19 crisis. Credit growth was allowed to accelerate over the past year, and this has helped mitigate the short-term negative impacts of the COVID-19 crisis on the economy. This type of credit impulse has been a common reaction by the Chinese Communist Party to periods of potential low or negative economic growth in the past. There have been a series of these large credit impulses, particularly since the GFC and each of these has been associated with a general increase in commodity prices. As the current credit impulse fades, commodity prices are likely to suffer a period of weakness. Weaker future commodity prices are disinflationary.

Figure 12: China outstanding Yuan loan growth

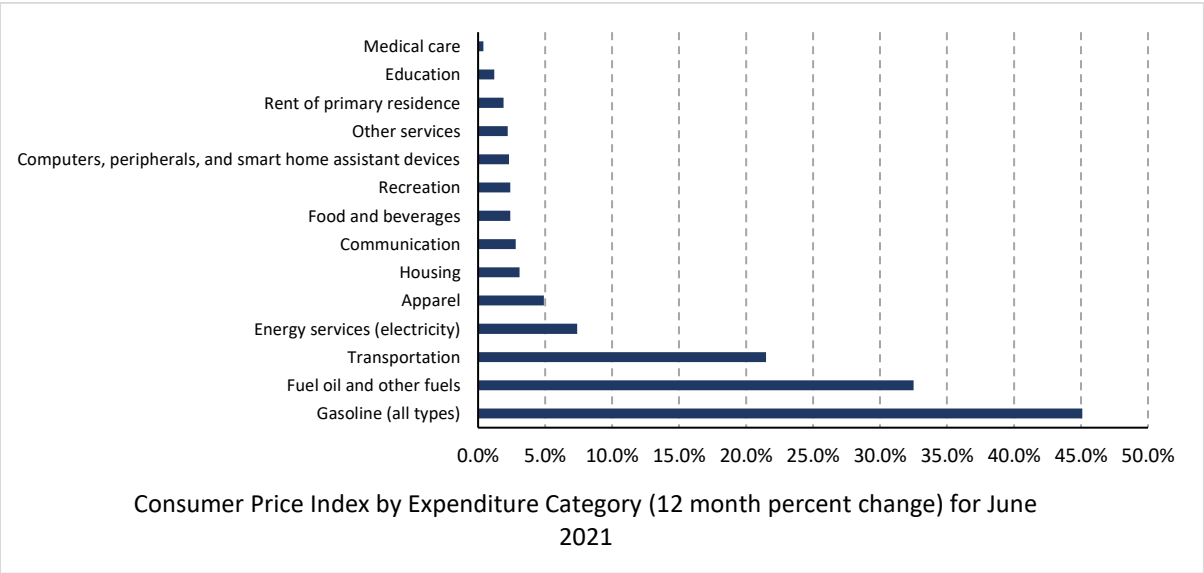


Source: *People's Bank of China, Trading Economics (2021)*

Increased demand for transport and travel related services and products

Finally, another temporary influence on inflation is the fact that demand for transportation and travel has gone from very low levels during the worst of the COVID-19 lockdowns to a more normalised level of demand currently. This has contributed to temporary price increases in used cars, gasoline and certain airline tickets.

Figure 13: Consumer price index by expenditure category in the U.S. (12-month percent change) for June 2021



Source: *U.S. Bureau of Labor Statistics. Data published in July 2021.*

In summary, these factors driving the recent increase in inflation are temporary in nature and are likely to recede over the next eighteen months. As the global economy more fully recovers from the COVID-19 crisis, deflationary structural forces will once again start to suppress inflation. Longer term, we believe these structural headwinds will overwhelm any future inflationary pressures.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

July 2021

Revisiting a low growth, low interest rate, low inflation world through COVID-19

Part 2 - Why the rotation to lower quality value stocks will not be sustained

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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In part 2 of our series, we explain why technology-based deflation, high and rising financialisation of the economic system, and key macro headwinds are impediments to inflation and real growth. This underpins our thesis that any rotation from high quality structural growth stocks to low quality value stocks will be temporary. We believe this is because most value style stocks are highly reliant on expansion in the size of the economy for their sales and profit growth. If the longer term outlook for both economic growth and inflation is poor than the performance of value style stocks is also likely to be poor.

Key factors that are expected to keep inflation at low levels in the long term

Since the onset of the GFC, our view has been that we face a low growth, low inflation, and low interest rate world. Each of the above factors are interrelated, positively correlated, and reinforcing over long time periods. Low levels of aggregate demand growth and overall real economic growth are supportive of lower inflationary pressures. That is, demand-pull inflation is less likely in a low aggregate demand growth world where real GDP growth is highly constrained. Low interest rate levels are generally associated with periods of low inflation and low real GDP growth. This is because government bond yields tend to be heavily influenced by the expected level of future nominal GDP growth.

We believe the world is facing **an extended period of technology-based innovation** and disruption. In fact, we believe we are at the onset of radical technological disruption and the cadence of innovative product launches should increase. Technology-based innovation by its very nature is deflationary because it results in better products at lower prices. Better products and services at lower prices result in a good type of deflation, because consumers enjoy an improvement in their standard of living for any given level of income.

This high level of innovation and disruption is likely to result in many "old world," or legacy, businesses that have historically dominated major industries suffering from declining sales and profits in the future. Many of these legacy businesses will be eventually forced to merge or go bankrupt. The process of these old world businesses failing economically because of weak and deteriorating value propositions will be deflationary. This is because these legacy businesses will ultimately be forced to discount their products and services in a futile attempt to maintain their market share and sales in the face of superior products from innovative companies.

Examples of innovation-based future deflationary factors include:

1) declining technology cost curves in solar, wind and batteries;
2) inexpensive transportation from autonomous based electric vehicles;
3) low-cost energy from distributed energy networks;
4) AI-based software and increasing automation that will reduce the value of human capital, and;
5) downward pressure on retail prices through increased transparency from the combination of smart phones and e-commerce.

Declining cost curves in renewables

Low-cost energy powered the second Industrial Revolution in the form of coal, oil and gas. Low-cost energy that is readily available forms the basis of modern civilisation and supports the standard of living of billions of people worldwide. Without inexpensive and easily accessible energy, civilisation would collapse into anarchy. The cost of energy is embedded in the price of all goods and services. Lower cost energy is deflationary. The cost of renewable energy generation is now less expensive than fossil fuel-based energy in most situations. Furthermore, renewable energy generation, primarily solar and wind, will continue to enjoy rapid declines in cost as the underlying technologies improve and the industry benefits from increasing economies of scale. This is a good, technology-based, deflation. In addition, advancements in battery technology and higher levels of scale in battery manufacturing will result in energy storage costs declining at double-digit rates per annum over the next decade. Recent advancements in battery technology include the 4680 battery cells designed by Tesla.

Cheap transportation from autonomous based electric vehicles

It is becoming increasingly likely that electric vehicle-based autonomous driving technology will be commercially available within the next five years (based on extrapolating current technological progress). Tesla is currently leading the race to full autonomy. Tesla is beta testing AI-based autonomous software, with billions of miles of real-world data from the multiple cameras and related sensors in its fleet of motor vehicles. As the number of Tesla vehicles sold increases, the number of miles driven by the fleet will continue to expand exponentially. The more miles driven, the faster the AI system learns and improves. Removing humans from driving motor vehicles will cause a significant reduction in the cost per mile of road-based transport. In addition, the use of autonomous vehicles will result in fewer road accidents and lower associated insurance costs. The cost of road-based transport for goods will decline as will the cost of ride share services. The use of electric vehicles, compared to combustion engine motor vehicles, will also help reduce the cost of road-based transport over the next decade. Electric vehicles have a lower cost of total ownership because the engine has far less complexity and fewer moving parts, resulting in lower cost of servicing. As the cost of electricity declines from increasing use of renewables in the power grid this will further lower the already material cost advantage that electric vehicles have in terms of cost of fuel. In addition, the economic life is much longer than a combustion engine motor vehicle, resulting in higher relative resale values for electric vehicles.

Low-cost energy from distributed networks

The cost of energy to households and businesses will also decline in the future as the current centralised power grid is transformed into a distributed power grid. In the long term, most buildings will be capable of generating and storing their own electricity. Most of the retail cost of electricity is from the cost of transporting electricity long distances across a network from a centralised power source.

AI-based software and increasing automation will reduce the value of human capital

We expect **wage growth to be subdued** over the next decade as human capital unsuccessfully competes with AI-based software and increasing levels of automation.

Historically, high levels of sustained wage growth have been associated with periods of high inflation. In our view, broad-based and sustained wage growth at high levels is unlikely over the next decade. This is because of expected declines in pricing power for human capital primarily from technology-based advancements, weaker aggregate demand growth and lower levels of work force unionisation. Computers and robots will continue to get better over time. Further software and hardware innovation will adversely impact the pricing

power of human capital. Historically, cost-push inflation has been primarily driven by higher wage costs. High wage inflation has tended to be associated with periods where organised labour unions had significant influence. The union movement is in a much weaker position today, and this weakness is likely to continue as heavily unionised second industrial revolution industries are disrupted.

The next decade is likely to see massive advancements in AI and machine learning that will result in the creation of smart "thinking machines" that will fundamentally displace human planning and decision making. This will result in lower pricing power for human capital. This situation can be contrasted with the second industrial revolution where "dumb" but powerful machines were combined with human knowledge and decision making. In the second industrial revolution, human capital still added significant value. Second Industrial revolution technologies destroyed mostly labour-intensive, repetitive, and inefficient jobs but at the same time created more service-based, thinking and decision-making jobs. These new less labour-intensive jobs involved functions and activities beyond the capability of computers and machines at that time.

Retail discounting from smart phones and globalised e-commerce

The ongoing increase in globalised competition will continue to keep profit margins low and help keep inflationary expectations low. This globalised competition is primarily the result of the internet and smart phones. With a smart phone (connected to the internet) most people can instantaneously price compare when they are buying a product or service. Smart phones are internet-connected super computers. Internet-connected smart phones place most buyers of products in a strong position of knowledge while global marketplaces provide consumers and businesses with excellent pricing knowledge and choice when making a purchasing decision. This globalised competitive environment is disinflationary, as it facilitates easy pricing comparisons by consumers from many global suppliers. This process forces demand to the lowest cost producers in a globalised marketplace.

The overuse of debt will reduce long-run growth and inflationary pressures

Structural economic headwinds (as discussed later in this paper), including high debt levels, will impede future growth in global aggregate demand over the long term. These headwinds will also be a factor in helping to keep growth in the prices of raw materials and commodities subdued.

China's strong economic growth rates started to significantly influence both commodity prices and overall global economic growth in the early 2000s. The positive influence of China on commodity prices and global economic growth increased further around the time of the GFC, when large debt funded spending programs were undertaken. A series of large credit impulses from China have been supportive of general commodity prices over the past decade and a half. Each of these credit impulses by China have been progressively less effective than earlier programs in stimulating economic growth. The progressive deterioration in the effectiveness of these large government backed spending programs is likely to continue in the future.

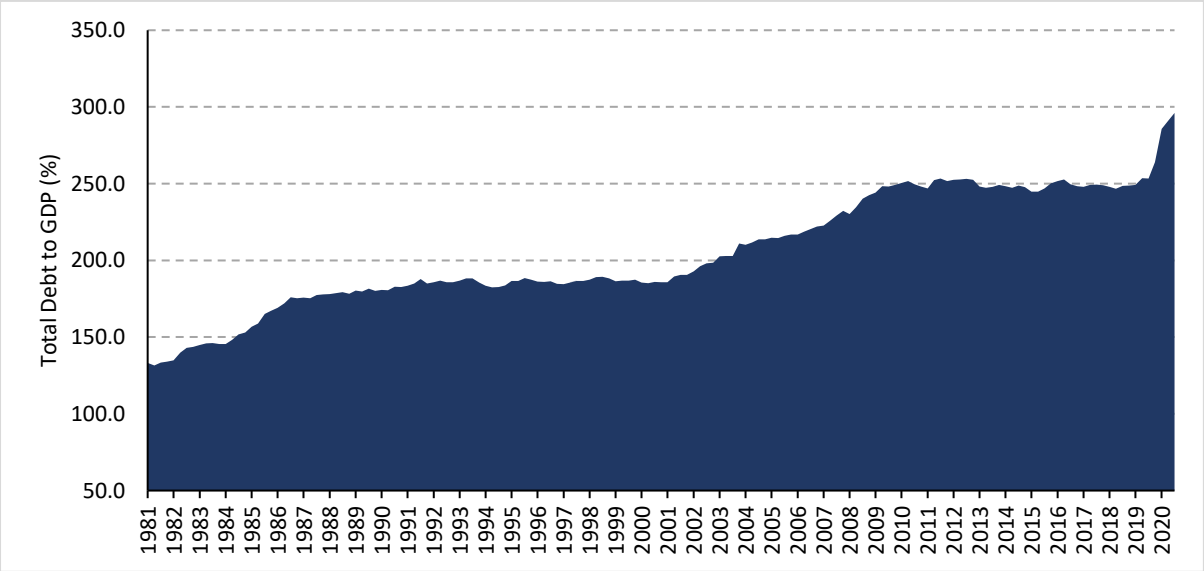
China now has a heavy debt burden that will impede its economic growth rates over the coming years. Thus, we think China's future credit impulses will have less of a positive impact on commodity prices and overall global economic growth over the next decade. Less support for commodity prices from China will be disinflationary.

We believe there are **diminishing returns from increasing use of debt.** The financialisation of society over the past half century has accelerated historical economic growth rates. Most major economies have used debt to help boost historical growth rates. In the U.S., total debt to GDP (where debt equates to total credit to the

non-financial sector) has increased from 133% in June 1981 to 296% in December 2020. Over the same time period, U.S. government debt to GDP has increased dramatically from 33% to 132%.

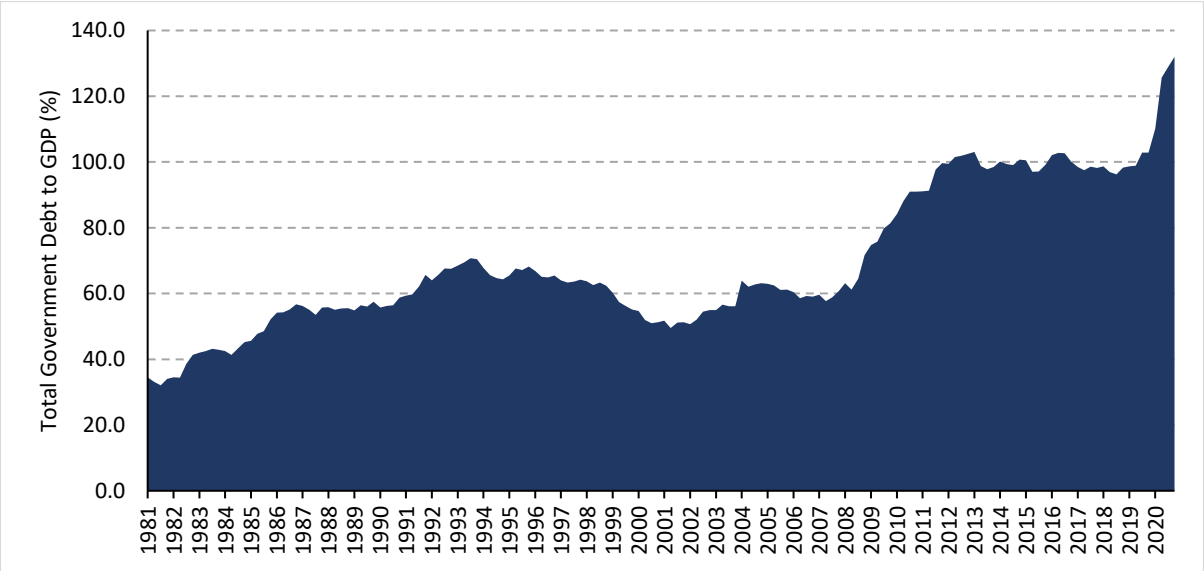
High debt levels impede future economic growth rates. The law of diminishing returns applies regarding the use of excessive levels of debt. Initially borrowing stimulates economic activity and the new debt is put to productive use, but as more debt is borrowed the productivity of that debt tends to decline. The high debt to GDP levels in the U.S., China and the Euro zone will impede future global growth rates. Lower aggregate demand growth and lower levels of economic growth are generally considered disinflationary.

Figure 14: Total debt to GDP - U.S. (%)



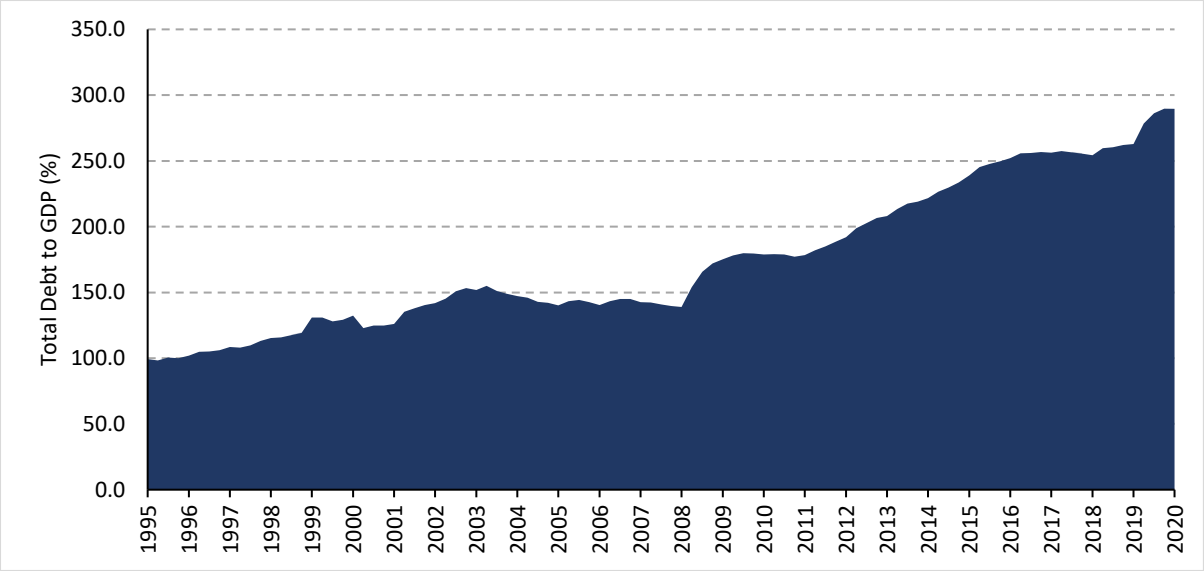
Source: *BIS (2020) United States Credit as percentage of GDP (Adjusted for breaks)*

Figure 15: Government debt to GDP - U.S. (%)



Source: *BIS (2020) United States Credit to General Government as percentage of GDP (Adjusted for breaks)*

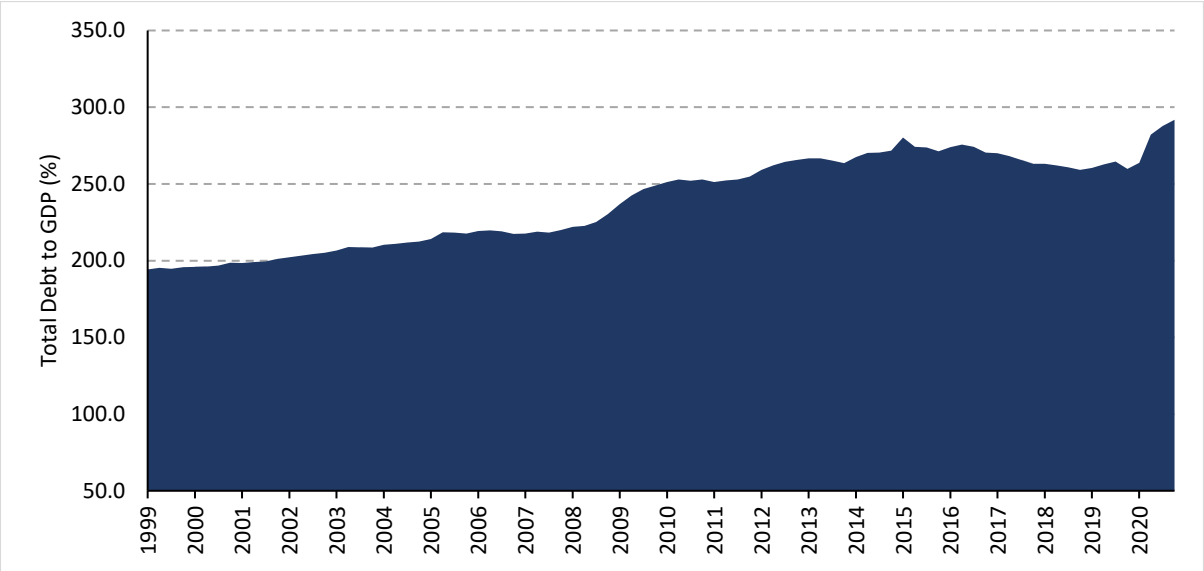
Figure 16: Total debt to GDP – China (%)



Source: *BIS (2020) China Credit as percentage of GDP (Adjusted for breaks)*

The countries in the Euro zone have also increased debt to GDP to high levels over the past couple of decades.

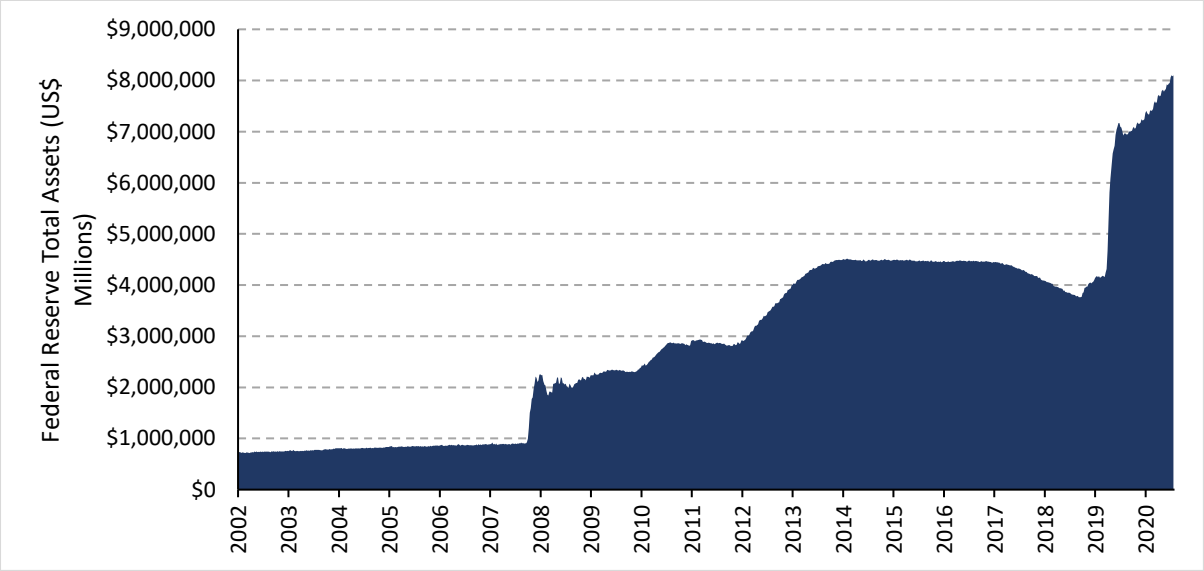
Figure 17: Total debt to GDP – Euro Zone (%)



Source: *BIS (2020) Euro Area Credit as percentage of GDP (Adjusted for breaks)*

The law of diminishing returns also applies to the aggressive monetary policies of most central banks in recent times. There has been a marked increase in the use by central banks of quantitative easing since the GFC. Japan was a pioneer in aggressive use of both government debt, to fund large spending programs, and quantitative easing policies. Money supply has been increased substantially in the U.S. and most other major economies in reaction to the COVID-19 crisis. The U.S. Federal Reserve's balance sheet has expanded from less than $1 trillion prior to the GFC to approximately $8 trillion today.

Figure 18: U.S. Federal Reserve balance sheet (US$ millions)



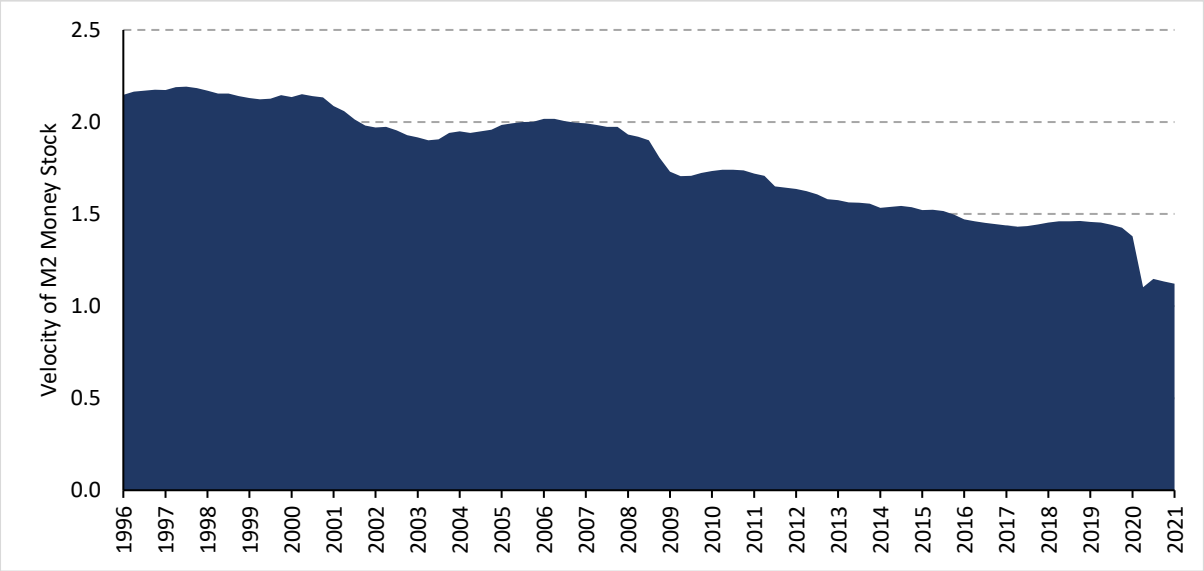
Source: *Federal Reserve Bank of St Louis (2021) Total Assets (Less Eliminations from Consolidation). Data in Millions of U.S. Dollars.*

We believe that the expansion of the Federal Reserve's balance sheet will not be inflationary because the underlying aggregate demand growth from consumers is likely to be weak over the long term. This can be seen from the consistent trend towards a **lower velocity of money** in the U.S. economy. The velocity of money is a measure of the frequency at which goods and services are purchased in an economy during a certain time. Velocity of money is calculated by dividing nominal GDP data by M2 money stock. A declining velocity of money as shown in Figure 9 below indicates that the increased money supply from quantitative easing is not being spent in the real economy. Thus, the increase in M2 money supply is unlikely to be inflationary while the velocity of money stays at low levels. It would require a massive and sustained increase in aggregate demand to drive the velocity of money significantly higher, and given the substantial economic headwinds the economy is facing, this appears unlikely.

The Federal Reserve's quantitative easing activities are unlikely to have a material impact on improving the rate of economic growth or to cause higher inflation. This is because the additional money that is created is used to buy financial assets like Government bonds which does not directly influence the real level of economic activity. The sellers of the bonds that the Federal Reserve buys with its printed money are unlikely to spend that money on purchasing real goods and services or capital investment in the real economy. As long as this remains the situation, quantitative easing and the expansion of the supply of money is unlikely to translate into higher levels of economic activity or higher inflation.

In contrast, the U.S. Government's recent increased spending on welfare payments because of the COVID-19 crisis does have a direct and positive impact on short-term economic activity. However, this money is borrowed, not printed, and there are legal requirements for this money to be repaid. The Government's borrowing money to fund spending boosts short-term economic growth but adds to the already large debt burden that will impede economic growth and be disinflationary in the long run.

Figure 19: Velocity of M2 money stock



Source: *Federal Reserve Bank of St Louis (2021) Velocity of M2 Money Stock*

Abundant levels of real economic growth will be short lived

Economic growth rates have been strong in recent times as the global economy recovers from the COVID-19 crisis. This strong growth associated with a cyclical recovery is likely to be short-lived. We believe that once the emergency government transfer payments and the base effect disappears from the short-term data, **the illusion of an abundance of growth will disappear.**

The structural headwinds that will ensure subdued levels of economic growth and low inflation in the medium to long term include the following:

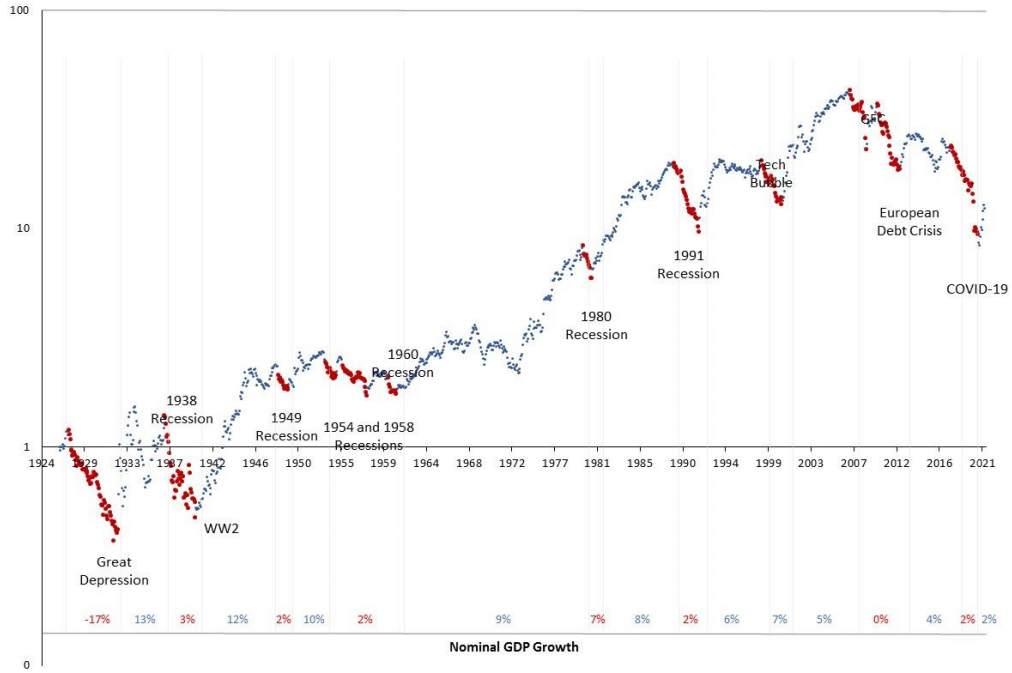
1) ageing populations;
2) declining population growth rates;
3) high debt levels;
4) rising wealth inequality and hollowing out of the middle class;
5) technology based innovation and disruption; and
6) increasing natural resource constraints and disruption.

As discussed in depth in previous white papers, demographics dictate that global economic growth rates are likely to remain low over the next decade. Debt levels across the major economies are too high for a rerun of the "Roaring Twenties". High debt levels will provide an ongoing drag on future rates of economic growth. Ageing populations and slowing population growth rates in most major economic regions will impede future levels of growth. Wealth inequality has been increasing in most major economies. Rising wealth inequality and a gradual hollowing out of the middle class in many countries will be a drag on future long-run economic growth. Technology-based innovation is likely to disrupt human capital markets globally as AI and ML progressively improve and ultimately achieve levels of decision making and planning that is better than humans. This should eventually lead to downward pressure on wage growth, employment growth and lower levels of real growth in aggregate demand. Finally, the adverse impact of climate change and natural resource constraints and disruption is also likely to impede future levels of economic growth. Over the long term, climate change will lead to more extreme weather events, materially different weather patterns and risk of flooding of major population areas, all of which will be highly disruptive to future economic activity.

Why the rotation to lower quality value stocks will not be sustained longer term

Given the poor long-term outlook for economic growth (both real and nominal) and the likely significant disruption from technology-based innovation, the current rotation to lower quality value stocks and away from higher quality growth stocks is unlikely to be sustained. The market has been focused on the cyclical recovery in economic growth and inflation that has occurred over the past eight months. The short-term profit growth of the overall market from this cyclical recovery has made growth temporarily abundant. Recently, momentum based short-term traders have been selling higher quality, structural growth stocks and buying lower quality stocks. This is because the short-term growth differential for revenue and profit between the high quality and low-quality stocks has narrowed and, in some cases, disappeared. This strong revenue and profit growth for the lower quality old world businesses is unlikely to be sustained beyond the next twelve months. In contrast, the higher growth rates associated with quality businesses are likely to be sustained longer-term because these businesses can grow by taking market share and are less reliant on economic growth for their own sales and profit growth. Also these higher quality stocks tend to be innovative and disruptive and thus less likely to be adversely impacted from future innovation and disruption. Therefore, we believe, the current rotation towards lower quality value stocks will end over the next 6-12 months and funds will be reallocated back to structural growth leaders in 2022 and beyond as growth again becomes scarce.

Figure 20: Fama French HML Index - Value Underperforms in Low Growth, Low Inflation, Low Confidence Environments



Source: *Kenneth R. French U.S. Research Returns Data (2021) Portfolios Formed on Book-to-Market* *http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html#Benchmarks*

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

July 2021

Revisiting a low growth, low interest rate, low inflation world through COVID-19

Part 3 - The relationship between real growth, inflation, interest rates and valuations

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Real rates of economic growth, inflation, interest rates and valuations are all interrelated.

Long-term government bond yields are largely determined by expectations for economic growth and stability (opportunity costs and associated economic risk) and inflation (reduction in the purchasing power of money). The return from long-dated government bonds represents the rate of return relating to overall economic growth in nominal terms. In other words, there are two key components of a government bond yield: 1) an opportunity cost component that relates to expected economic growth and stability levels that theoretically everyone can enjoy and benefit from, and 2) an inflation compensation component.

Long-dated government bond yields have increased over the past year as the economic outlook has improved and inflation expectations have increased. Recently, the 10-year U.S. government bond yield has risen sharply and is now approximately 136bps, compared to a low of 50bps last year. It is worth noting that this yield is still considerably lower than the average since the GFC of approximately 230bps.

Given the poor outlook for economic demand growth and the technology-based disruption the world faces, we continue to believe that any pickup in inflation over the next year is temporary and unlikely to be sustained over the long term.

High levels of inflation increase uncertainty for both consumers and businesses. High inflation is particularly damaging for holders of long-term bonds. This is because the return of the bond is set in nominal terms at the time of purchase, and a sustained increase in inflation will result in the real (inflation-adjusted) returns declining.

Equity holders are generally in a better position, because businesses have some potential to lift the prices they charge customers to help protect the real value of their future revenue and free cash flows. However, there will be many businesses that cannot pass on the cost of inflation and maintain their revenues and free cash flows in real terms. These stocks are likely to suffer materially from any sustained return to high inflation.

We continue to believe that inflation will remain lower for longer, **with our base assumption of 10-year U.S. bond yields to average 250bps over the next 10 years.**

Figure 21: U.S. 10-Year Treasury constant maturity rate over time

Source: *Federal Reserve Bank of St Louis (2021) 10-Year Treasury Constant Maturity Rate in Percent (Not Seasonally Adjusted)*

Discount rates are used to reduce estimated future cash flows to today's value. The higher the discount rate, the lower the current value of any set of future cash flows. The further out the cash flows are into the future, the larger the impact of the discount rate in reducing the present value of the cash flow.

Discount rates are a function of:

1) Expected rates of economic growth and associated predictability (general opportunity costs and economic risks);
2) Expected long-term rates of inflation (the rate of decline in the value of money); and
3) Risk perceptions.

Long-term government bond yields are largely a function of 1) and 2) above. Discount rates that influence stock prices are a function of 1), 2) and 3). If expectations for inflation levels over the long term increase dramatically, this would have a one-off impact on bond yields.

Stocks are attractive relative to bonds, as their future cash flows and intrinsic values can increase. In contrast, bonds have fixed coupons and fixed terminal values with strict time-based payment schedules.

The potential growth in the future cash flows without a maturity date is the most attractive aspect of investing in stocks. Discount rates reduce the present value of future cash flows, whereas future growth rates in free cash flows can increase the present value of a business. Growth in future free cash flows can come from two key areas: 1) sharing in the overall growth of the economy and/or 2) by taking market share from other competitors. As the size of the economic pie grows, businesses share in this growth. In periods of high growth in the economy, sales and profit growth is abundant, because most businesses share in this type of growth. In contrast, growth that comes from taking market share is difficult to obtain organically and is incredibly valuable in a low growth world. This type of growth is not reliant on the overall economy and can be a source of sales and free cash flow growth for a business, even in an economy that is shrinking.

The present value of a stock is potentially negatively impacted if the discount rate increases. All other things being equal, if any of these three factors (outlined above) that comprise the overall discount rate increase, then the present value of the stock will decline. The relevant discount rate is the bridge that connects the expected future free cash flows to the present value.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

July 2021

Revisiting a low growth, low interest rate, low inflation world through COVID-19

Part 4 - Why high-quality businesses can handle high inflation better than most other investments

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Stocks that have sustainable business models tend to have longer durations compared to lower quality, less sustainable stocks. That is, they sell on higher short-term price-earnings ratios and, therefore, more of their expected future free cash flows are further out in the future, compared with lower quality, less sustainable businesses. All other things being equal, longer duration assets, including stocks, tend to be more sensitive to changes in long-term bond yields and discount rates.

However, the duration of a stock, as a measure of its share price sensitivity to changes in interest rates, is only valid if the nominal growth rates in the future free cash flows do not change by a similar degree and match the change in long-term bond yields.

If the long-term expectation regarding nominal GDP growth increases by 1% (assuming this increase in economic growth is reflected in a 1% increase in long-term government bond yields) and the expectation for growth in future free cash flows also increases by 1%, then the present value of the stock should remain unchanged. Whereas, if the nominal future free cash flows do not increase or increase by a lower percentage relative to the bond yield increase, then the present value of the stock would decline.

Lower quality businesses tend to have shorter durations, because the market has lower levels of confidence that the business will have predictable free cash flows in the long term. That is, the market treats these businesses as being less robust and less sustainable. This is because lower short-term price-earnings ratios mean the potential future free cash flows are closer in time, and therefore the duration of these stocks is lower than a more sustainable, higher quality business. These lower quality companies tend to sell on lower short-term price-earnings ratios, and thus their market valuations are relatively less impacted by increases in discount rates relating to inflation and economic growth rates. Again, this statement is only true if the business cannot match the increase in interest rates with increased free cash flows.

Some resource and materials stocks have high levels of sensitivity to changes in nominal GDP growth rates. If the prices and/or volumes of the commodities they sell increase at rates above the rise in the relevant discount rate, then the present value of these stocks can increase even in the face of higher discount rates. Therefore, some lower quality stocks would have the ability to benefit from higher inflation. This situation would reduce the relative growth advantage that high quality, structural growth stocks would otherwise enjoy compared to resource and materials stocks.

As stated above, **the duration of a stock only becomes important in assessing the sensitivity of its valuation to changes in bond yields if it cannot change its future growth rates to match those changes in bond yields.**

A stock that cannot pass on its inflation-related costs to its customers will not be able to increase the growth rate of its future free cash flows sufficiently to fully offset increases in bond yields and discount rates. Therefore, its present value will decline in the face of higher bond yields and discount rates. The longer the

duration of such a stock, the more sensitive it will be to changes in bond yields and discount rates. Thus, **long duration businesses without pricing power will be more sensitive to any one-off changes in discount rates,** because they are generally valued based on cash flows that stretch out further into the future.

Businesses that have strong pricing power normally can offset any increase in long-term bond yields, because they can adjust their future free cash flows to compensate for the higher discount rate resulting from increased inflation or higher expected real economic growth rates.

The *relative* attractiveness of higher quality, structural growth companies compared with that of lower quality companies declines if expectations regarding future nominal GDP growth rates increase.

At the extreme, if the world could produce sustained high levels of economic growth, and associated profit growth was also strong and widely distributed, then the valuation gap (dispersion) between high quality, structural growth businesses and lower quality businesses would narrow. However, this high growth world has not existed since the GFC and is unlikely to exist in the future. Therefore, in a low growth world, high quality, structural growth businesses are significantly more valuable and therefore will be more highly rated and have longer durations compared with lower quality, low growth businesses.

This expectation of higher levels of overall nominal GDP growth can be driven by higher real economic growth rates and/or higher inflation. Higher rates of real economic growth are more beneficial than expectations of higher rates of inflation for stocks in general.

High quality, structural growth stocks tend to be less reliant on the overall rate of economic growth, compared with lower quality stocks. This is because high quality, structural growth stocks generally can grow their sales and profits through taking market share. Lower quality stocks generally do not have the ability to take market share. Therefore, higher levels of nominal economic growth reduce the growth premium that high quality stocks enjoy when economic growth expectations are more subdued. In other words, a lower gap between the sustainable growth rates of high quality and low quality stocks means that the market valuation differential between them declines. In high growth economic environments, growth becomes abundant (and subsequently less valuable), whereas in low growth economic environments growth becomes scarce (and subsequently more valuable).

All other things being equal, the higher the underlying structural growth of a business, the better its ability to recover from the negative impact of a one-off increase in the discount rate over time. High quality, structural growth businesses can compound their future free cash flows at higher rates that enable them to recoup any adverse change in government bond rates with more certainty.

In addition, high quality businesses tend to have strong value propositions that enable them to pass on higher inflation in their cost base more easily to their customers and thus maintain expected future free cash flows in real (inflation-adjusted) terms. This ability results in a situation where the nominal future free cash flows increase by the same amount as the bond yield, the discount rate, and the inflation rate.

On the other hand, many listed stocks would not have the ability to pass on high levels of inflationary costs onto their customers, so their real future cash flows would decline in the face of higher inflation levels.

Hyperion global equity strategy

Bonds do not have the ability to pass on increases in inflation and maintain the inflation-adjusted value of their future cash flows. We believe our global equity strategy does have this ability. Theoretically, the interest

rate sensitivity of the strategy should be higher than a 10-year zero coupon bond, as its duration would be longer than ten years.

We estimate that a 10-year zero coupon bond would be expected to decline in value by approximately 9% if 10-year government bond yields increased by 100bps because of an increase in inflation.

However, this longer duration is not relevant if the underlying free cash flows of the portfolio can be maintained in inflation-adjusted terms and fully match any increase in the relevant discount rate. Therefore, an increase in long-term government bond yields based on higher inflation should have no material impact on the intrinsic value of the strategy.

It should also be noted that the earnings-per-share growth for the portfolio is estimated to be approximately 20% per annum over the next fifteen years. Therefore, even if we assumed that the portfolio's underlying free cash flows were not able to fully offset a future increase in the long-term bond yield, the rising intrinsic value of the portfolio would be capable of recouping any one-off negative valuation impact from a future increase in the bond yield over time.

The stocks in the strategy should be able to retain their expected future free cash flows in real (after inflation) terms even if inflation levels increased. Therefore, higher levels of inflation, as reflected in higher long-term government bond yields and higher discount rates, would be fully or mostly offset by higher future levels of cash flows. Thus, the present value of the portfolio should remain unchanged from an increase in the discount rate that results from higher expected inflation levels.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

July 2021

Revisiting a low growth, low interest rate, low inflation world through COVID-19

Part 5 - What if our views on inflation turn out to be wrong

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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We believe higher inflation will be temporary. However, if we are wrong, our companies are much better placed relative to their benchmarks. Our reasoning is that, with strong pricing power, companies can pass on rising input prices to customers in the form of higher prices, without materially affecting their value proposition. High quality, structural growth companies should be considered inflation hedges.

Most companies do not have the ability to pass on rising input costs by increasing the prices charged to customers. This is particularly true in an internet- and smart phone-enabled, world where demand growth has been weak post-GFC, and the consumer is very price sensitive and has an abundance of choice. The world has globalised, competition has intensified, and disruption has accelerated as the world has modernised. All things being equal, businesses that are perceived as inflation hedges should be valued relatively higher by investors and should have higher weights in equity portfolios.

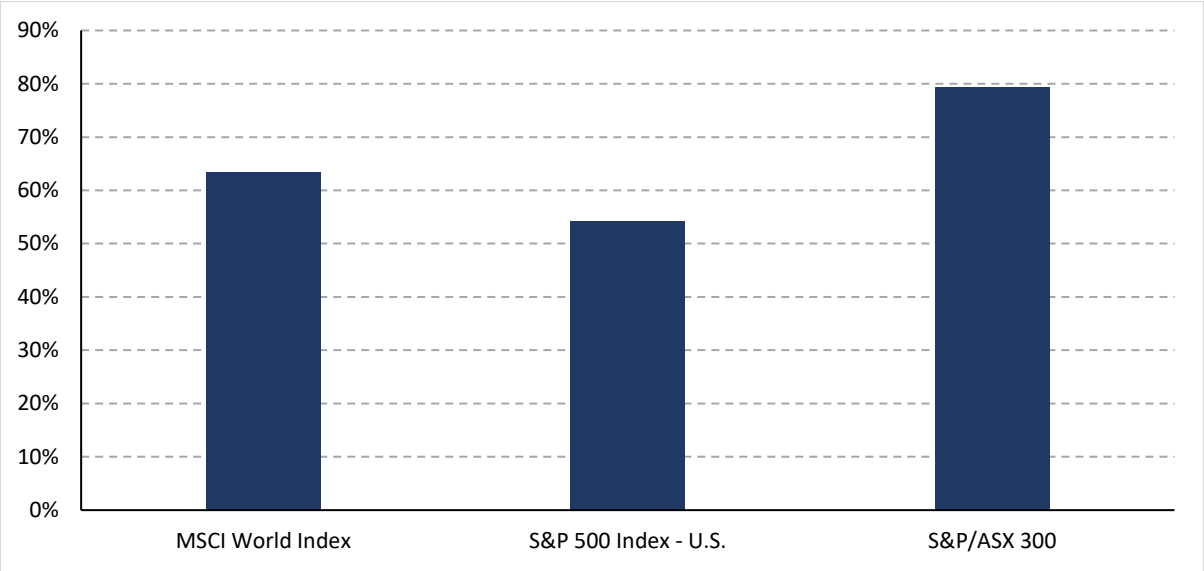
Hyperion has ranked the stocks in our global portfolio by their ability to act as an inflation hedge and believes our global equity strategy has a high degree of pricing power and, thus, defensiveness, in a high inflationary economic environment.

High quality, structural growth companies should perform better in a relative sense than broader equity benchmarks, which are dominated by "old world" businesses, which we define as those that are:

1) no or low growth; and/or
2) being disrupted by a far superior product or service.

Hyperion estimates 79% of the stocks (by index weight) in the Australian S&P/ASX300 Index can be categorised as old world. Outside Australia, 63% of the MSCI World Index and 54% of the U.S. S&P 500 Index have old world characteristics. This means the level of fundamental risk in the main benchmarks globally is high, as they are dominated by low growth businesses that are being disrupted by higher growth, more modern challengers. This disruption is being driven by the stronger value propositions that these modern businesses offer consumers. Over the next decade, we believe there will be significant levels of "creative destruction" as this transition from incumbents to challengers progresses. In this highly competitive environment, it will be difficult for these large, listed businesses to pass on any input cost pressures in the form of higher prices.

Figure 22: Proportion of benchmarks that are "old world"



Source: *FactSet, Hyperion. Hyperion has assigned companies with no or low expected EPS growth and/or with risk of permanent business model disruption as "old world".*

The largest companies by revenue globally are predominately businesses in traditional industries. The top ten businesses have nearly $US4 trillion of forecast aggregate revenue, with Amazon and Apple arguably the only modern businesses in this list. The top 20 businesses by forecast revenue ($US6.6 trillion of aggregate revenue) are dominated by traditional fossil fuel-based energy and automotive companies.

These old-world businesses are highly sensitive to economic activity levels. As the COVID-19 crisis impacted aggregate demand levels, transportation related services and oil and gas producers suffered declines in revenues, and this impacted their rankings in the 2020 year. Other old world companies, including the large auto OEMs, also suffered declines in revenues during the early part of the COVID-19 crisis.

Longer term, traditional fossil fuel-based energy and auto businesses will be disrupted by electric vehicles and renewable energy generation, storage and distribution. This disruption will result in these old world businesses permanently disappearing from the top of global revenue ranking lists. One of the largest beneficiaries of this shift should be Tesla. Overall, we believe trillions of dollars of revenue will be transferred from traditional legacy businesses to new market leaders over the next decade.

Table 1: Largest global companies by estimated FY2022 Revenue

Rank	Firm	Forecast Revenue (USD billion) *	Industry	MSCI World Index Weight Rank^	MSCI World Index Weight^	"Old World"	Fossil fuel based
1	Amazon	$581	Retail, Information Technology	3	2.54%	No	No
2	Walmart	$567	Retail	32	0.38%	Yes	No
3	State Grid	$390	Electricity	N/A	N/A	Yes	Yes
4	Saudi Aramco	$369	Oil and gas	N/A	N/A	Yes	Yes
5	Apple	$368	Electronics	1	3.97%	No	No
6	China National Petroleum	$366	Oil and gas	N/A	N/A	Yes	Yes
7	PetroChina	$358	Oil and gas	N/A	N/A	Yes	Yes
8	Royal Dutch Shell	$316	Oil and gas	134	0.14%	Yes	Yes
9	Volkswagen Group	$314	Automotive	261	0.08%	Yes	Yes
10	China State Construction Engineering	$309	Construction	N/A	N/A	Yes	Yes
11	UnitedHealth Group	$305	Healthcare	13	0.66%	Yes	No
12	Toyota Motor	$295	Automotive	48	0.32%	Yes	Yes
13	CVS Health	$294	Healthcare	98	0.19%	Yes	No
14	Berkshire Hathaway	$289	Financials	12	0.66%	Yes	No
15	Alphabet	$275	Information Technology	5	1.28%	No	No
16	ExxonMobil	$271	Oil and gas	23	0.46%	Yes	Yes
17	Samsung Electronics	$263	Electronics	297	0.07%	Yes	No
18	McKesson	$259	Healthcare	428	0.05%	Yes	No
19	BP	$244	Oil and gas	120	0.15%	Yes	Yes
20	Glencore International	$231	Commodities	297	0.07%	Yes	Yes

***Source:** FactSet, Fortune, Forbes, Hyperion. Forecasts are FY22 FactSet consensus figures converted to USD billions from local currency. Note: State Grid forecast uses Statista 2020 revenue figure converted to USD; China National Petroleum forecast uses 2019 FactSet data. Largest companies sourced from 2021 Fortune 1000 and 2021 Forbes 2000 Global company rankings. MSCI World Index Rank by constituent weight. Data as at 30 June 2021. Hyperion has assigned companies with no or low expected EPS growth and/or with risk of permanent business model disruption as "old world". Volkswagen Group and Toyota Motor are classified as fossil fuel based due to low proportions of vehicles sold being electric vehicles.*

Conversely, we define "new world" businesses as those that are:

1) disrupting incumbent businesses through innovation and by creating products that are significantly better and/or cheaper than existing legacy products; and

2) likely to be able to produce high sustained relative growth rates in the long run by expanding into large addressable markets and sustaining their innovative cultures.

Listed equity markets are typically dominated by large, incumbent, mature businesses. Furthermore, these businesses (and the corresponding investments in their listed security) were often developed through effectively understanding and targeting the growing baby boomer cohort. Over time, consumer behaviour and corresponding investment decisions will be driven by a younger generation that are digital natives and are better educated and globally aware. We believe changes in behaviour and patterns of consumption will be fundamentally driven and structural.

In terms of U.S. retail spend, Gen X and older is 68% of this spend, with Millennials at 27% and the next generation, Gen Z, at 5%. However, by 2030 this is forecast to shift to Gen X and older at 52%, Millennials at 31% and Gen Z at 17%[4]. Currently, Millennial and Gen Z represent only 31% of total spend and 37% of retail spend despite being 50% of the work force[5].

The sustainable nominal growth rates of most listed businesses over the next ten years are likely to be weak relative to the past five decades, particularly when compared with the high growth period before the GFC. In a high inflation environment with low rates of real economic growth, the earnings streams (in real terms) of these average quality businesses will be even more challenged.

Businesses that can sustain high real growth rates typically have the following attributes:

1) strong and sustainable value propositions;

2) innovative cultures that actively improve the features and quality of the existing products and create new products over time;

3) yet to fully monetise the value of their existing product offering; and

[4] Forecasts based on the University of Michigan Panel Study of Income Dynamic 2005-2017, Bureau of Labor Statistics CE Generation Tables, Census Bureau Population projections for United States.
[5] Australian Bureau of Statistics Labour Force Survey, May 2020; Australian Bureau of Statistics Census 2016. HILDA Wave 18 Note: Definition of generations in this report: Gen Z includes individuals born after 1996, Millennials includes individuals born between 1981 - 1996, Gen X are individuals born between 1965 - 1980, Older generation are individuals born before 1965. Retail spend includes clothing and footwear, home repairs, renovation and maintenance, medicines, prescriptions and pharmaceuticals.

4) revenues that are small relative to the size of their total addressable market ("TAM").

However, most businesses operate in a competitive industry structure and do not have the value proposition to sustainably increase (relative) prices to consumers. Consumers have been increasingly exposed to more frequent and larger discounting, including specific promotional periods. When product differentiation is low and choice is plentiful, the ability to increase relative prices is poor. We believe this is the typical operating environment most businesses face. It is only the few exceptional businesses that have strong pricing power.

Companies with strong pricing power typically have:

1) a perceived scarcity factor through strong branding and heritage;
2) controllable or limited product supply;
3) an exceptionally strong value proposition relative to competitors; and/or
4) limited competition in terms of alternative products (which typically denotes a technological or regulatory advantage).

Hyperion attempts to identify exceptional companies with a compelling value proposition and competitive advantage that offers strong pricing power. These companies are rare, as they tend to have natural monopolistic characteristics such as a network effects or a perceived scarcity factor, such as some global ultra-luxury brand names. For example, we estimate the price of Hermes' flagship Birkin handbag has compounded at double-digit rates over the past 30 years in the second-hand market. Some rare disorders that are life threatening can cost hundreds of thousands of dollars to treat, including some immunoglobulin products supplied by CSL. We estimate REA Group as the owner of realestate.com.au has increased its prices by high single-digit rates over the past ten years (with revenue growth significantly higher due to the migration of customers onto premium products).

Companies with strong pricing power can offset increases in input costs with higher prices for their services or products without affecting their value proposition. This means real earnings are preserved. Companies with commoditised products may not be able to pass through any meaningful amount of their higher input costs, resulting in declines in their real earnings.

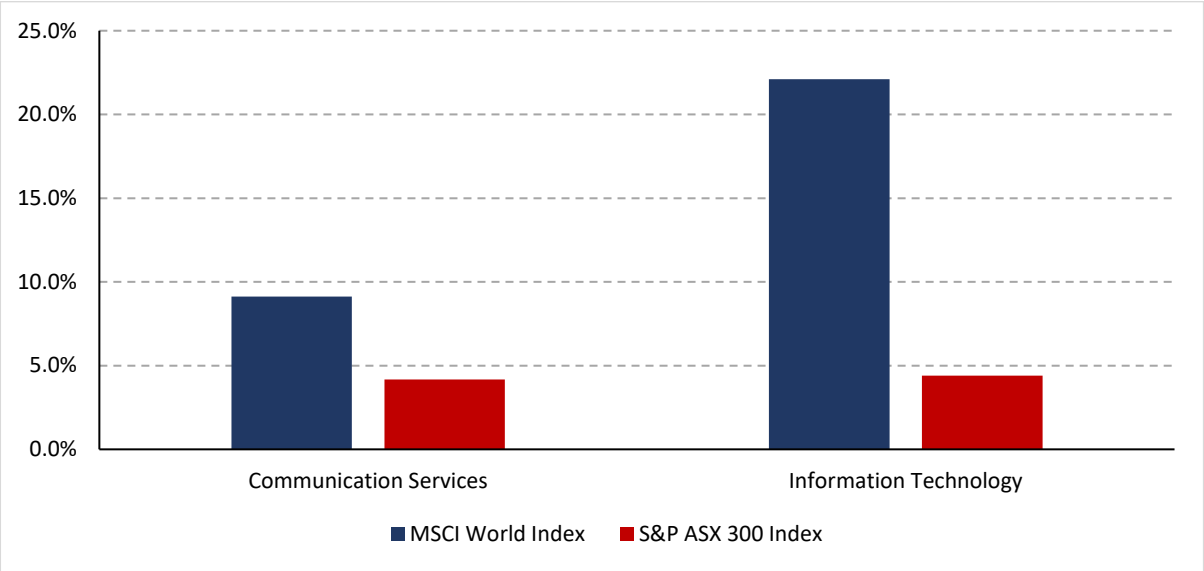
Historically, some commodities and non-fiat currencies such as gold have been considered good inflation hedges. However, we believe **software companies will be identified as more effective, modern inflation hedges** going forward. These companies typically have software that is absorbed in the workflow of an organisation, which means there are high switching costs. Often the software is under-monetised relative to its value, as the focus has been growing its user base and capturing the addressable market opportunity rather than optimising pricing. Companies that have strong market positions and a loyal user base paying relatively low monthly subscription fees could substantially increase their prices. Globally, examples include flagship products from both Salesforce and Atlassian, who charge relatively low monthly subscriptions for access to their software. Domestically, examples include core products from both WiseTech Global ("WiseTech") and Xero. For example, we understand WiseTech through its CargoWise One platform only charges a small amount at the point of value transfer (time of invoice) for each transaction. Based on the complex problems WiseTech helps solve for its customers and the limited cloud based available alternatives, we believe these fees could be increased substantially while retaining its customer base.

Businesses such as Tencent and Alibaba that have large, loyal customer bases but have low take rates and revenue streams from advertising and payments relative to Western peers also should have an ability to increase their take rate in an inflationary environment.

Software has moved from the edges of society and business to the core over the past decade. This trend has accelerated through COVID-19. However, software, as largely represented by the classification of Information Technology and to a lesser extent Communication Services, is still a relatively small percentage of the major equity benchmarks. This contrasts with Hyperion's portfolios, where most of the stocks are innovative and modern businesses that use technology well.

We estimate software represents less than 30% of developed global equities and less than 8% of the Australian listed market. The Information Technology and Communication Services sectors currently have weights of 22% and 9%, respectively, in the MSCI World Index. Furthermore, Information Technology and Communication Services is 4.4% and 4.2%, respectively, of the S&P/ASX300 Index[6]. We believe software is a good segment of the market to discover companies with strong pricing power.

Figure 23: MSCI World Index and S&P/ASX 300 Index sector weightings



Source: *FactSet. Data as at 30 June 2021.*

Higher quality businesses have more pricing power and are in a better position to pass on any inflation-based increases in their cost base by lifting the prices they charge their customers. Thus, they are in a good position to retain the "real" (inflation-adjusted) value of their future free cash flows. In this situation, the long duration nature of higher quality stocks is not relevant to their present value. That is, if these businesses can increase the nominal rate of growth in their future free cash flows sufficiently to offset any increase in the discount rate resulting from an increase in inflationary expectations, then the present value remains unchanged.

In addition, extremely high structural growth stocks are in a better position to handle high levels of inflation compared with stocks with a more modest growth rate. Even if we assume these high-quality stocks are not in a position to increase the nominal value of their future free cash flows and thus retain the real value of those free cash flows, the relative impact on the cash flow is lower.

[6] GICS Sector weightings as at 30 June 2021. Source: FactSet.

In a relative sense, the higher the nominal structural growth rate for a company, the less the real growth rate declines for any given increase in inflation. A business with a 40% structural growth rate with 10% inflation suffers a 25% decline in real structural growth (compared to a zero-inflation situation). Contrast that with a 20% nominal growth rate company that would suffer a 50% decline in real growth from a move in inflation from 0% to 10%.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

July 2021

Appendix 1

Table 2: U.S Real Gross Domestic Product: Percent Change from Quarter One Year Ago (Billions of U.S. Dollars)

	2019				2020				2021
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1 (r)
Gross Domestic Product (GDP)	2.3	2.0	2.1	2.3	0.3	-9.0	-2.8	-2.4	0.4
Personal Consumption Expenditures (PCE)	2.3	2.4	2.5	2.5	0.2	-10.2	-2.8	-2.7	1.8
Goods	3.0	3.9	4.2	3.7	3.1	-1.7	7.2	6.7	13.2
Durable Goods	3.4	4.7	5.5	5.7	2.0	-1.5	12.8	11.6	27.6
Nondurable Goods	2.8	3.5	3.6	2.7	3.6	-1.8	4.3	4.1	6.0
Services	2.0	1.8	1.7	1.9	-1.1	-14.0	-7.3	-6.8	-3.3

Source: *U.S. Bureau of Economic Analysis (2021). Note: (r) denotes revised estimates. Data from latest U.S. Bureau of Economic Analysis release on 24 June 2021*.

Table 3: Expenditure on goods as % of GDP has increased during the COVID-19 crisis

	2019	2020				2021
	Q4	Q1	Q2	Q3	Q4	Q1 (r)
Gross domestic product (GDP)	*19,254.0*	*19,010.8*	*17,302.5*	*18,596.5*	*18,794.4*	*19,086.4*
Personal consumption expenditures	13,353.7	13,118.4	11,860.3	12,924.7	12,999.1	13,353.3
Percentage of Total GDP (%)	69.4%	69.0%	68.5%	69.5%	69.2%	70.0%
Goods	4,811.8	4,812.9	4,677.4	5,152.4	5,134.3	5,446.7
Percentage of Total GDP (%)	25.0%	25.3%	27.0%	27.7%	27.3%	28.5%
Durable goods	1,811.7	1,752.0	1,744.6	2,028.2	2,022.6	2,235.3
Percentage of Total GDP (%)	9.4%	9.2%	10.1%	10.9%	10.8%	11.7%
Nondurable goods	3,018.2	3,070.6	2,947.9	3,154.5	3,142.1	3,255.4
Percentage of Total GDP (%)	15.7%	16.2%	17.0%	17.0%	16.7%	17.1%
Services	8,584.9	8,365.3	7,306.9	7,919.6	8,002.5	8,085.4
Percentage of Total GDP (%)	44.6%	44.0%	42.2%	42.6%	42.6%	42.4%

Source: *U.S. Bureau of Economic Analysis (2021). Note: (r) denotes revised estimates. Figures presented in Billions of chained (2012) U.S. Dollars, seasonally adjusted at annual rates. Data from latest U.S. Bureau of Economic Analysis release on 24 June 2021.*

Hyperion's Mission, Values and Beliefs – Updated For 2021

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Hyperion's mission

Hyperion's mission is to protect and grow our clients' capital sustainably over the long term.

The trust that we have built with our clients and other stakeholders over more than two decades, is the key reason that Hyperion still exists in the ultra-competitive and globalised funds management industry. A track record of long-term alpha (excess returns above a relevant benchmark) is rare and valuable. It provides objective and verifiable evidence to third parties that we have a philosophy, process and structure that exploits inefficiencies in equity markets. It also provides the clients and other key stakeholders the confidence that we can continue to add value longer-term.

The key elements of our mission are to:

1) protect client capital; and
2) grow client capital over the long term.

We seek to construct and manage share portfolios that are designed to protect our clients' capital first and then grow that capital over the long term. We call this "protect and grow" and it is fundamental to how we analyse businesses and construct portfolios.

1) Mission to Protect Capital

We view risk as a permanent loss of capital at the portfolio level, not the volatility of market-based returns. We believe traditional metrics such as beta, Sharpe ratio and tracking error have limited inherent value in assessing the risk, quality and structural growth embedded in a portfolio of stocks.

Permanent loss of capital is where the underlying intrinsic value of the portfolio suffers a permanent decline that is so material that it is unlikely to be recovered in real terms. We do not believe a large decline in the market value of the portfolio during an economic or market crisis is a fundamental risk, provided the long-term intrinsic value of the portfolio remains intact and the share prices and the market value of the portfolio are likely to recover. We believe you cannot predict short-term share prices consistently, but you can take advantage of these share price movements by comparing them to the long-term intrinsic value of the related business.

We seek to protect client capital by only investing in businesses that have high quality attributes, including strong value propositions, sustainable competitive advantages, innovative creative cultures and large addressable markets. These elements, together with our proprietary portfolio management system that sets stock weights based on risk adjusted long-term forecast returns, aim to help protect clients' capital. Our portfolios comprise a group of well selected stocks that have both the quality attributes we seek and trade at a significant discount to their estimated long-term intrinsic values.

We believe our portfolios comprise businesses that are robust, resilient and have significant long-term structural growth. The long-term earnings growth of our portfolios should not only be higher on average than their relevant benchmarks, but they should also be more resilient to economic shocks. Potential customers become more discerning in difficult economic conditions, and in turn they drive accelerated market share shifts towards better value products during these periods.

In difficult economic and market circumstances, clients tend to be more focused on capital protection. It is during these challenging periods that it becomes more obvious who has taken extra fundamental risk, because higher risk businesses tend to suffer more in depressed economic circumstances.

"Only when the tide goes out do you discover who's been swimming naked." Warren Buffett

2) Mission to Grow Capital

Over long time periods, we expect our portfolios to produce total returns after fees that are well above the returns of the relevant equity benchmarks. All of our key investment strategies including the Hyperion Australian Growth Companies Fund, the Hyperion Small Growth Companies Fund and the Hyperion Global Growth Companies Fund (Managed Fund) have achieved substantial alpha after fees since their inception.

We have successfully achieved long-term attractive returns through varied economic and market cycles. This includes both the generally strong economic conditions from 1996 up until the GFC in 2008 and in the more difficult economic conditions since such as the onset of COVID-19.

Sustainability and "long-termism" are core to our philosophy. We are long-term business owners that buy the highest quality companies in the relevant investable universe. We do not buy stocks with a particular exit strategy in mind. When we buy a listed business, we ideally want to own it over the long term and hope to benefit from sustainable growth in its positive free cash flows.

Over time, the businesses in our portfolios tend to grow their sales at double digit rates. This strong underlying structural growth also results in double-digit earnings per share (EPS) growth for our portfolios over extended time periods. Share prices tend to follow the long-term earnings trajectory of a security. Alpha accrues as the EPS growth at the portfolio level exceeds the EPS growth of the benchmark.

The businesses in our portfolios typically can grow their underlying revenue organically even when the overall economy is stagnant or shrinking. These businesses generally have addressable markets that are much larger than their current revenues, and they also have attractive products and services that many potential customers have not purchased. Thus, the raw underlying demand for the company's products or services generally is much larger than the current ability of the business to supply that product or service.

We believe "good things happen to good businesses," such that the intrinsic value of the best listed businesses should be able to grow at double-digit rates over the long term. Through innovation, long-termism and R&D, these businesses have significant embedded positive optionality in their long-term future free cash flows. Thus, not only do we purchase businesses at prices significantly below their intrinsic values, but we expect these intrinsic values to increase over time.

Hyperion's Values and Beliefs

Our core belief is that portfolios managed in a disciplined manner in accordance with Hyperion's investment process and philosophy will produce attractive investment returns over the long term.

Our six core values are summarised as follows:

1) Research driven, not marketing driven

Our organisational culture is research driven and investment led. We are not a marketing or sales-based business. Our primary focus is long-term stewardship of our clients' capital, not salesmanship.

We are an alpha seeking rather than an asset gathering organisation. Most of our current funds under management (FUM) is from investment returns including substantial long-term alpha, with client contributions representing a minority of FUM.

We believe in growing our FUM primarily through investing capital not gathering assets. Our staff are heavily invested in Hyperion's products so that both the staff and clients benefit from any alpha generation over time. The Lead Portfolio Managers' financial incentives are primarily based on rolling five-year alpha and above.

2) Evidence based; merit based

Fundamental research and understanding are central to how we invest. We invest based on knowledge and evidence. We do not speculate on short-term share price directions or chase short-term momentum. This relates to our mission of protecting and growing clients' capital and to our long-term investment approach as business owners. We complete a standardised detailed research report and financial model for every stock in our universe. The vast majority of stocks do not possess the characteristics we are seeking, and we remain disciplined not to deviate from our process. In every investment decision we make, we try to be rational, objective and employ relevant evidence.

3) Think long-term

We think and invest using a long-term framework and process. Our investment process and proprietary portfolio management system are designed with the aim of generating attractive returns over the long term . It is difficult to overstate the importance of a long-term framework for decision making. Our portfolio turnover levels are low. Our stock name turnover is typically around 10%, meaning on average we will hold a stock for 10 years. We also expect our staff to take a long-term view regarding how they act, make decisions and direct their energies within the business.

We believe that short-termism is pervasive across the active funds management industry. Hyperion fights this short-termism in many ways, including our mission, values, beliefs, our structured investment process, the way the investment team is structured and the way the business is managed. Everything we do has a focus on the long term and sustainability of the value that we create for our clients and other stakeholders. Our investment team members are always expected to take a long- term view when guiding their decision making and behaviour. This is reflected in our remuneration model, with the key element being potential equity ownership for key long-term contributors.

4) Alpha focused

We know Hyperion only exists because clients believe that we can generate future excess investment returns over the long term. It is long-term alpha that we seek to achieve for clients, not short-term alpha through trading activity. "No Long-term Alpha, No Hyperion."

5) Business owners, not share traders

We invest in listed equities with a long-term business owner mind set. We do not seek to make short-term trading-based profits. When we buy a stock, we are hopeful that we will end up holding that business in the portfolio for decades. We do not buy stocks with a view to an exit plan or some catalyst to realise a short-term profit. We believe this an important point of difference where many market participants say they are long-term investors but have high portfolio turnover and a trading-based mindset and culture.

6) Collective First

We focus on the collective group of stakeholders and place clients and the firm first and ourselves as individuals second. A group should be able to out-perform an individual, but only if the collective functions well as a team.

Conclusion

Hyperion's values are centred around our belief in the inherent worth of investing our clients' capital with the mindset of long-term business owners. We are not interested in investing in most listed businesses, because we believe these businesses have poor long-term economics. We believe in investing exclusively in the highest quality, modern businesses within our relevant investable universe. These high-quality businesses have structural growth and superior economics. We believe that high quality, structural growth companies are typically undervalued by markets and that creating a portfolio of these businesses will result in attractive returns over the long term. Our investment process includes our standardised research template (report), standardised financial model and proprietary portfolio management system. We believe if we execute this process well as an investment team, we have the framework to create portfolios that seek to protect and grow our clients' capital over the long term.

Meaningful long-term alpha generation (after fees) is incredibly rare and is thus valuable to our clients. Hyperion has demonstrated an ability to generate long-term alpha since its establishment in 1996. Provided clients and other stakeholders believe that the portfolios Hyperion creates have the attributes that aims to protect clients' capital and produce sustainable, attractive long-term returns, then Hyperion will continue to exist and thrive.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

June 2021

How Hyperion Aims to Protect and Grow Your Investment – Updated For 2021

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Hyperion Asset Management "Hyperion" is a client-centric, alpha seeking business; our primary objective is to protect and grow our clients' capital sustainably over the long term through our philosophy of investing in the highest quality businesses. Our approach has resulted in above benchmark returns for our clients over the long term. Hyperion has been successfully managing listed equity portfolios for clients since 1996 and currently manages approximately $10 billion on behalf of our clients, including $2.4 billion in internationally listed equities.

Economic outlook and portfolio construction

When economic conditions are favourable most businesses can do well and in the short term, portfolios containing average and low-quality firms may well have strong performance. However, over the longer term there are both upturns and downturns in economic cycles, sometimes for prolonged periods of time and in the longer run, returns of portfolios containing average and low-quality businesses suffer. Prior to the GFC, many below average businesses steadily grew their earnings, often assisted by financial leverage. The earnings and the associated share price appreciation produced in these buoyant economic conditions were illusionary and not sustainable in more modest economic conditions.

Hyperion aims to maintain a portfolio of stocks that are robust and resilient, even in downturns and difficult economic environments. The investment processes of Hyperion are designed to weed out average and low-quality businesses allowing the investment team to focus their research efforts on only high-quality businesses that are positioned to sustain and grow even in harsh economic climates. For example, Hyperion's portfolios have been stress tested and significantly outperformed through difficult economic conditions such as the GFC, European debt crisis and the COVID-19 crisis.

In the period since the GFC, economic conditions have been subdued. The global economy is currently recovering from the COVID-19 crisis, global growth rates have been strong partly because of many countries adoption of aggressive monetary and fiscal policy, which has inflated asset prices and helped reduced unemployment from the high levels experienced during 2020. More importantly however, the long-term macro-economic outlook is for continued low levels of economic growth globally. Compared with the strong economic conditions that the global economy enjoyed in the six decades between the end of WW2 and the GFC, the long-term growth outlook is modest at best. We believe the world is likely to continue to experience low inflation, low growth, and low interest rate conditions for decades to come.

The key structural headwinds impeding the economic growth outlook include ageing populations, high consumer and government debt levels, rising levels of inequality in most countries, the increasingly disruptive impacts of climate change, artificial intelligence (AI), and robotics. Under these low growth economic conditions, it will be difficult for average businesses to thrive or even survive; whereas high quality businesses are the last to be affected by difficult economic conditions and are ultimately positioned to take market share. Businesses with structural tailwinds, innovative cultures that can adapt to and drive change, and sustainable

capital structures (i.e., strong balance sheets) have a significant advantage over average and low-quality businesses.

What characteristics do high quality businesses have that gives them an advantage even in economic downturns?

Four key characteristics that Hyperion seeks when identifying high quality businesses are:

1. Proven structural growth (tailwinds);
2. Innovative cultures;
3. Low debt levels; and
4. Sustainability.

Proven structural growth (tailwinds)

Businesses that have structural growth tailwinds, include those businesses that can grow by utilising disruptive technologies that are the cause of fundamental change in industries. Lower quality businesses tend to be those that are enmeshed in old technology, are unable to recognise and/or respond to disruption and are beholden to economic cycles. These businesses are either unwilling to accept change or not in a position to transfer to the disruptive technology quickly or efficiently. As such, these companies lose market share. This is an outcome that is likely to be detrimental to longer-term survival and a problem that increases in magnitude in a low growth economy.

Hyperion looks for firms that have created products with strong value propositions that have the potential to expand addressable markets and take revenues away from traditional competitors. Examples of portfolio firms that have successfully disrupted industries and have structural growth tailwinds are Amazon in the retail sector, Alphabet in media and advertising, and PayPal in the payments sector.

Innovative Culture

In order to position a business to recognise and benefit from disruption and structural change it needs to have an organisational culture that embraces innovation. Hyperion views high quality firms as having a culture of innovation. This culture needs to be observed through the whole of the business from top management down. Examples of attributes associated with an innovative culture would be: (i) senior management's understanding and insight regarding the influences of change on their product and market; (ii) appropriate investment in research and development; and (iii) creation of environments structured to encourage an innovative workforce (e.g., Google's campuses built to facilitate "smart creatives"). These are just some of the characteristics the Hyperion investment team seeks when identifying high-quality businesses. Furthermore, senior management needs to be able to convert this culture into a successful commercial reality.

A strong balance sheet

The Hyperion investment team view high quality firms as having low debt levels. The reason for this is that shareholders in firms that have low debt levels are less likely to experience binomial outcomes during difficult economic times. Having low debt levels affords businesses the ability to make decisions without the threat of liquidation if the business goes through periods of adverse change or low growth.

Sustainability

Sustainability has been core to Hyperion's investment philosophy and process since it was established in 1996. Hyperion has a long-term investment horizon of 10 years or greater, and we have always invested as business owners, not short-term share traders. This is evidenced by the fact that historically our average stock holding period for our portfolios is approximately 10 years. We only invest our clients' capital in those businesses that we believe are extremely high-quality with strong and sustainable value propositions to all stakeholders. The stakeholders include the wider community and an assessment of the company's future likely long-term impact on the overall natural environment, including its carbon footprint. Sustainability assists in reducing the risks of any permanent loss of capital across our holdings. Eventually, companies that externalise costs, will be forced by external stakeholders to internalise them – either through regulation or changing expectations of society. As such, long-term sustainability is a core component of our philosophy.

We believe our portfolios contain very low ESG risk due to this long-term focus and the substantial qualitative and quantitative research completed on all our holdings. Short-term share traders do not care about the long-term fundamentals and sustainability of the businesses they trade in, as their sole focus is on short-term share price performance (alpha generation) during their (brief) holding period. These alpha traders do not need to worry about the long-term sustainability of the business because they are merely short-term "renters" of the stock.

Conclusion

These are four key attributes the investment team at Hyperion considers when researching companies. By investing only in the highest quality businesses, we aim to protect and grow our clients' capital sustainably over the long term.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

May 2021

HYPERION ASSET MANAGEMENT
a different horizon...

The Death of the Value Anomaly revisited for COVID-19

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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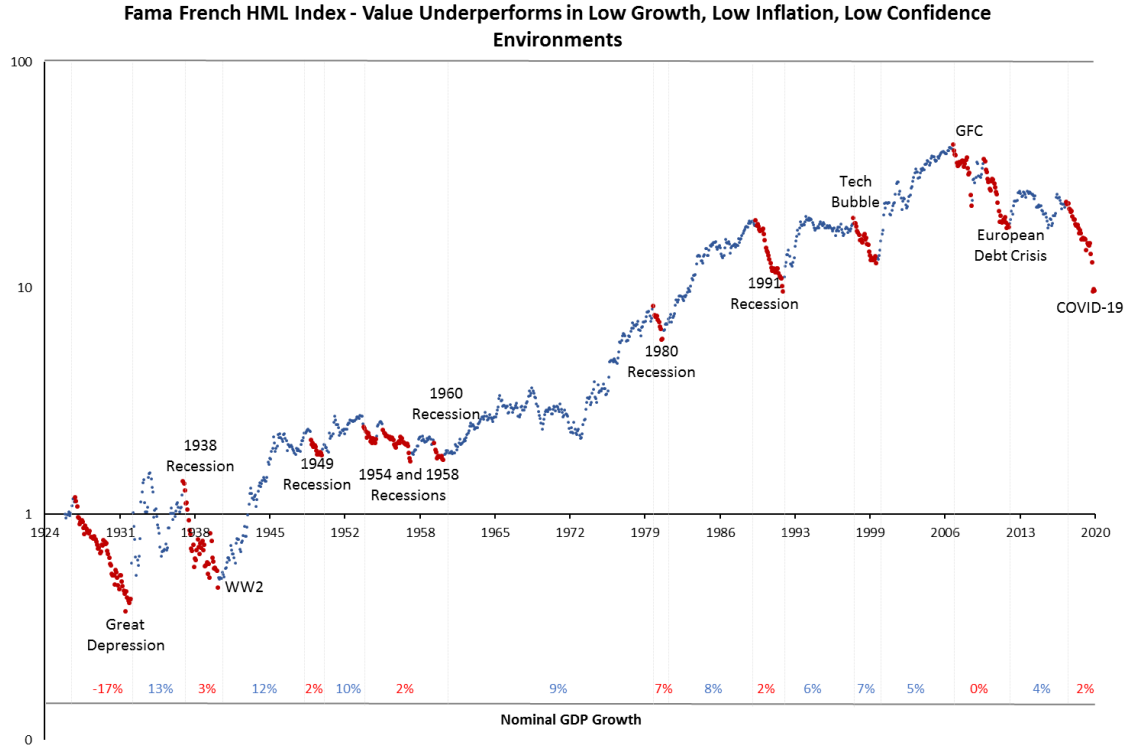
In this white paper we revisit the topic of the Value Anomaly and why it disappeared after the GFC. We also review the underperformance of traditional value style investing ("Value") in Japan post the GFC. We have updated our predictions for the likely success of value investing in a COVID-19 and post COVID-19 world.

The last 13 years have been extremely difficult for traditional value style investors but none of this underperformance should be surprising given Value's consistent poor performance during difficult economic and corporate profit conditions going back almost one hundred years. Importantly in this white paper, we explain why Value is also unlikely to produce sustained attractive returns in the future.

The following chart is an updated version of the one that was presented at the Portfolio Construction Forum in Sydney in August 2019. The latest version of the chart clearly shows the negative impact that the COVID-19 crisis has had on the performance of Value over the past few months. The dramatic underperformance is what we expected from Value during an economic downturn. As we outlined in our previous white papers on the Value Anomaly, **Value as an investment style does not protect investors when they need it most, during difficult economic conditions.** Value is a fair-weather investment style that is poorly suited to the low growth, internet-enabled and disrupted world we are likely to face over the next decade and beyond.

Figure 1: Fama French HML Index updated for COVID-19



***Source*:** Kenneth R. French, Hyperion Asset Management

The red dots in Figure 1 show the periods associated with weak nominal GDP growth and weak aggregate corporate profit growth in the U.S. In periods of low nominal GDP and aggregate corporate profit growth, Value has underperformed. Starting with the Great Depression in late 1929 and the early 1930s, Value underperformed; in the recession in 1937-1938, Value underperformed. This underperformance was repeated in the recessions of 1949, 1953, 1958 and 1960, right through to the GFC in 2008 and beyond.

Only in one recession did Value perform well, this was in the recession of 1973-1974. The reason for this was that nominal GDP and aggregate corporate profit growth were still strong. During this period inflation increased to double-digit levels because of the U.S. abandoning the gold standard and the OPEC oil embargo dramatically increasing oil prices. Average and below average quality businesses performed relatively well during this period because their sales and profit growth (in nominal terms) were strong. In addition, value stocks were less impacted by the material increase in bond yields that occurred during 1974 compared with growth stocks. Value tends to perform poorly in recessionary conditions unless these conditions are associated with strong aggregate profit growth, high levels of inflation and higher interest rates.

Value style investing is not defensive, and it is unlikely to protect capital in difficult economic circumstances. It is an investment style that does very well in accelerating and high growth economic environments when confidence levels are high and competition levels are low and declining. Conversely, Value performs very poorly in decelerating and low growth economic environments when competition and disruption levels are high and increasing.

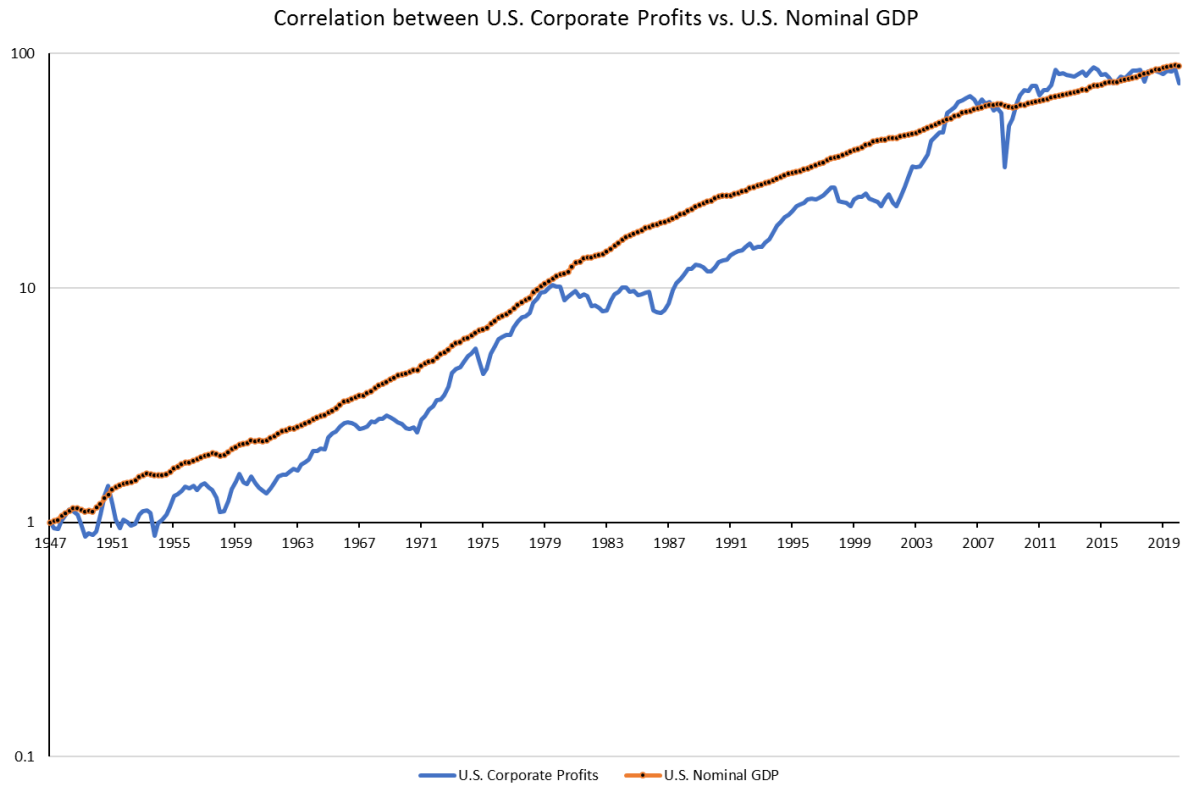
Key factors determining Value's relative performance:

1) aggregate demand growth;
2) levels of competition and disruption;
3) aggregate profit growth;
4) nominal GDP growth (comprising real GDP growth and inflation);
5) the distribution of aggregate profits and profit growth;
6) confidence in future aggregate profit growth;
7) confidence in future aggregate demand growth; and
8) confidence in future nominal GDP growth.

Value stocks performed well pre-GFC due to significant economic tailwinds

In the "economic growth bubble" of 1950 to 2007, average quality companies grew revenues at high rates (in-line with nominal GDP) as they shared in the strong growth of the economy. The average rate of nominal GDP growth during this extraordinary period was above 8% p.a. for the global economy and approximately 7% p.a. for the U.S. economy.

Figure 2: U.S. corporate profits and U.S. nominal GDP (indexed from 1947)



Note: between 1947-2007 the annualised CAGR of U.S. Corporate Profits and U.S. Nominal GDP was 6.9% and 6.9% respectively. Whilst the annualised CAGR of U.S. Corporate Profits and U.S. Nominal GDP between 2008-2020 was only 2.2% and 3.3% respectively.

Source: U.S. Bureau of Economic Analysis 2020, Hyperion Asset Management

Corporate sector revenues tend to grow in line with nominal GDP over time. For businesses there are two potential sources of revenue growth: 1) sharing in the growth of the overall economy; and 2) taking market share. Average quality businesses have limited ability to organically increase market share, therefore, they are normally highly reliant on economic growth to be able to grow their sales. Thus, during the "economic growth bubble" period, average quality businesses could grow their revenues organically at attractive, high single digit rates merely because the overall economy grew at these high rates.

The fundamental performance of average quality businesses was further enhanced by the **natural inverse relationship between the rate of economic growth and the level of competition.** Average businesses benefited relatively more than high quality businesses because of greater sensitivity to competition levels. High quality businesses deal better with higher levels of competition because of stronger value propositions and competitive advantages. Thus, high quality businesses benefited less in a relative sense during the high growth, less competitive decades leading up to the GFC as it was easier for all businesses to get a share of the growing economic pie. Further, disruption levels were low during the "economic growth bubble" period, with most major established industries enjoying extended periods of competitive stability.

Economic tailwinds prior to the GFC included:

1) strong global population growth and young populations;

2) the financialisation of society, which allowed people to spend more than they earned and brought forward aggregate demand growth;
3) expansion of a robust middle-class, at least up until the 1970s, which boosted levels of economic growth;
4) unwavering confidence that the economic outlook was bright partly because of recency bias, momentum-based feedback loops, and a general belief that central banks and governments had the power to ensure that future economic growth rates would be strong;
5) the development and commercialisation of powerful machines driven by cheap fossil fuel-based energy;
6) a general belief that there were abundant natural resources that would always be available to fuel strong economic growth; and
7) lower levels of competition and disruption.

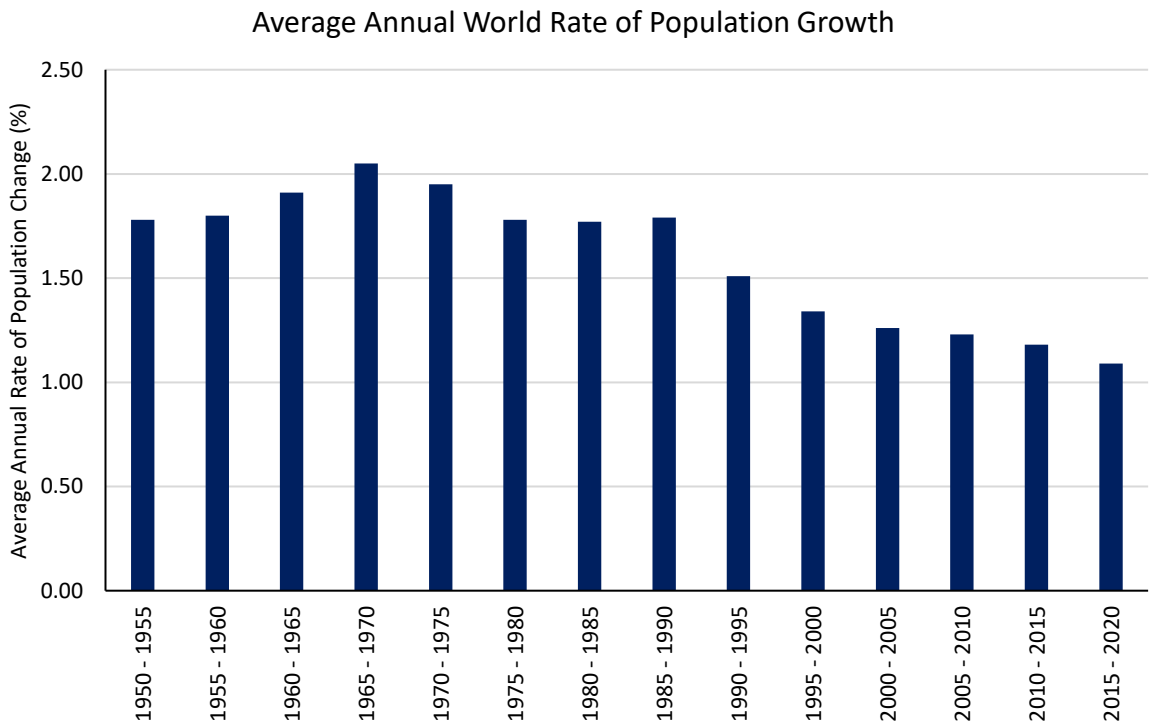
These tailwinds were considered normal and permanent at the time.

However, we believe that these tailwinds were unique to this phase of economic development and when viewed in the context of the history of civilisation were temporary and one-off in nature.

The tailwinds outlined above have been replaced with headwinds including:

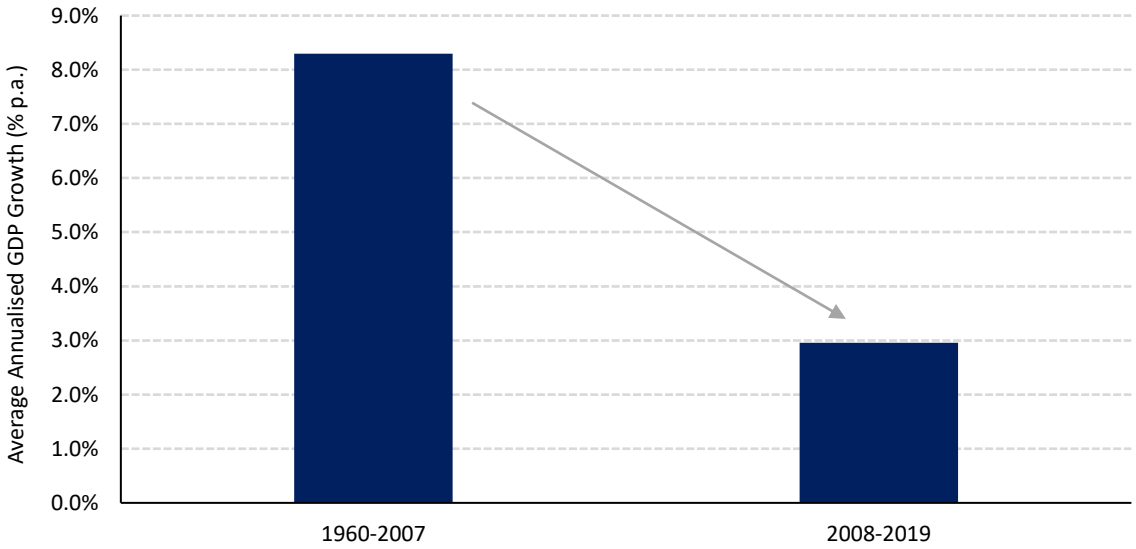
1) declining global population growth rates and ageing populations;
2) high debt levels in most major economies;
3) rising wealth and income inequality and the gradual hollowing out of the middle class;
4) increasing natural resource constraints and disruptions including climate change; and
5) technology based disruption of human capital markets, energy markets and the deflationary impact of new innovative products.

Figure 3: Global population growth has been declining for many decades



Source: United Nations Population Division, Hyperion Asset Management

Figure 4: Global nominal GDP growth has been low post the GFC



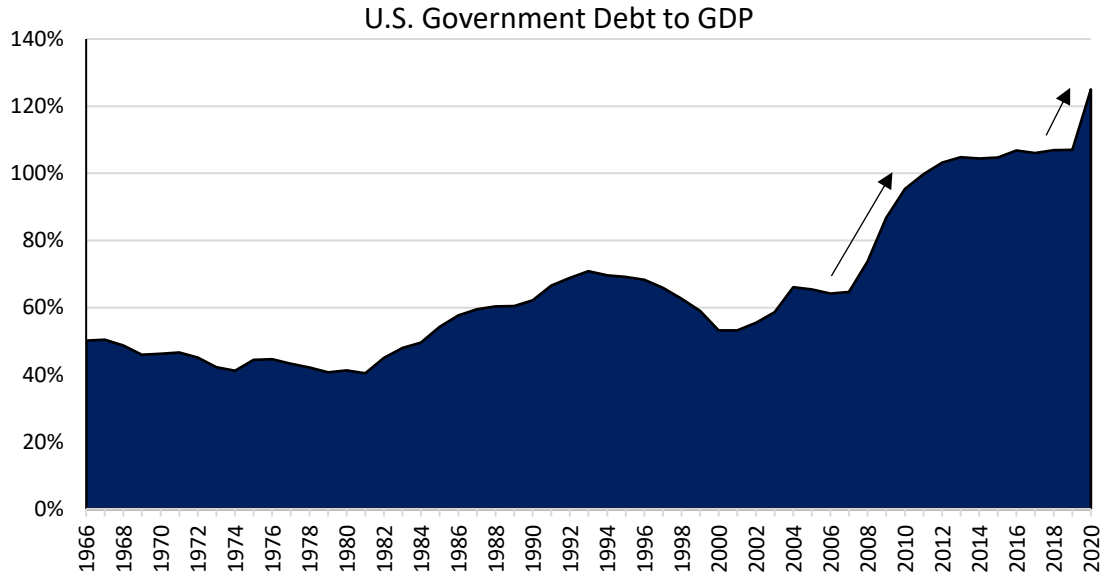
Source: The World Bank Group, Hyperion Asset Management

The impact of COVID-19 will impede future long-term rates of economic growth

Many of the factors that we identified as being detrimental to value investing have been accentuated by the pandemic. COVID-19 has fast-forwarded the impact of our long-standing predictions for a low growth, disrupted world. Higher debt levels and the accelerated loss of middle-income jobs will act to reinforce and strengthen the economic headwinds the global economy faces over the coming decade.

Debt levels for most economies will increase significantly as a result of the COVID-19 crisis. Many governments have undertaken large spending programs that have been used to reduce the negative impact of the lockdowns and social distancing measures on short-term economic activity. Government debt has increased significantly in most economies as a result of the COVID-19 crisis.

Figure 5: U.S. Government debt levels are estimated to have moved higher during the COVID-19 crisis



Source: IMF, Hyperion Asset Management

Corporate debt as a percentage of GDP has been increasing in the U.S. over the past 7 decades as part of the financialization of society. The COVID-19 crisis has caused a further spike in corporate debt levels in the U.S.

Figure 6: U.S. Corporate debt levels have moved higher during the Covid-19 crisis

Source: Federal Reserve Bank of St. Louis, Hyperion Asset Management

Higher debt levels will impede future long-term economic growth rates. High debt levels make businesses and households more fragile and less likely to consume, invest and take risks.

COVID-19 gives the world a glimpse into the long-term future

We believe a new economic environment is disrupting traditional investment models of most incumbent asset managers**.** Investment frameworks that rely on traditional investing models such as Value will not work in this economic environment.

The outperformance of Value is associated with the following:

1) strong growth in aggregate corporate profits and nominal GDP;
2) periodic short-term economic downturns followed by extended strong recoveries;
3) structural stability and low levels of competition and disruption;
4) mean reversion in financial performance factors; and
5) average quality businesses sharing and benefiting from high levels of aggregate demand growth.

Traditional value investment focuses primarily on historical accounting-based data and short-term forecasts to direct investment decisions. This style of investor uses metrics that are **short-term** in nature and primarily based on **backward looking** accounting data. Value investors **emphasize mean reversion** to average values based on historical company, industry and economic data. Traditional value investors assume that historical financial data is relevant to the future by trying to identify "bargains" based on short-term financial metrics such as below average P/E, P/B, EV/Sales Ratios and/or above average dividend yields. These types of stocks have usually experienced below average short-term growth rates compared with other similar companies or compared with their own historical growth rates. These stocks are expected to mean-revert to higher growth rates over time.

Traditional value investing relies on both EPS growth and P/E Ratio expansion during the holding period to produce attractive returns. P/E Ratio expansion is reliant on the expectation of future EPS growth. A stock's P/E Ratio is unlikely to increase during the holding period unless the market believes the EPS growth outlook is good and improving.

Recent dispersion between Growth and Value to continue

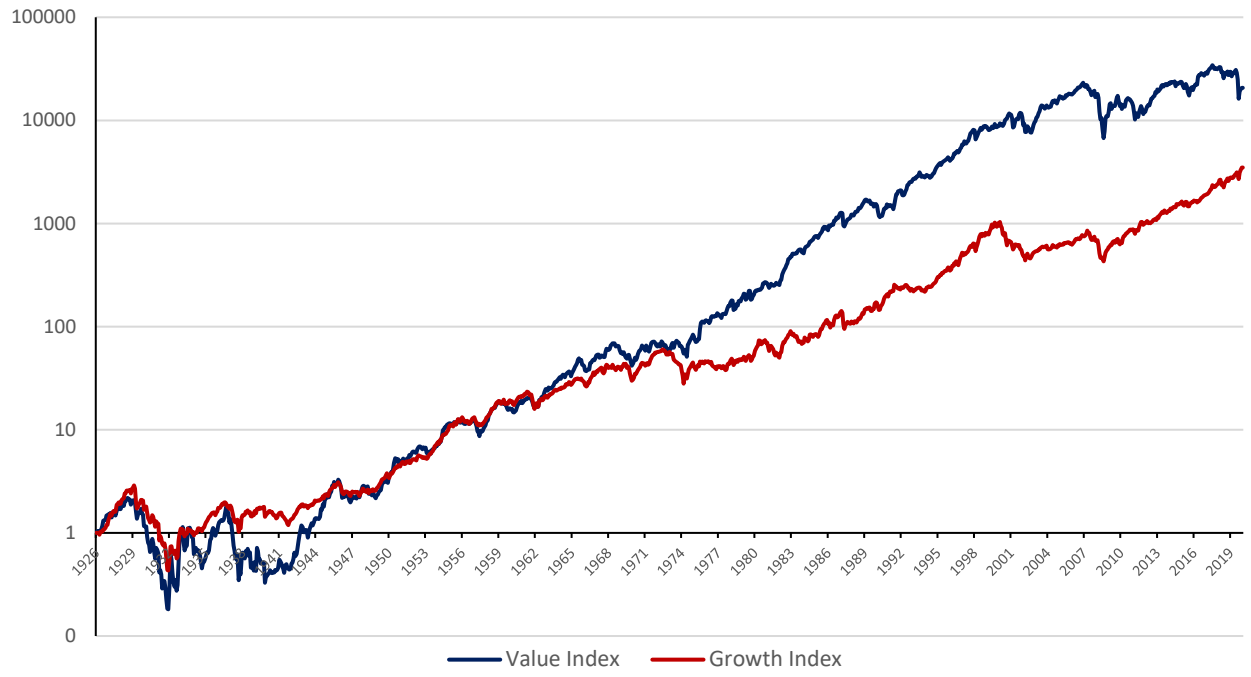
Value investors talk about Growth outperforming Value since the GFC and argue that there should be a recovery or mean reversion where Value will recoup its underperformance over the past 13 years. This is the extreme **dispersion gap** argument that growth stocks are too high and value stocks are too low relative to historical averages.

We do not believe there will be mean reversion in this situation given that the economic environment has structurally changed from a high aggregate profit growth world to a much lower growth world. Any sustained mean reversion is unlikely because the economic conditions that drove the outperformance of Value prior to the GFC no longer exist in the world we face over the next decade.

Also, the mean reversion argument changes dramatically depending on when you start calculating the average from. If you go back to the 1920s then it is Value that is still overstretched and still needs to suffer further underperformance, to get back to a more balanced position relative to Growth. A low growth economic environment is likely to allow growth to continue to outperform Value and reduce the dispersion gap that opened during the "economic growth bubble" period from 1950 to 2007.

The dispersion between Value and Growth has been narrowing over the past 13 years since the GFC. We believe this underperformance of Value will continue as many low P/E Ratio stocks continue to suffer from ongoing disruption and low levels of demand growth over the next decade. On the other hand, high-quality structural growth businesses that are less sensitive to economic conditions and possess an ability to grow their revenues and profits organically are relatively more valuable because in a low growth competitive world, growth is scarce and valuable.

Figure 7: Fama French Value and Growth – Value looks stretched relative to Growth



Source: Kenneth R. French, Hyperion Asset Management

In the future there will still be periods of accelerating growth in aggregate demand and associated periods of improved profit growth that will provide a temporary tailwind to Value but a sustained high growth world seems very unlikely over the next decade. Therefore, we believe that Value will continue to underperform Growth over the long term. **We believe cyclical rotations from Growth to Value will get smaller and shorter as investors begin to accept the new economic framework we have identified.**

The difficult economic conditions associated with the COVID-19 crisis will eventually end and there will be a period of growth to bring the economy back to a more normalized level of economic activity. However, once the normalized level of economic activity is reached, **we should then revert to a low growth or no growth economic environment.** We are very unlikely to return to a sustained period of strong economic growth.

Value investors bet against innovation and progress

Traditional value investing had success in the high growth world of the past, where there were low levels of disruption and organically driven structural market share changes were less frequent. Growth slowdowns or profit declines for many companies were temporary in nature because the overall economic pie was rapidly expanding. Also, organically derived market share changes tended to be temporary and even if they were sustained, they were relatively less important to overall sales growth because of the high level of aggregate demand growth. During this period, there were relatively low levels of differentiation between competitors and average quality businesses could still enjoy reasonable growth because of long periods of strong aggregate demand growth. Recessions were short-lived and a company selling on a low P/E Ratio had a reasonable probability of producing a recovery in sales growth rates and profits once the economy recovered or it was able to stabilise and reverse market declines against fairly similar competitors.

Stocks that have weak value propositions or low levels of innovation are less likely to be able to reverse their market share losses in a disrupted world, where there are large network effects and disruptive value propositions. In fact, market share losses for many average quality businesses are likely to continue in the long term and result in ongoing declines in sales and EPS with no sustained recovery.

Value investors tend to bet against structural change, innovation, and progress. They rely on high levels of strong aggregate corporate profit growth. **They need change to be temporary and mean reverting for their style of investing to add value.**

The companies that value investors own are normally sensitive to overall rates of aggregate profit growth. Aggregate profit growth is, in turn, dependent on aggregate demand growth and low levels of competition, innovation and disruption. Value investors are attracted to cyclical and mature industries and businesses such as traditional banks, traditional retail, commodity businesses, capital intensive industrial businesses, auto, energy, utilities, and traditional manufacturing businesses. These types of businesses do well in a high demand growth economic environment but very poorly in a low growth disrupted environment.

Value investors depend on two main types of **mean reversion**. First, mean reversion caused by regular economic cycles with longer periods of strong economic and aggregate profit growth followed by shorter recessionary periods. Second, mean reversion caused by temporary market share loss or other financial underperformance that is transitory in nature and which is followed by a recovery. Traditional value investors can be said to be "buying straw hats in winter" because winter is temporary, and summer will inevitably follow.

Value style investors believe that change is temporary and mean reverting, a reasonable thesis when the economy experiences high levels of growth and structural stability but not for the world we face over the next decade and beyond. In this newly disrupted, low growth, competitive, internet-enabled world - **mean reversion of growth rates for businesses has been replaced with dispersion; and betting against change has been replaced with betting on progress.**

Value investing is reliant on average quality businesses growing at attractive rates

In a low growth world, traditional value stocks such as the banks and retailers are unlikely to produce attractive returns. This is because the tailwind of strong levels of credit demand from the financialisaton of society has been replaced by headwinds that will hinder future long-term growth. Without a sustained period of future strong EPS growth then P/E Ratios are also unlikely to mean revert to higher levels.

In a low growth, disrupted economic environment where most average quality businesses cannot grow their sales and EPS, these stocks become **value traps**. **The only long-term winners in a disrupted low growth world are the disruptors themselves.** The average quality "old world" businesses with weak value propositions and legacy technology will suffer permanent declines in revenues and profits and most will ultimately have zero intrinsic value.

In a low growth economic environment, most businesses suffer because profit growth is heavily dependent on the growth in the level of overall demand. If the rate of growth in aggregate demand is weak, this tends to naturally increase the level of competitive tension as market participants try to expand sales in the face of weak demand growth. If that lower level of demand growth is combined with a high level of disruption, then a situation arises where most businesses have stagnant or declining revenues, declining profit margins and declining returns on capital. If these businesses have debt, then financial leverage will magnify declining

intrinsic values. **We believe most businesses are losing market share to a few emerging elite businesses with very strong value propositions.**

Morningstar Survey – Value versus Growth

According to the June 2020 Morningstar Australian Institutional Sector Survey, the average growth manager has outperformed its Value counterparts in Global Equities by 1140 bps p.a. and 570 bps p.a. over 5 and 10 years, respectively. The average growth manager has outperformed its value counterparts in Australian Equities by 380 bps p.a. and 200 bps p.a. over 5 and 10 years, respectively.

Table 1: Excess returns from growth style managers

	Global Equities			Australian Equities		
	Growth	Value	Excess Return	Growth	Value	Excess Return
1 Month	-0.4%	-1.8%	**1.4%**	2.4%	1.6%	**0.8%**
3 Months	10.7%	3.0%	**7.7%**	18.6%	16.3%	**2.3%**
FYTD	20.1%	-3.6%	**23.7%**	-3.0%	-15.1%	**12.1%**
1 Year	20.1%	-3.6%	**23.7%**	-3.0%	-15.1%	**12.1%**
3 Years (pa)	19.4%	3.4%	**16.0%**	8.1%	1.8%	**6.3%**
5 Years (pa)	15.6%	4.2%	**11.4%**	8.5%	4.7%	**3.8%**
10 Years (pa)	15.1%	9.4%	**5.7%**	9.6%	7.6%	**2.0%**

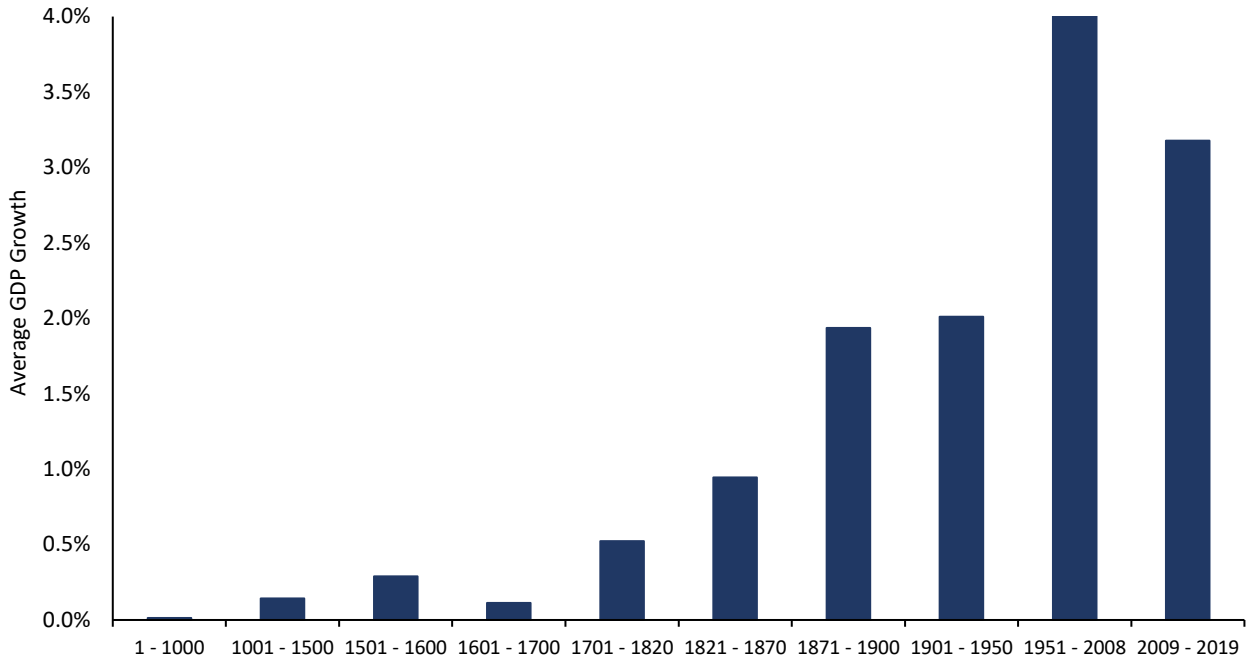
Source: Morningstar, Hyperion Asset Management

Returns: The table uses median manager returns; excess return illustrates Growth median Outperformance/Underperformance relative to Value

Pre-GFC data and relationships are not relevant in the new economic environment we face

We believe that high levels of economic growth are not normal or sustainable over long periods of time. Prior to the first and second industrial revolutions, **economic growth rates were generally very low for thousands of years.** Most of the 20th Century (particularly the second half) was a period of strong economic growth. This strong growth was driven by powerful machines and other related technology developed and commercialised as part of the second industrial revolution and the discovery of cheap fossil fuel-based energy, primarily oil. This was a unique period in history that is unlikely to be repeated over the next decade.

Figure 8: Real global GDP growth over the past 2000 years

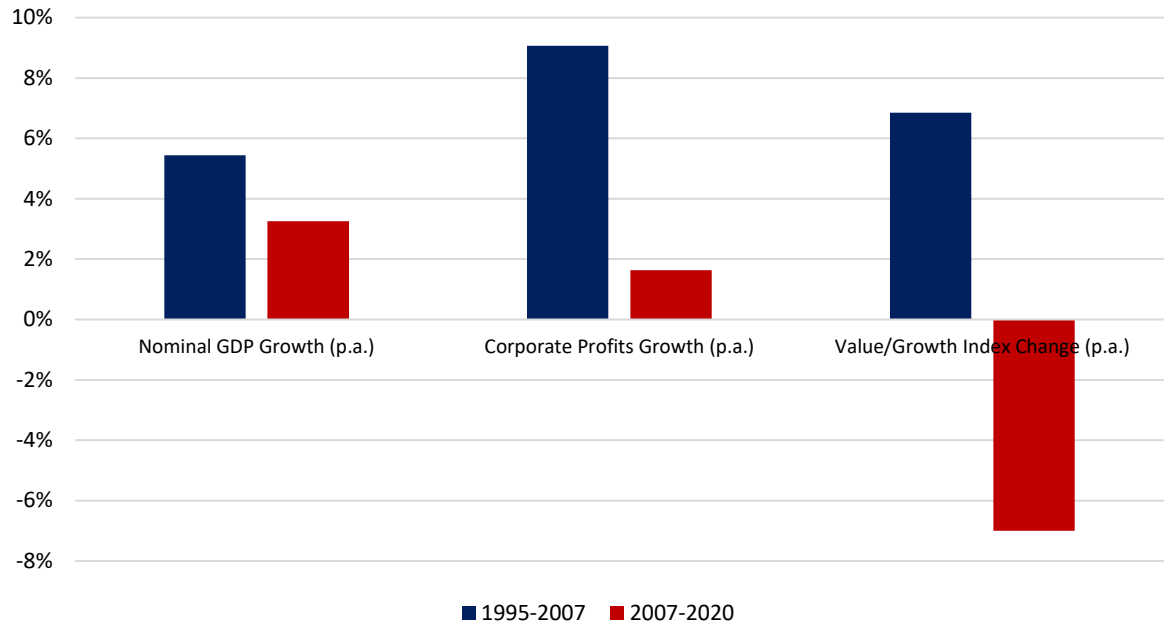


Source: The World Bank Group, Angus Maddison

Aggregate corporate profit growth rates and nominal GDP growth rates

The six-decade period up until the GFC was a period of strong economic growth, with low levels of disruption producing an economic environment that was ideal for value style investors. Figure 9 illustrates the relationship between nominal GDP, corporate profits and the Value Anomaly in the U.S. in the 12 years prior to the GFC and the 13 years after the GFC. The period before the GFC was a strong period of growth in both nominal GDP and corporate profits in the U.S. During this period of strong economic and profit growth, Value produced strong outperformance. However, in the years after the GFC, nominal GDP and corporate profit growth have both been much weaker than the pre-GFC period and during this period Value has performed poorly.

Figure 9: Weak corporate profit growth in the U.S. after the GFC

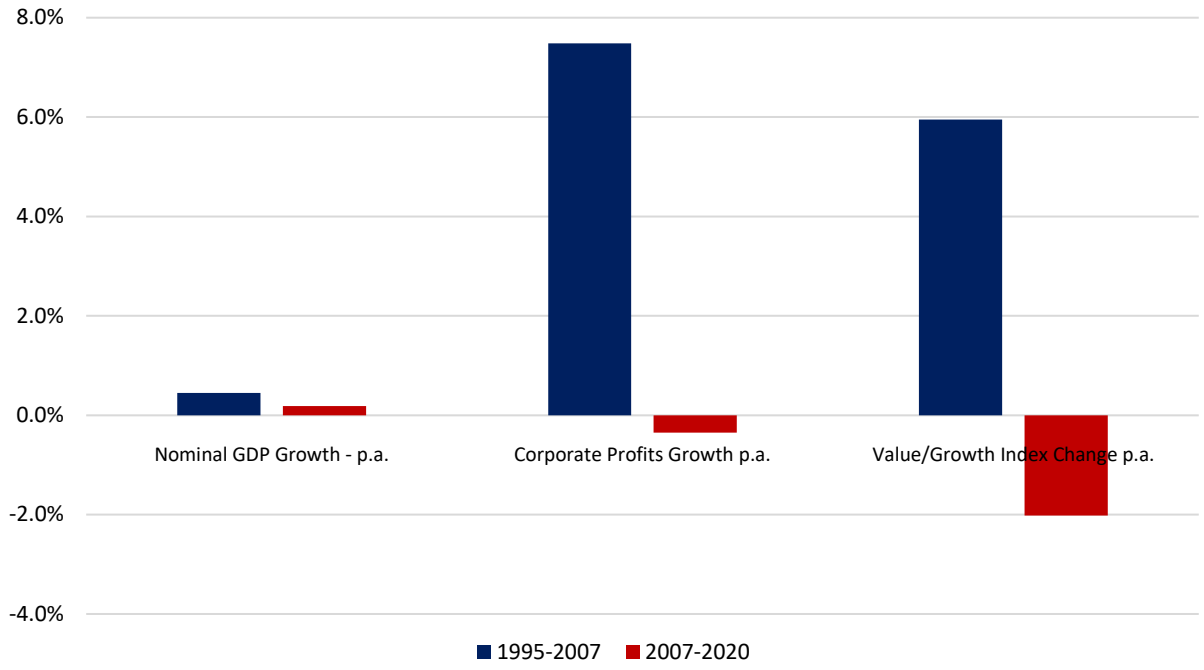


Source: U.S. Bureau of Economic Analysis, Kenneth R. French, Hyperion Asset Management

Japan shows the importance of strong aggregate profit growth to the Value Anomaly

Even though nominal GDP growth in Japan has been weak since the mid-1990s, aggregate corporate profit growth was strong over the period from the mid-1990s to the GFC. The strong aggregate corporate profit growth during the period up until the GFC is shown in Figure 10. After the GFC aggregate corporate profit growth has been weak.

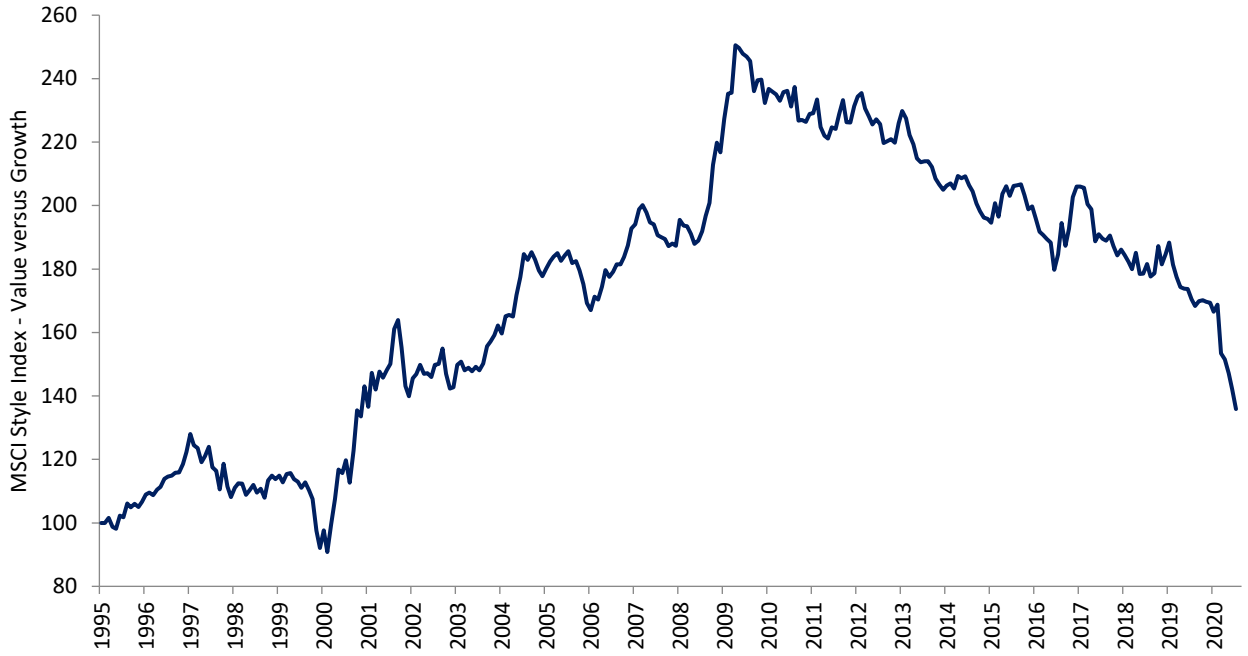
Figure 10: Japan - strong aggregate corporate profit growth before the GFC



Source: Ministry of Finance Japan, MSCI, Bloomberg, Goldman Sachs Global Investment Research, Hyperion Asset Management

The strong aggregate profit growth in Japan prior to the GFC enabled value style investing to perform well, despite the low level of nominal GDP growth during this period. However, post the GFC aggregate profit growth in Japan has been weak and this has resulted in the significant underperformance of Value. The performance of the value style of investing in Japan is illustrated in Figure 11.

Figure 11: Value has under-performed Growth in Japan post GFC



Source: MSCI, Bloomberg, Data compiled by Goldman Sachs Global Investment Research.

Structural growth investing performs well in a low growth economic environment

In this low growth economic environment, we believe **Quality factors also become more relevant**. This means investors need to emphasise business analysis over trading ideas and long-term holding periods over "renting" stocks short term. Investing is about looking forward and forecasting future free cash flows. Quality structural growth portfolios are likely to out-perform in a low growth environment because the underlying businesses in these portfolios have the ability to grow their sales organically by taking market share. Other Quality factors include superior financial strength from a strong balance sheet that reduces a business' vulnerability to an economic crisis. The benefits of a Quality growth portfolio were demonstrated through COVID-19 where modern businesses out-performed those with higher fundamental risk such as traditional value and cyclical stocks.

Conclusion

In a low growth world**,** most businesses suffer more because they are highly reliant on economic growth for their own growth. This has become very clear through COVID-19. In a low growth economy, average quality businesses can only grow their revenues organically in line with nominal rates of economic growth. Only superior businesses, that can take market share, can produce organic revenue growth materially above nominal GDP growth levels on a sustained basis. **In a low growth world, competition will increase, the intrinsic value of average businesses is likely to decline, and value traps will become more widespread. The Value Anomaly is dead.**

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

HYPERION
ASSET MANAGEMENT
a different horizon...

How Hyperion Aims to Protect and Grow Your Investment – Updated For 2021

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Hyperion Asset Management "Hyperion" is a client-centric, alpha seeking business; our primary objective is to protect and grow our clients' capital sustainably over the long term through our philosophy of investing in the highest quality businesses. Our approach has resulted in above benchmark returns for our clients over the long term. Hyperion has been successfully managing listed equity portfolios for clients since 1996 and currently manages approximately $10 billion on behalf of our clients, including $2.4 billion in internationally listed equities.

Economic outlook and portfolio construction

When economic conditions are favourable most businesses can do well and in the short term, portfolios containing average and low-quality firms may well have strong performance. However, over the longer term there are both upturns and downturns in economic cycles, sometimes for prolonged periods of time and in the longer run, returns of portfolios containing average and low-quality businesses suffer. Prior to the GFC, many below average businesses steadily grew their earnings, often assisted by financial leverage. The earnings and the associated share price appreciation produced in these buoyant economic conditions were illusionary and not sustainable in more modest economic conditions.

Hyperion aims to maintain a portfolio of stocks that are robust and resilient, even in downturns and difficult economic environments. The investment processes of Hyperion are designed to weed out average and low-quality businesses allowing the investment team to focus their research efforts on only high-quality businesses that are positioned to sustain and grow even in harsh economic climates. For example, Hyperion's portfolios have been stress tested and significantly outperformed through difficult economic conditions such as the GFC, European debt crisis and the COVID-19 crisis.

In the period since the GFC, economic conditions have been subdued. The global economy is currently recovering from the COVID-19 crisis, global growth rates have been strong partly because of many countries adoption of aggressive monetary and fiscal policy, which has inflated asset prices and helped reduced unemployment from the high levels experienced during 2020. More importantly however, the long-term macro-economic outlook is for continued low levels of economic growth globally. Compared with the strong economic conditions that the global economy enjoyed in the six decades between the end of WW2 and the GFC, the long-term growth outlook is modest at best. We believe the world is likely to continue to experience low inflation, low growth, and low interest rate conditions for decades to come.

The key structural headwinds impeding the economic growth outlook include ageing populations, high consumer and government debt levels, rising levels of inequality in most countries, the increasingly disruptive impacts of climate change, artificial intelligence (AI), and robotics. Under these low growth economic conditions, it will be difficult for average businesses to thrive or even survive; whereas high quality businesses are the last to be affected by difficult economic conditions and are ultimately positioned to take market share. Businesses with structural tailwinds, innovative cultures that can adapt to and drive change, and sustainable

capital structures (i.e., strong balance sheets) have a significant advantage over average and low-quality businesses.

What characteristics do high quality businesses have that gives them an advantage even in economic downturns?

Four key characteristics that Hyperion seeks when identifying high quality businesses are:

5. Proven structural growth (tailwinds);
6. Innovative cultures;
7. Low debt levels; and
8. Sustainability.

Proven structural growth (tailwinds)

Businesses that have structural growth tailwinds, include those businesses that can grow by utilising disruptive technologies that are the cause of fundamental change in industries. Lower quality businesses tend to be those that are enmeshed in old technology, are unable to recognise and/or respond to disruption and are beholden to economic cycles. These businesses are either unwilling to accept change or not in a position to transfer to the disruptive technology quickly or efficiently. As such, these companies lose market share. This is an outcome that is likely to be detrimental to longer-term survival and a problem that increases in magnitude in a low growth economy.

Hyperion looks for firms that have created products with strong value propositions that have the potential to expand addressable markets and take revenues away from traditional competitors. Examples of portfolio firms that have successfully disrupted industries and have structural growth tailwinds are Amazon in the retail sector, Alphabet in media and advertising, and PayPal in the payments sector.

Innovative Culture

In order to position a business to recognise and benefit from disruption and structural change it needs to have an organisational culture that embraces innovation. Hyperion views high quality firms as having a culture of innovation. This culture needs to be observed through the whole of the business from top management down. Examples of attributes associated with an innovative culture would be: (i) senior management's understanding and insight regarding the influences of change on their product and market; (ii) appropriate investment in research and development; and (iii) creation of environments structured to encourage an innovative workforce (e.g., Google's campuses built to facilitate "smart creatives"). These are just some of the characteristics the Hyperion investment team seeks when identifying high-quality businesses. Furthermore, senior management needs to be able to convert this culture into a successful commercial reality.

A strong balance sheet

The Hyperion investment team view high quality firms as having low debt levels. The reason for this is that shareholders in firms that have low debt levels are less likely to experience binomial outcomes during difficult economic times. Having low debt levels affords businesses the ability to make decisions without the threat of liquidation if the business goes through periods of adverse change or low growth.

Sustainability

Sustainability has been core to Hyperion's investment philosophy and process since it was established in 1996. Hyperion has a long-term investment horizon of 10 years or greater, and we have always invested as business owners, not short-term share traders. This is evidenced by the fact that historically our average stock holding period for our portfolios is approximately 10 years. We only invest our clients' capital in those businesses that we believe are extremely high-quality with strong and sustainable value propositions to all stakeholders. The stakeholders include the wider community and an assessment of the company's future likely long-term impact on the overall natural environment, including its carbon footprint. Sustainability assists in reducing the risks of any permanent loss of capital across our holdings. Eventually, companies that externalise costs, will be forced by external stakeholders to internalise them – either through regulation or changing expectations of society. As such, long-term sustainability is a core component of our philosophy.

We believe our portfolios contain very low ESG risk due to this long-term focus and the substantial qualitative and quantitative research completed on all our holdings. Short-term share traders do not care about the long-term fundamentals and sustainability of the businesses they trade in, as their sole focus is on short-term share price performance (alpha generation) during their (brief) holding period. These alpha traders do not need to worry about the long-term sustainability of the business because they are merely short-term "renters" of the stock.

Conclusion

These are four key attributes the investment team at Hyperion considers when researching companies. By investing only in the highest quality businesses, we aim to protect and grow our clients' capital sustainably over the long term.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

May 2021

Equity returns are driven by the few not the average – back the winners!

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Introduction

Over the past decade and a half, we have moved to a globalised, internet and smart phone-enabled, world. The power law distributions that have historically described regional industry structures and competitive landscapes have now become global. The market has become a globalised "winner takes all market". Power law probability distributions describe the situation where only a small percentage of a certain population produce most of the value. This type of probability distribution is also known as a Pareto Distribution. A common example is the "80-20" rule where 80% of the value is produced by 20% of the population.

Even before the emergence of the internet, returns for global equity markets had been dominated by a small group of highly successful businesses. Most listed stocks produce unattractive long-term buy and hold returns. In a study of the returns produced by U.S. equities from 1926 to 2016, Hendrik Bessembinder (2018) finds an extremely narrow group of stocks drove all of the equity market returns.[7] The top-performing 1,092 listed U.S. companies (or 4.31% of the total number of listed stocks during this time period) accounted for all of the wealth creation from investing in equities (i.e. excess equity returns relative to treasury bills). Bessembinder (2019) replicated this study across 42 countries over the 1990 to 2018 period and found the returns globally were even narrower where the best performing 811 firms (or 1.33%) accounted for all the net global wealth creation[8].

Power law distributions drive long-term equity returns

Power law distributions, rather than normal distributions, explain the composition of stock market returns over long time periods. Stock market returns over the long term are not driven by most stocks but rather by a small number of structural growth businesses. The extraordinary returns from this small number of structural growth businesses result in the market's return distribution having a positive skew rather than a normal bell curve shape. It is the compounding impact of high return structural growth businesses ("the winners") that drive most stock market returns over the long term. Unless a long-term "buy and hold" investor can successfully select future structural growth companies, that is, the structural winners, and give them sufficient weight in their portfolio they will not produce excess returns. Alternatively, market participants including fund managers can attempt to out-perform over short time periods using active trading strategies. However, successfully predicting the direction of short-term share price movements is very difficult. Portfolio managers running short-term trading strategies operate in an extremely competitive space where share prices are random and unpredictable. **Short-term trading and speculation become even more challenging as economic tailwinds and rising intrinsic values are replaced by economic headwinds and falling intrinsic values for most listed stocks.**

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[7] Bessembinder, H. 2018. Do Stocks Outperform Treasury Bills?. *Journal of Financial Economics*, 129(3): 440-457.
[8] Bessembinder, H., Chen, T., Choi, G., & Wei, K. 2019. Do Global Stocks Outperform US Treasury Bills?. *SSRN Electronic Journal*.

Historically, most listed companies have produced long-term returns either in line or below the returns achieved from treasury bills. The average period that a typical U.S. equity remained listed between the years 1926 to 2016 was only 90 months, despite most of this period experiencing strong growth in the U.S. economy[9].

Value investing relies on short-term trading strategies in strong economic periods

Even during the incredibly strong economic growth period that existed from the middle of the 20th Century to the GFC, most listed businesses were unable to produce attractive long-term returns. Thus, if an investor failed to allocate sufficient capital to the small number of high quality, structural growth companies that produced most of the long-term returns, then it was difficult to outperform the risk-free rate. During the economic boom period from 1950 to 2007, the most popular and successful investment style was traditional value investing. This style of investing was made famous by academics, including Fama and French, during the 1970s. Value style investing focused on short-term mean reversion of P/E Ratios and EPS recoveries to outperform broad equity indices and the risk-free rate. Value investing worked well during this exceptional economic growth period because most businesses shared in the strong growth of the economy and the associated growth in overall corporate profits. Even when the economy and aggregate corporate profit growth experienced periods of low or negative growth, there was a general belief in society that governments and central banks had the power to ensure a return to strong growth in future periods.

Traditional value style investors tend to invest in average and below average quality businesses because:

1) these businesses represent most listed companies; and

2) the investment processes and related investment screens commonly used by value investors steer them towards stocks that are selling on below average P/E Ratios relative to other stocks or compared with their historical averages. These types of stocks tend to have above average fundamental business risk.

In an environment where nominal GDP and aggregate corporate profits are expanding rapidly, and this situation is viewed as sustainable, then traditional value investing works well. In this strong overall economic environment, the additional fundamental risk associated with buying average and below average quality businesses is masked or hidden because “a rising economic tide lifts all boats”. In other words, in a high profit growth environment the performance differences in terms of perceived economic fundamentals and future growth potential separating very high-quality businesses and below average quality businesses narrows.

Value investors are not generally long-term buy and hold investors because increases in short-term P/E Ratios are an important driver of alpha. This compares to structural growth investors like Hyperion Asset Management (“Hyperion”) where changes in P/E Ratios are not a material component of our long-term returns. The key driver of our long-term returns and alpha is superior EPS growth on the stocks in our portfolios, not the change in the average P/E Ratio of the portfolios.

Given that most listed stocks produced buy and hold long-term returns in line or below the risk-free rate, value investors need to be able to trade the stocks in their portfolios to boost their overall returns. The strong economic growth environment in the period from 1950 to the GFC increased the opportunities for value

[9] Bessembinder, H. 2018. Do Stocks Outperform Treasury Bills?. *Journal of Financial Economics*, 129(3): 440-457.

investors to profitably trade average and below average quality stocks. This strong economic tailwind is a key reason why value investors performed well during the 6-decade period leading up to the GFC.

This is an important difference between traditional value investors and Hyperion. Traditional value investors are forced to try and take advantage of changes in short-term P/E Ratios. They do this by selling stocks to realise gains related to a P/E Ratio re-rating during the relevant holding period. **P/E Ratio expansions have a non-compounding or one-off impact on returns. The longer the holding period the lower the return impact per annum of the increase in the P/E Ratio.** Thus, to maximise the return and alpha impact of an increase in the P/E Ratio, value investors need to realise the gain and sell the stock. The importance of P/E Ratio expansion as a driver of returns results in an underlying short-termism mindset that heavily influences most value style investors. **The one-off, non-compounding return impact from changes in the P/E Ratio contrasts with the compounding impact on long-term returns from EPS growth.**

As a rule, the closer an investor moves towards investing in average or below average quality businesses the more important short-term trading metrics like a relatively low P/E Ratio become.

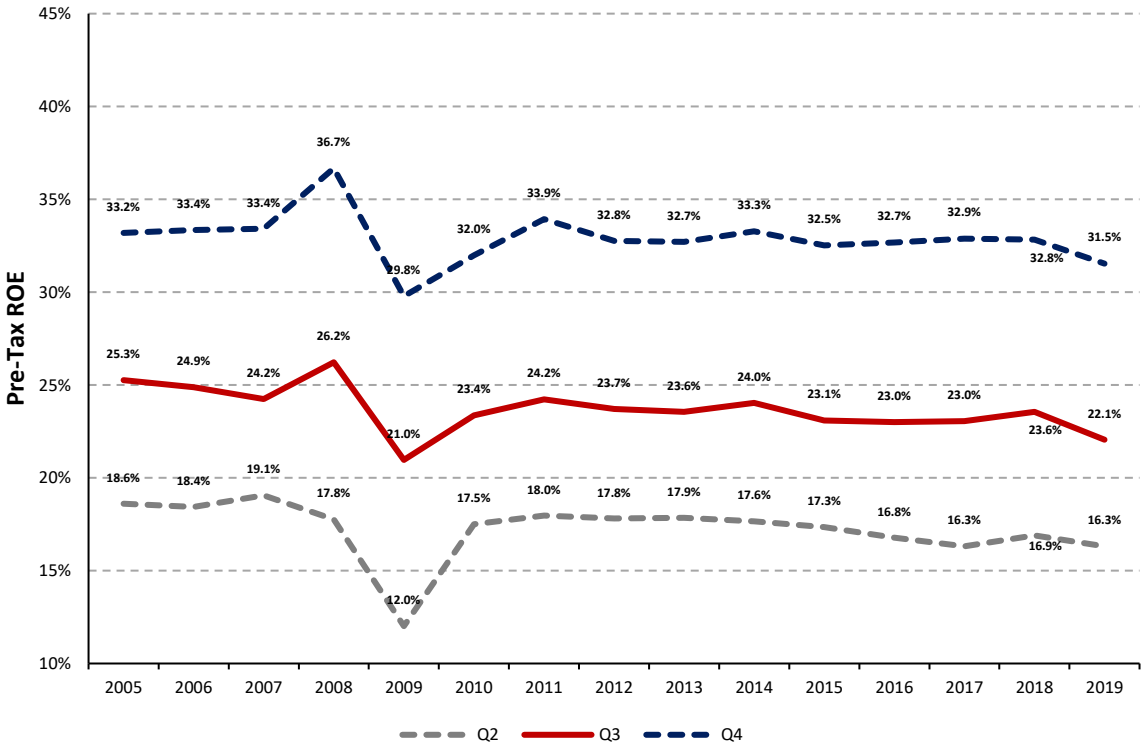
The fact that most stocks do not provide attractive long-term buy and hold returns forces value investors to trade stocks on a relatively short-term basis. They try and string together a series of short-term alpha trades from a combination of P/E Ratio expansion, dividend return and EPS growth during the relevant holding period. Therefore, these investors focus on stocks selling at relatively low short-term earnings multiples and try to take advantage of near-term earnings recoveries.

Many value investors performed well in the high growth world prior to the GFC because they traded stocks rather than buying and holding for long time periods. In a high growth economic environment, it was relatively easy for value investors to buy low P/E Ratio stocks and produce alpha because average quality businesses shared in the growth of the overall economic pie. In addition, this high growth economic period was one of low levels of disruption and globalised competition. This meant there were less value traps to reduce value investors returns during this period.

Intrinsic values are declining for most listed companies

Value investing with its short-term, trading-based characteristics becomes very difficult in a structurally low growth, low inflation, and disrupted economic environment. This is because average quality businesses are more likely to suffer future declines in economic fundamentals rather than recover through cyclical mean reversion of earnings and P/E Ratios. In addition, cyclical recoveries are less frequent, shorter and less robust in a low growth disrupted world. It will progressively be harder to apply short-term mean reversion techniques (short-term cyclical EPS growth and P/E Ratio arbitrage) in this more difficult economic environment. Stock selection and actively avoiding average and below average quality businesses will become more important in a low growth world. **Most businesses will fail and die. Only a few will win and grow.** This is seen in the declining intrinsic values of average companies as approximated by their pre-tax return on equity ("ROE").

Figure 1: Declining intrinsic values of average quality businesses



Source: UBS, Hyperion

Historical U.S. equity returns are driven by a narrow group of winners

We believe that most listed companies will not produce long-term "buy and hold" returns above treasury bills. This is unconventional thinking. The basis of conventional finance theory states that equity investments have higher risk relative to other asset classes such as fixed interest or cash because stocks exhibit higher levels of volatility.

Finance theory also states this higher risk that is associated with some form of short-term market price volatility, should result in higher returns - "higher volatility related risk, higher expected returns". Sharpe (1964)[10] concludes this short-term share price volatility relates to a stock's sensitivity to economic conditions. The more sensitive a stock's revenues and profits are to economic conditions the higher the general short-term share price volatility associated with that stock.

Traditional finance theory states that provided you diversify sufficiently you can eliminate non-systematic risk or individual company fundamental risk. This theory believes that investing in a broad equity index provides sufficient diversification and removes non-systematic equity related risk.

Sharpe's 1964 journal, Capital Asset Prices: A Theory of Market Equilibrium under conditions of Risk[11] stated, "*since all other types [of risk] can be avoided by diversification, only the responsiveness of an asset's rate of*

[10] Sharpe, W. 1964. Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk. *The Journal of Finance*, 19(3): 425-442.
[11] Ibid.

return to the level of economic activity is relevant in assessing its risk." It is assumed that investing in a sufficiently diversified portfolio of equities should result in higher returns above the risk-free rate.

Sharpe-Lintner-Black developed the Capital Asset Pricing Model ("CAPM") that has since governed the way academics and market participants approach the subject of risk and returns and asset pricing of stocks and other assets. CAPM builds on the mean-variance efficient framework of Markowitz (1959). CAPM states that the expected returns on securities have a positive linear function to their market Betas - where Beta is the slope in the regression of a security's return compared with the market's return. CAPM provides cross-sectional predictions for expected stock returns.

We believe there are two fundamental flaws with traditional theoretical asset pricing models such as the Sharpe-Lintner-Black model around risk and return:

1) share price volatility (relative or absolute) does not accurately define risk; and
2) averages are misleading and can be the outcome of extreme tail events.

Firstly, we believe that true risk is permanent loss of capital, not short-term share price volatility (relative or absolute). This permanent loss of capital results when an asset's expected future free cash flows disappear or decline permanently. Permanent loss of capital occurs when the business ceases to exist because of bankruptcy, takeover or when the owner of the asset sells. Short-term share price volatility was chosen to represent risk because it was convenient for academics to measure and it enabled them to use substantial amounts of data in their empirical research. You can simply eliminate this kind of volatility related "risk" by investing in illiquid assets such as unlisted real estate and infrastructure. It is obvious that the underlying fundamental risk of a business or other asset is not properly captured by short-term market-based volatility. It should be noted that sensitivity of a stock to changes in economic conditions or short-term market returns is also not a complete measure of fundamental risk.

Secondly, why should a diversified collection of average quality businesses necessarily outperform the risk-free rate? Adding lots of average quality businesses does not necessarily result in a portfolio that outperforms the risk-free rate over the long-term, particularly in a low growth, disrupted world. We believe, equity investing is about long-term growth, which is driven by compounding returns of the survivors (or winners). This produces positive skews not a normal distribution of returns. Essentially the extreme fundamental economic success of a few listed equities masks the failure of most individual stocks. Thus, successful long-term equity investors cannot afford to omit the few structural winners from their portfolios.

Furthermore, Fama and French (1992)[12] find that over time the linear relationship between risk (Beta) and return has diminished. They concede that earlier studies conducted from 1926 to 1968 using the Centre for Research in Securities Prices ("CRSP") NYSE dataset do find a positive correlation in support of the traditional finance model. However, when replicating the study, using the same dataset from 1963 to 1990, this simple relationship disappears. They conclude that risks are multidimensional and as such, *the SLB [Sharpe-Lintner-Black] model does not accurately describe average stock returns.*

"Positive mean excess returns for the broad stock market is driven by very large returns to relatively few stocks, not by positive excess returns to typical stocks. The positive skewness of long horizon stock returns is primarily attributable to the effects of compounding." Bessembinder (2018)

[12] Fama, E., & French, K. 1992. The Cross-Section of Expected Stock Returns. *The Journal of Finance*, 47(2): 427-465.

The returns produced by U.S. equities from 1926 to 2016 were driven by an extremely narrow group of stocks. Excess returns relative to treasury bills was derived from a small number of stocks that generated abnormally large returns, not from the performance of a typical common stock (or the "average"). The net gain for the entire U.S. stock market since 1926, measured using CRSP monthly stock returns, is explained by the best-performing 4% of listed companies (Bessembinder, 2018)[13].

Averages can be misleading as they are driven by the tail

Average businesses produce long-term returns at or below U.S. treasury returns. This means that the long-term returns from most listed businesses fail to justify the additional fundamental risk associated with investing in equities compared with U.S. treasuries. The symmetrical bell curve or normal distribution of returns taught at university does not reflect the reality of complex systems. Averages or mean values do not accurately describe many real-world systems and complex relationships. **Positive skews and compounding create averages from large values in the tail.** Power law distributions rather than normal distributions are more reflective of real systems, particularly when humans are involved. This is often called the "80-20 rule" where a few dominate. We would argue in a competitive, disruptive, and complex world its closer to a "90-10" or even "95-5" rule.

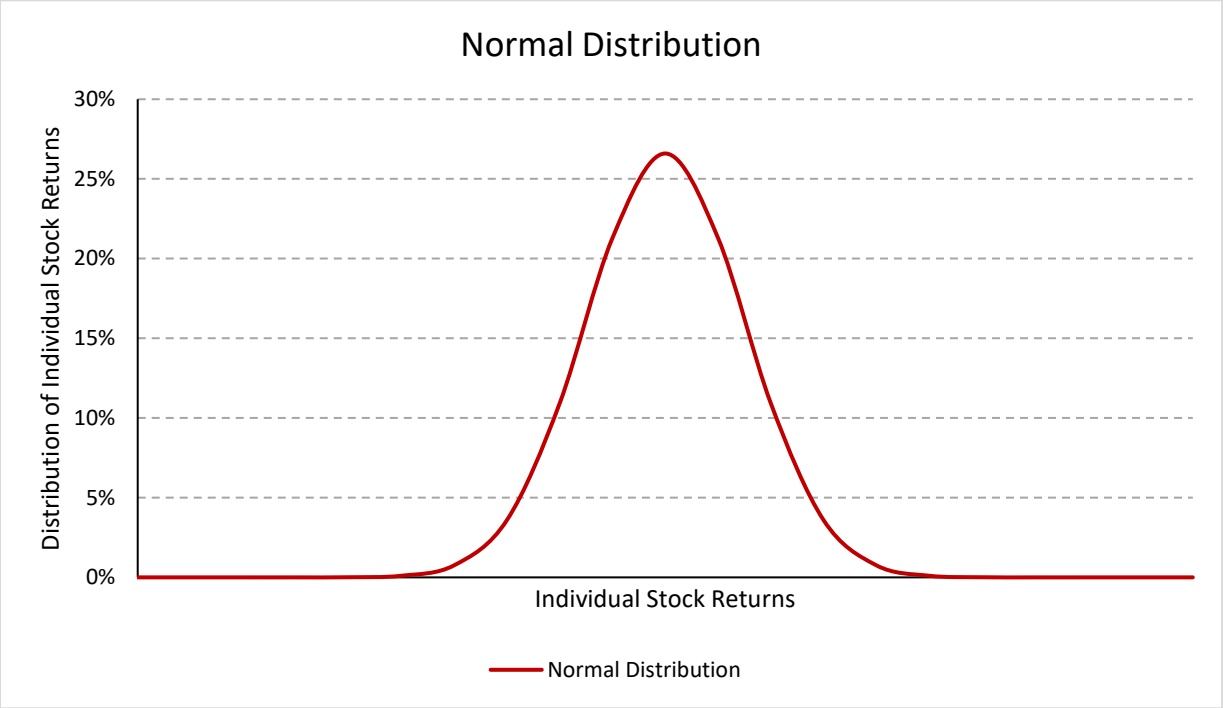
Most businesses fail to grow at high rates sustainably over the long-term. In addition, these types of businesses end up failing because they do not produce sufficiently attractive products and services. The lack of a value proposition that is strong enough to attract and grow customers and sales over the long-term results in eventual business failure.

Over the long-term, very few companies create significant sustained value. The companies that do produce significant value are those that produce exceptional products and services and they tend to accrue all or most of the economic benefits associated with that value creation.

Humans tend to seek comfort from the validation of others, including situations involving the selection of a product or service. This becomes even more important when there is some uncertainty regarding the future performance of that product or service. Examples include the selection of an active fund manager where future performance is uncertain or the selection of a software provider where the functionality required in the future is also uncertain. Hence, a first mover advantage is extremely important in many industries. Human's seeking confirmation of the best product or service by observing what their peers select creates a self-reinforcing winner's loop.

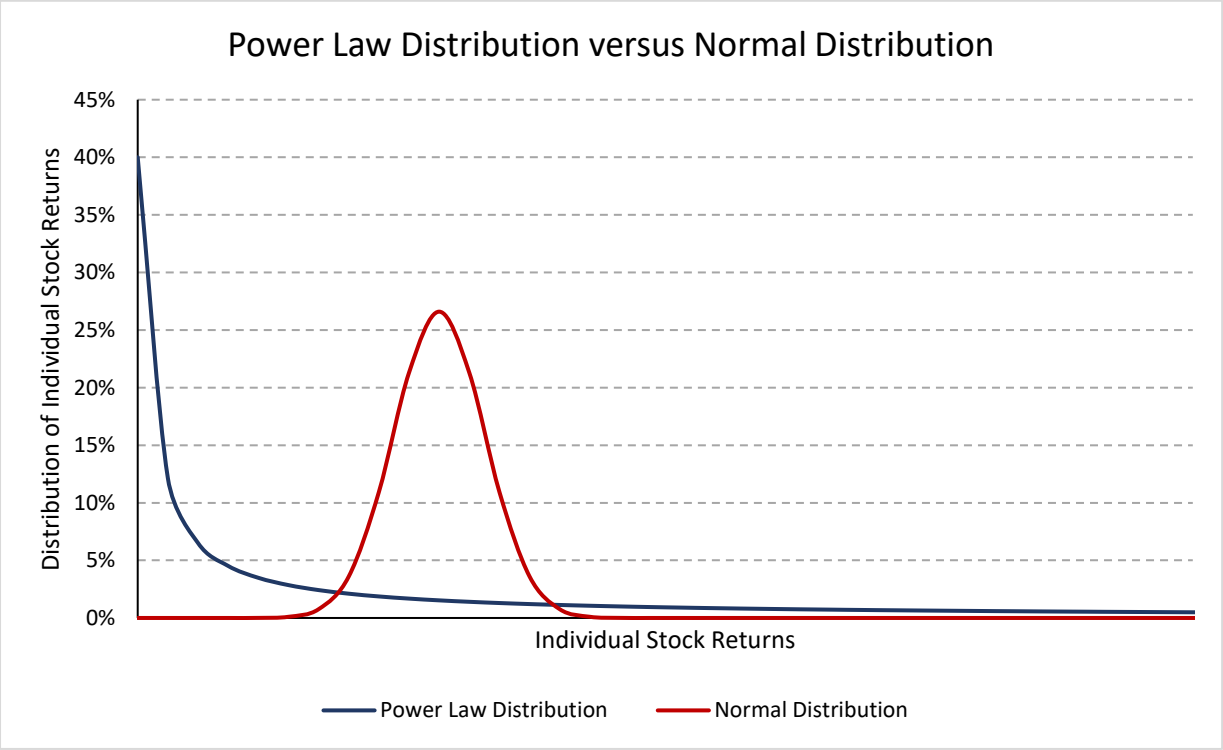
[13] CRSP month stock returns contain all common stocks listed on the NYSE, Amex and NASDAQ exchanges.

Figure 2: Theoretical distribution of returns – Normal distribution



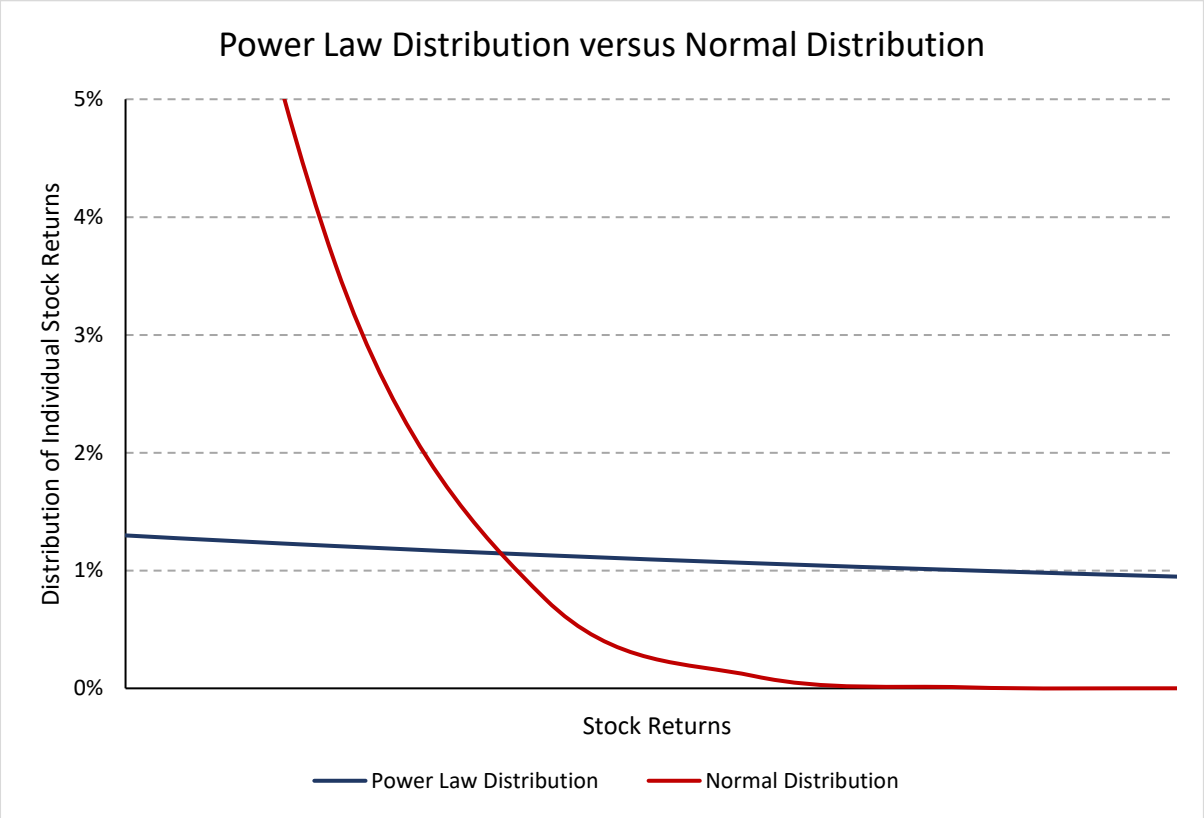
Source: Hyperion

Figure 3: Power law distribution of returns versus a normal distribution



Source: Hyperion

Figure 4: Practical distribution of returns – the tail of a power law distribution

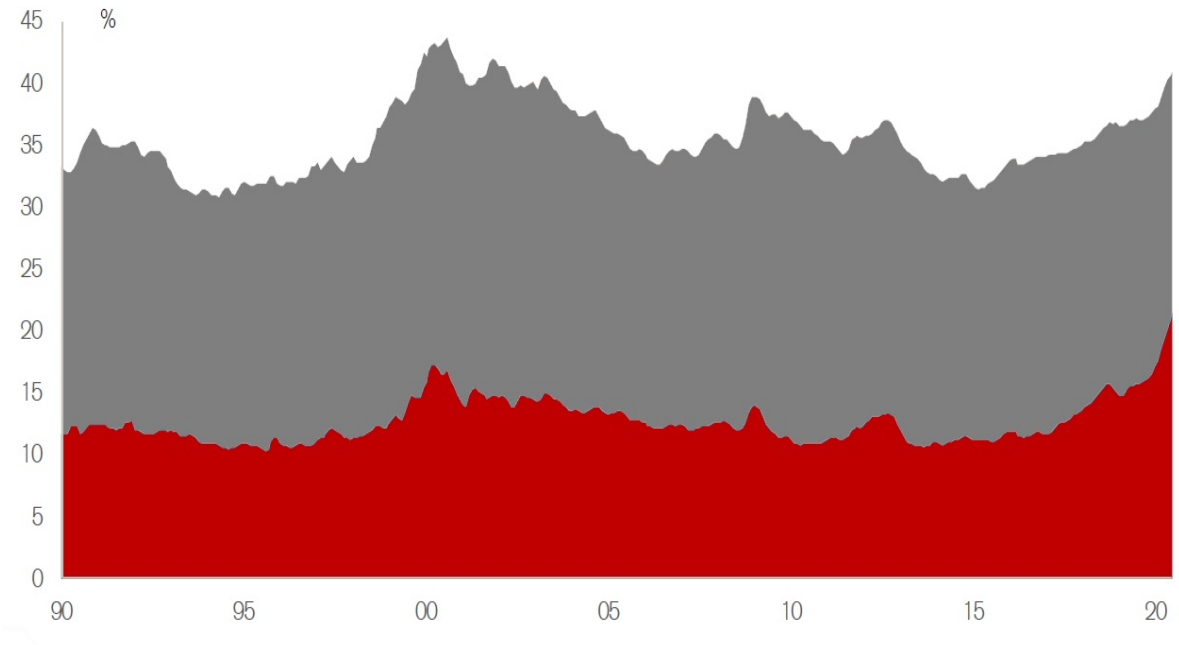


Source: Hyperion

The long-term returns of broad-based stock market indices are driven by a narrow group of elite businesses, effectively the top 99th percentile.

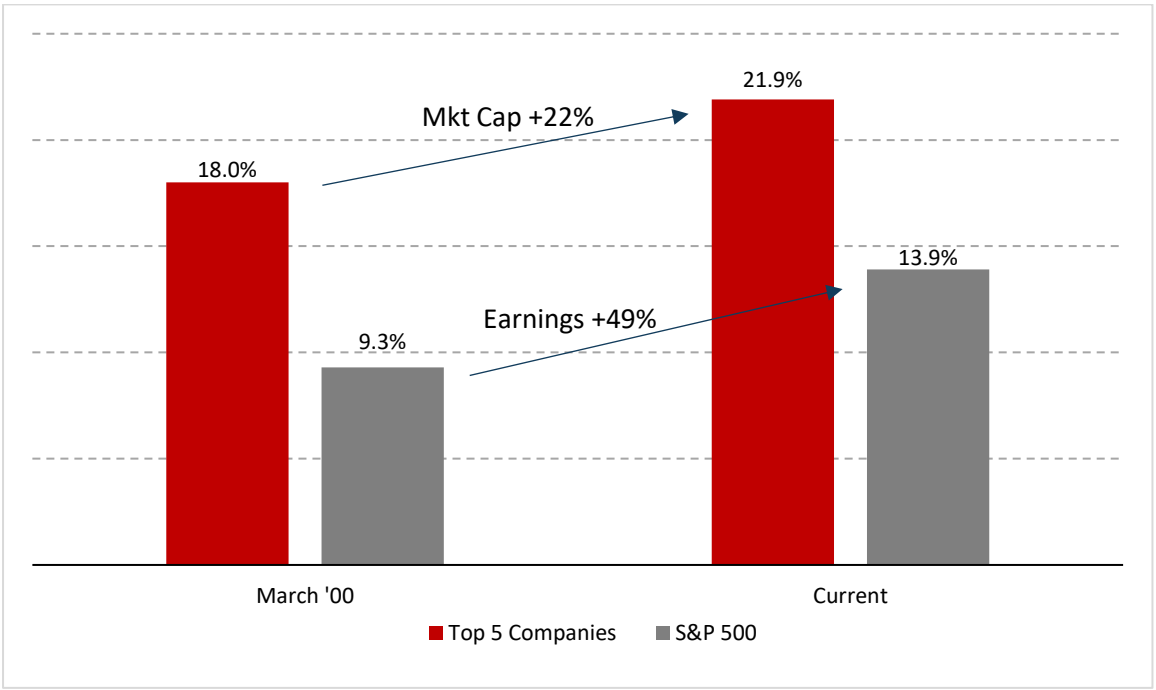
We have observed previously that the listed companies with the highest return on equity (top 10%) in developed markets has been expanding over time. In contrast, the average return on equity of most listed companies has been in decline. These trends commenced in the 1990s with the advent of the internet and became more pronounced post the GFC. In a low growth, low interest rate world the level of competitive intensity has risen as companies fight for market share in stagnant industry revenue pools. We expect positive skews to become even larger over time and thus averages to become even more skewed in a structurally low growth, disrupted world.

Figure 5: % of Market Cap – Top 5 vs. top 25 companies over time



Source: Credit Suisse 2020, Golub, J., Palfrey, P., Manish, B., Coates, M., & Erica, C. 2020. *Market Concentration Not a Problem,* Hyperion

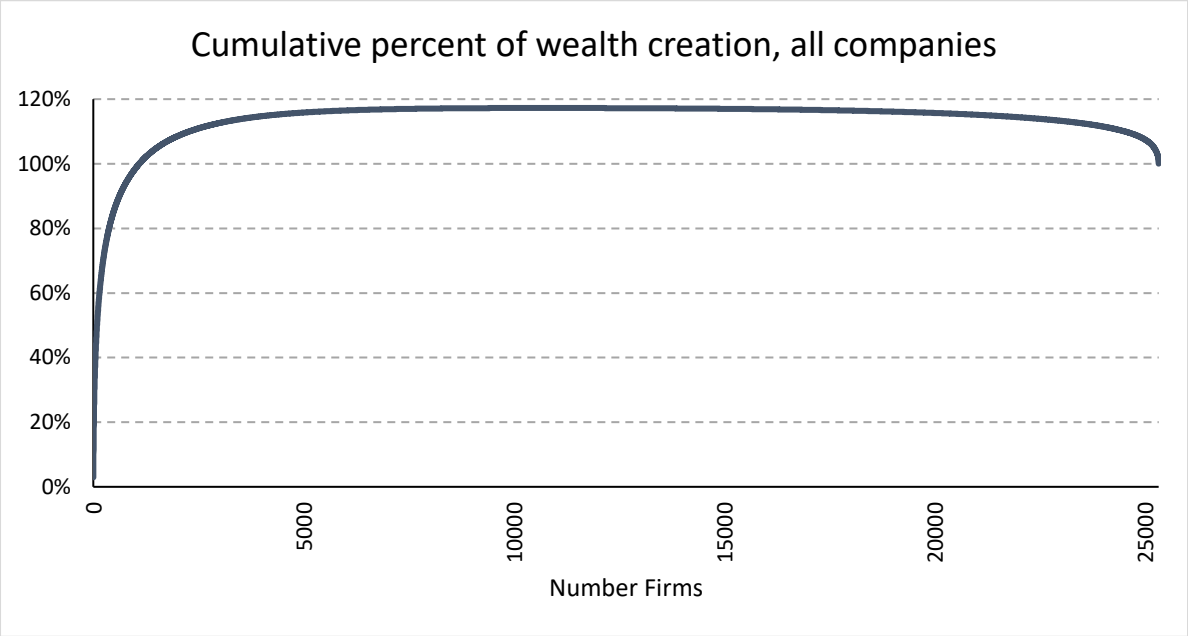
Figure 6: Percentage of Market Capitalisation - Top 5 companies over time



Source: Credit Suisse 2020, Golub, J., Palfrey, P., Manish, B., Coates, M., & Erica, C. 2020. *Market Concentration Not a Problem*, Hyperion

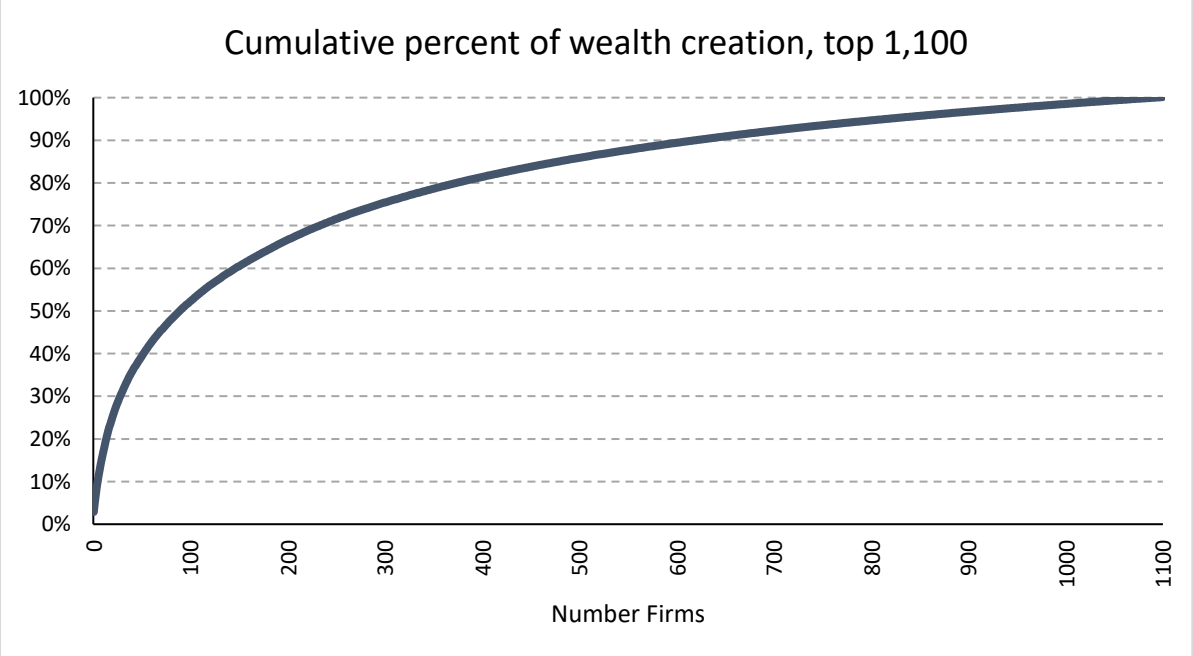
Bessembinder (2018) provides evidence that long-term market returns are driven by a narrow number of long-term winners. The following charts clearly show how narrow the number of companies are that contribute to equity returns from 1926 to 2016 in the U.S. market. The super-abnormal returns of a select few businesses compensate for many losing or average performers.

Figure 7: Cumulative percent of wealth creation in U.S. listed markets, all companies



Source: Bessembinder (2018), Hyperion

Figure 8: Cumulative percent of wealth creation in U.S. listed markets, top 1,100 companies



Source: Bessembinder (2018), Hyperion

The creative destruction of capitalism means there are few winners

The world continues to migrate to a winner-takes-all model where average and below average companies continue to suffer from low industry demand growth and a structural decline in the relative strength of their value proposition to customers. **We believe the return and performance profile of a select group of quality growth companies will persist.** With the largest 5 companies in the MSCI World between 1.0% to 4.5% of the index each, some of these will become much larger components over the next decade. Market capitalisations of many trillions of dollars will become reality for the largest listed companies in the world over the next decade and beyond.

Table 1: MSCI World Index as at 31 July 2019

Ranking	% weight	Security
1	4.25%	Apple Inc. (APPL-US)
2	3.38%	Microsoft Corporation (MSFT-US)
3	3.06%	Amazon.com, Inc. (AMZN-US)
4	1.39%	Facebook Inc. (FB-US)
5	1.04%	Alphabet Inc. (GOOG-US)

Source: MSCI, Hyperion

Capitalism is driven by the economics of creative destruction and for most long-term business investments, including equities, this results in business failure and loss of capital. This destruction can occur very quickly with most common stocks having short lifespans. According to Bessembinder, more than half of CRSP common stocks deliver negative lifetime returns with the most common outcome a loss of 100%. Individual common stocks tend to have short lives. The median time that a stock was listed on the CRSP database between 1926 and 2016 was 90 months (or 7.5 years).

Value creation within capitalism is rarely linear. To maximise compound returns, we believe investors need to hold a small number of structural growth stocks for very long time periods, generally many years to decades. The typical duration for a Hyperion holding is 10 years. There are companies such as Cochlear (COH-AU), Macquarie Group (MQG-AU), REA Group (REA-AU) and Technology One (TNE-AU) that Hyperion has held for decades in its Australian portfolios.

With the intrinsic value of most listed companies declining and life spans of listed companies shortening, investors need to "protect" before they can "grow." **We believe that true risk relates to permanent loss of capital or destruction of capital. Share price volatility is not risk. A sustainable business model is essential for earnings to compound over time.** Hyperion focuses on qualitative elements such as value proposition, competitive advantage, strength of business model, recurring level of revenue and strength of balance sheet to ensure we have selected businesses that can survive permanently.

In a structurally lower growth world post 2008, companies have been driven to innovate and invest at a faster rate. The most disruptive companies have accrued significant economic value in this environment. In contrast, there are many traditional average and below average quality businesses that have been sustained by low interest rates, quantitative easing, tax reductions, restructuring and mergers.

Most stocks generate negative lifetime excess returns (relative to treasury bills). Only 42.6% of CRSP common stocks have lifetime buy-and-hold returns that exceed the buy-and-hold return on one-month treasury bills over the same period (Bessembinder, 2018). This shows the importance of **not omitting key stocks from investment portfolios.** Again, the concept of a winner takes all outcome appears in listed equity markets. We

expect this to become even more common in the coming decades as the competitive intensity rises in a low growth world.

25,967 individual common stocks since July 1926, collectively created $34.82 trillion in wealth as at Dec 2016 on U.S. exchanges. However, this cumulative wealth was driven by a surprisingly narrow number of listed securities. Large positive returns to a few stocks offset the modest or negative returns to more typical stocks. The stock that made the single largest contribution to aggregate wealth over this time period was ExxonMobil at $1.0 trillion (or 2.88% of total accrued wealth). The second largest contributor was Apple at $745.7 billion (or 2.14% of total accrued wealth). In fact, the top 5 firms (ExxonMobil, Apple, Microsoft, General Electric and IBM) accounted for 10% of accrued wealth. Further, the 90 top performing companies (representing only 0.36% of the total number of companies) collectively account for over 50% of wealth creation and the top-performing 1,092 companies (representing 4.31% of the total number of companies) account for all the net wealth creation (Bessembinder, 2018).

Table 2: Wealth creation in U.S. listed markets, 1926 to 2016

Number of Companies	% of Listed Securities	% of Accrued Wealth
Top 5	0.02%	10.07%
Top 50	0.20%	39.29%
Top 90	0.36%	50%
Top 295	1.16%	75%
Top 1,092	4.31%	100%

Source: Bessembinder (2018), Hyperion

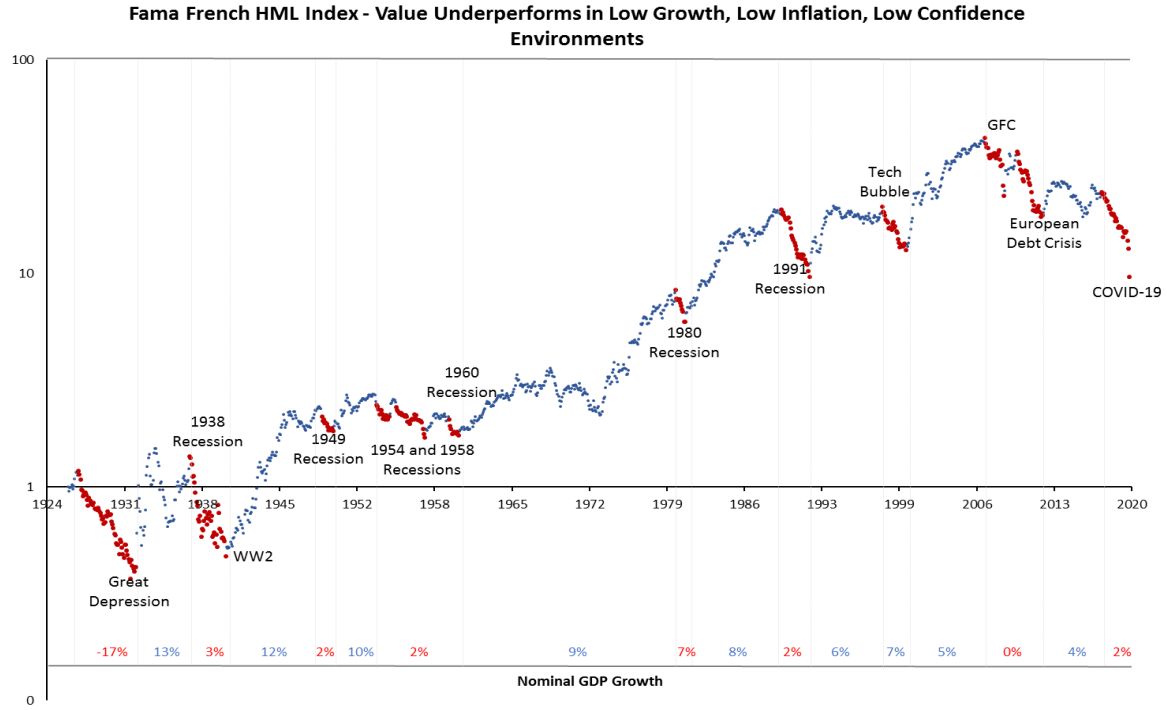
The fact that long-term cumulative equity returns are driven by a small number of exceptional equities does not mean the odds of success are necessarily low. Most experienced investors have some ability to recognise a few good investment ideas over the long term. By investing in a relatively concentrated number of high-quality growth businesses, being patient and holding these businesses over the long term, investors can focus on their best investment ideas and benefit from the compounding growth in their value. This is an extremely powerful and effective approach to wealth creation.

However, long-term investing is still difficult to execute in practice, as organic **growth and returns are rarely linear.** It is difficult not to overweight or extrapolate recent events ("recency bias"). There will be inevitable periods of under-performance, that sometimes stretch on for several years. Factors that influence share prices in the near term can continue to drive directional movements over multiple years in certain circumstances. However, over the long-term share prices follow organic sales growth per share and earnings per share growth.

Traditional value investing is structurally flawed in a low growth world

Value style investing is predicated on successfully forecasting short-term share price movements. This is difficult to do successfully without strong underlying economic tailwinds and regular and pronounced economic cycles. In fact, we have previously observed value style investing has consistently under-performed in periods where nominal GDP growth and aggregate profit growth have been low.

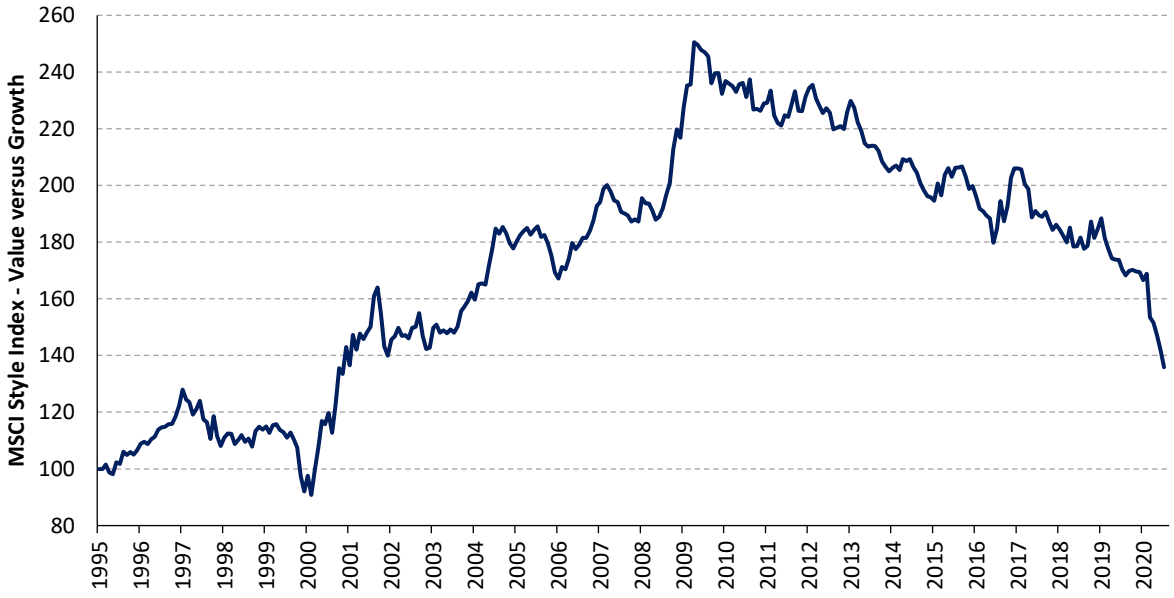
Figure 9: Value underperforms in periods of low nominal GDP growth



Source: Kenneth R. French, Hyperion

Strong aggregate profit growth in Japan prior to the GFC enabled value style investing to perform well, despite the low level of nominal GDP growth during this period. However, post the GFC aggregate profit growth in Japan has been weak and this has resulted in significant underperformance of value style investing.

Figure 10: Value has under-performed Growth in Japan post GFC



Source: MSCI, Bloomberg, Data compiled by Goldman Sachs Global Investment Research, Hyperion

We invest as long-term business owners

Hyperion's approach focuses purely on maximising long-term returns, long-term capital preservation and long-term alpha. We believe Hyperion is different from most market participants in that we do not attempt to generate short-term alpha through trading strategies such as:

1) momentum;
2) near term news flow;
3) feedback loops;
4) P/E Ratio mean reversion;
5) cyclical EPS recoveries;
6) shorting; or
7) short-term macro trends.

Our focus is on long-term business fundamentals and long-term valuation.

To select a portfolio of long-term winners, the qualitative factors of an investment become much more important. Insights around the strength of a company's business model, value proposition, competitive advantage and addressable market become essential. In contrast, factors such as short-term financial heuristics or recent news flow becomes less important.

By deliberately tilting our time more in favour of developing long-term knowledge and understanding and less towards short-term noise, we can create a long-term knowledge advantage. Hyperion develops a Business Quality Score ("BQS") for each potential investment to provide a framework to consistently assess the quality of each company. The BQS is derived from a number of components, with both quantitative and qualitative factors contributing to the final score.

Even though our **investment process incorporates short-term share price volatility, we do not attempt to predict the direction** and/or quantum of future short-term share price movements to generate alpha. That is, our investment process is not predicated on accurately forecasting short-term share price movements. The investment process can add long-term alpha regardless of the direction and quantum of relevant short-term share price movements. This is in stark contrast to how most market participants try to generate alpha by implementing investment processes that are reliant on correctly predicting the direction and duration of short-term share price movements.

At Hyperion, we see ourselves as long-term business owners and thus, sustained growth of the business is key to our investment philosophy. **We have never based our portfolio construction on index stock weights.** Our investment decisions are based on long-term business fundamentals. We look for modern businesses, with strong value propositions, that can grow revenues and profits organically at double-digit rates for at least the next decade. To us it makes long-term economic sense to be selective and manage a concentrated portfolio of stocks and not be exposed to a wide number of average to below average quality businesses that comprise most indices and benchmarks. Diversifying into structurally challenged old-world stocks with declining intrinsic values, even if they represent large weights in key indices, is likely to be value destructive in the long term. **This will become more important over the next decade as technology moves from the edge to the core of society and business.**

Global equity returns replicate U.S. findings

The same positive skewed returns found in U.S. listed equities applies globally (see Appendix). Bessembinder (2019) analysed return data for approximately 62,000 global listed common stocks across 42 countries over the 1990 to 2018 period. The findings revealed the best performing 811 firms (1.33% of total) accounted for all the net global wealth creation, and 67.20% of gross global wealth creation. Furthermore, less than 1% of non-U.S. firms accounted for all the net wealth accrued outside the U.S. in the studied period.

Bessembinder found that the concentration of gross wealth creation is similar across U.S. and non-U.S. firms. For example, the top-performing 1% of non-U.S. firms accounted for 59.9% of gross wealth creation in the non-U.S. group, while the top performing 1% of U.S. firms accounted for 60.1 % of gross wealth creation in the U.S. group (Bessembinder, 2019).

The top 10 contributors to wealth creation in Australia, New Zealand, United Kingdom and United States is included in the Appendix. The positive skews are larger and the long-term winners narrower outside the U.S. (i.e. Australia, NZ and UK).

Conclusion

Equity investing is about long-term compounding. Long-term returns of equity markets are driven by the compounding returns of a limited number of out-performers. The long-term excess return of your typical stock does not generate wealth. Traditional value investing relies on under-paying for average businesses, with returns driven by mean reversion over a relatively short period of time. However, most companies produce poor risk adjusted returns and have short life spans. Value investors tend to buy businesses that are suffering from declining intrinsic values, with many of these stocks likely to have zero long-term value. Successful value investors are extremely skilful and require an exceptional ability to accurately predict stock price movements over relatively short time periods.

Given that it is only a narrow group of stocks that produce most of the sustained wealth creation from equity markets, we believe successful investors need to identify and invest in the highest quality businesses – the structural winners.

Mark Arnold (Chief Investment Officer)

Jason Orthman (Deputy Chief Investment Officer)

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Appendix – Wealth Creation by Country, Top 10 Firms, 1990 - 2018

Table 3: Wealth creation in Australia

Firm	Wealth created ($ millions)	% of Global Wealth Creation	% of National Wealth Creation	Annualized Dollar Weighted Return
Commonwealth Bank Australia	125,736	0.19%	8.48%	16.05%
BHP Group	123,766	0.19%	8.35%	11.63%
Westpac Banking	84,518	0.13%	5.70%	12.35%
National Australia Bank	72,538	0.11%	4.89%	13.70%
CSL	68,908	0.10%	4.65%	26.04%
ANZ	68,184	0.10%	4.60%	11.72%
Rio Tinto Group	48,473	0.07%	3.27%	12.60%
Woolworths Group	37,063	0.06%	2.50%	15.48%
Wesfarmers	36,254	0.05%	2.44%	13.35%
Macquarie Group	29,885	0.04%	2.02%	16.12%

The top 10 firms in Australia generated 46.9% of gross national wealth competition. This is expanded to 57.92% for the top 20 listed firms.

Table 4: Wealth creation in New Zealand

Firm	Wealth created ($ millions)	% of Global Wealth Creation	% of National Wealth Creation	Annualized Dollar Weighted Return
Auckland Intl Airport	7,826	0.01%	8.95%	25.17%
Fisher & Paykel Healthcare	5,830	0.01%	6.67%	14.62%
A2 Milk Company	5,328	0.01%	6.09%	59.32%
Meridian Energy	4,117	0.01%	4.71%	25.08%
Ryman Healthcare	4,049	0.01%	4.63%	29.24%
Contact Energy	3,611	0.01%	4.13%	11.07%
Port of Tauranga	3,158	0.00%	3.61%	22.38%
Air New Zealand	2,406	0.00%	2.75%	6.95%
Mainfreight	2,385	0.00%	2.73%	21.27%
Fletcher Building	2,145	0.00%	2.45%	7.12%

The top 10 firms in New Zealand generated 46.7% of gross national wealth competition. This is expanded to 64.7% for the top 20 listed firms.

Table 5: Wealth creation in United Kingdom

Firm	Wealth created ($ millions)	% of Global Wealth Creation	% of National Wealth Creation	Annualized Dollar Weighted Return
HSBC Holdings	166,739	0.25%	4.48%	9.33%
BP	148,444	0.22%	3.99%	7.20%
Royal Dutch Shell	127,586	0.19%	3.43%	5.61%
Astrazeneca	122,018	0.18%	3.28%	10.52%
British American Tobacco	120,144	0.18%	3.23%	13.44%
Diageo	104,718	0.16%	2.81%	9.97%
Shell Transport and Trading	94,248	0.14%	2.53%	12.59%
Glaxosmithkline	93,286	0.14%	2.51%	6.10%
Rio Tinto	88,784	0.13%	2.39%	11.43%
Sabmiller	88,377	0.13%	2.38%	14.68%

The top 10 firms in United Kingdom generated 31.0% of gross national wealth competition. This is expanded to 46.3% for the top 20 listed firms.

Table 6: Wealth creation in United States

Firm	Wealth created ($ millions)	% of Global Wealth Creation	% of National Wealth Creation	Annualized Dollar Weighted Return
Apple	1,006,035	1.51%	2.96%	21.00%
Microsoft Corp	954,787	1.43%	2.81%	17.77%
Amazon Com	696,738	1.05%	2.05%	29.35%
Alphabet	528,536	0.79%	1.55%	17.62%
Exxon Mobil Corp	515,827	0.77%	1.52%	11.26%
Berkshire Hathaway	438,959	0.66%	1.29%	12.12%
Johnson & Johnson	437,430	0.66%	1.29%	13.87%
Walmart	407,376	0.61%	1.20%	13.13%
Altria	360,711	0.54%	1.06%	17.12%
Procter & Gamble	315,778	0.47%	0.93%	12.59%

The top 10 firms in United States generated 16.7% of gross national wealth competition. This is expanded to 24.6% for the top 20 listed firms.

Source: Bessembinder (2019), Hyperion Asset Management

HYPERION ASSET MANAGEMENT
a different horizon...

Why Active Investment Management Businesses Fail

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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In a capitalist, market-based society, it is extremely valuable to be able to produce attractive and sustained returns on capital that can compound over long periods of time. Compounding and growing capital allows individuals to sustain and enhance their standard of living and reduces the need to rely on personal exertion and government assistance to generate income, particularly in retirement. In a low growth world, the ability to produce alpha (returns above a benchmark) becomes even more valuable because the returns from passive styles of equity investing are likely to produce less attractive returns than they have achieved historically. Active asset management businesses that possess the ability to produce attractive returns over the long term, will continue to provide a valuable service to clients. Few active fund management businesses are successful in achieving positive alpha over long periods of time and many active fund management businesses fail.

Investing is about the future

The problem the market has in correctly assessing the quality of an active fund manager's product is that the strength of its true value proposition is not known at the time the investment decision is made. This is because the value proposition relates to future investment returns over uncertain time periods. A well-executed marketing campaign can result in investors allocating capital to actively managed products that have poor value propositions, because the investment decision is being made under conditions of uncertainty, with the outcome being that these managers are ultimately unable to deliver alpha. There are many actively managed products that have raised money initially by successfully marketing a promise to produce alpha in the future, but which end up failing to deliver that alpha. Hedge funds have been particularly good at marketing primarily through selling complexity and promising low levels of short-term price volatility and future alpha.

An effective proof point for identifying an active investment manager is for that investment manager to be able to show prospective investors a long-term track record of producing alpha after fees. This is evidence that there is some reasonable probability of the asset manager being able to produce alpha in the future by applying the same investment process and philosophy that achieved the historical alpha. However, investors should proceed with caution, as the conditions and factors that enabled and facilitated the historical investment track record needs to remain intact in the future. If there has been a material change in the economic conditions or other factors that facilitated the historical alpha, then the track record becomes less relevant. This has been evidenced by the negative impact a slower economic growth environment has had on traditional value managers' ability to generate alpha.

Reasons why active investment managers fail to produce long-term alpha

Reasons why active fund managers fail to produce alpha include:

1) the economic environment has permanently changed, and the investment philosophy and process no longer work in the new environment; or
2) the philosophy and process were never sound, and the value proposition is weak.

1) The economic environment has permanently changed, and the investment philosophy and process no longer work in the new economic environment

An investment philosophy and process are typically tailored to a specific economic environment. Successful investment approaches can become less effective and even fail if the economic environment permanently changes and historical market inefficiencies disappear.

The economic environment has permanently changed

We believe that there have been several fundamental changes to the economic and business environment over the past two decades that have substantial implications for the success of traditional value styles of investing. The changed environment also has negative implications for passive investment.

In the six-decades leading up to the GFC there were significant economic tailwinds. These economic tailwinds included:

1) young and growing populations;
2) the progressive financialisation of society;
3) a robust and growing middle class;
4) inexpensive energy in the form of fossil fuels that drove powerful machines;
5) a perception that natural resources were abundant and unlimited; and
6) benign levels of competition and limited disruption from new technologies.

Since the GFC the world has experienced lower levels of nominal GDP and corporate profit growth with the emergence of the following headwinds:

1) lower population growth rates and ageing population;
2) high debt levels in most major economies;
3) hollowing out of the middle class and rising wealth and income inequality;
4) increasing awareness of environmental constraints and disruption; and
5) increasing technology-based disruption of old-world business models and human capital markets.

In summary, the following factors have radically changed the economic and business environment:

1) tailwinds have been replaced by structural headwinds for the global economy;
2) aggregate corporate profit growth potential has been weakened overall from increased competition and better and cheaper products and services as result of the internet, smart phones and better software and technology; and
3) the distribution of profits has structurally moved to a few global leaders and away from many old-world and regional businesses.

These factors, in combination, have made traditional value investing less effective and will over time reduce the attractiveness of passive investing.

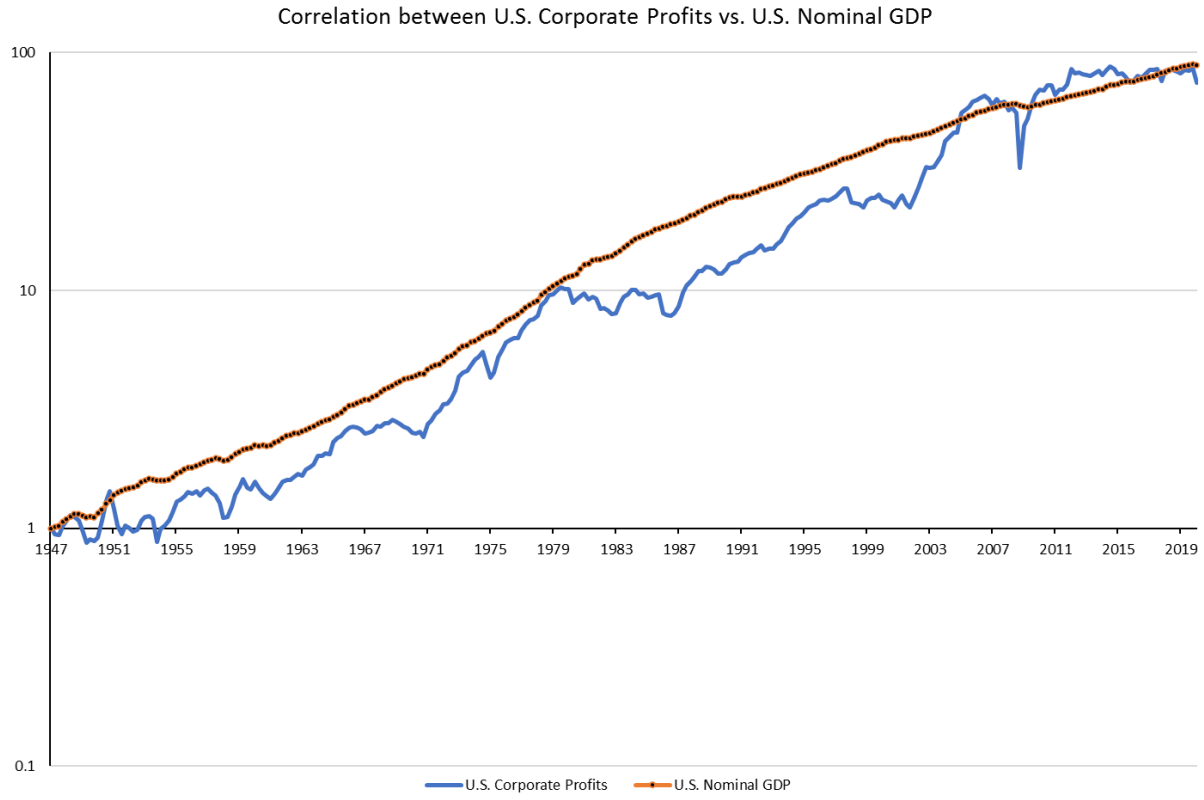
Value investing will struggle in a low growth, internet-enabled and disrupted world

The economic environment has changed permanently since the GFC. We believe this decline in the average rate of nominal GDP growth and associated aggregate corporate profit growth is enduring with long-term risk to the downside. **It is very unlikely that the high economic growth period from 1950 to 2007 will be revisited.** During this almost six-decade period the global economy produced very high average rates of nominal GDP and corporate profit growth. In this high growth environment, average quality companies were able to grow

their revenues at attractive rates, in-line with nominal GDP, as they shared in the strong overall growth of the economy.

However, the tailwinds that saw the rapid economic growth of the decades prior to the GFC have dissipated and economic headwinds are strengthening. **The emergence of the COVID-19 pandemic has further reinforced these headwinds and accelerated the disruption occurring in many industries, including in asset management.**

Figure 1: Aggregate corporate profit growth has been weak since the GFC



Note: between 1947-2007 the annualised CAGR of U.S. Corporate Profits and U.S. Nominal GDP was 6.9% and 6.9% respectively. Whilst the annualised CAGR of U.S. Corporate Profits and U.S. Nominal GDP between 2008-2020 was only 2.2% and 3.3% respectively.

Source: U.S. Bureau of Economic Analysis 2020

Lower rates of nominal GDP growth make it more difficult for most businesses to grow their sales and profits. The traditional economic cycles have largely disappeared as the effectiveness of monetary policy has reduced. The virtuous loop of young and growing populations and the productivity boost from low cost fossil fuel-based energy and powerful machines from the second industrial revolution started to fade from the 1970s and 1980s onwards.

Nominal GDP growth is linked to aggregate corporate profit growth. Lower aggregate corporate profits, all other things being equal, results in lower nominal GDP growth. Lower aggregate corporate profit growth has been caused by internet and smart phone related globalization and disruption. Weaker demand growth has also contributed to lower revenue and profit growth. Factors causing weaker demand growth include high debt levels and the loss of middle-income jobs.

The increase in global competition and disruption is placing downward pressure on profit margins for most businesses, particularly "old-world" businesses. Most listed businesses are "old world" in that their business models were created prior to the internet and smart phones.

At the same time, it has become a globalized winner takes all market and a few elite modern businesses have taken significant market share from many old-world businesses that still dominate the global corporate profit pool. These "old world" businesses tend to sell, for obvious reasons, on below average short-term P/E Ratios and thus value investors tend to be attracted to these stocks. The shifting of spending to these "new world" businesses has been given a further boost by the shelter-in-place restrictions of the COVID-19 pandemic. It is expected that this change in consumer habits will be permanent because many "old world" businesses have been forced to closed down or to shift much of their product distribution from bricks and mortar to online and rethink how they communicate, access and provide services to their customers.

Aggressive government spending programs that have been implemented as a result of the COVID-19 crisis have accelerated the trend to higher government debt levels in most countries. Increased unemployment levels will accelerate the trends toward more gig economy jobs, lower paying service jobs and fewer middle-income jobs. We believe many of the middle-income jobs lost during the COVID-19 crisis will permanently disappear. This has significant implications for future rates of economic growth and will result in a completely different and much weaker economic environment compared with the pre-GFC period.

Physical distribution and service models have been migrating to digital formats for many years. These include secular trends towards e-commerce, digital payments, and cloud-based software. The emergence of the internet in the 1990s and the release of the iPhone in 2007 were key enablers of these structural shifts. We believe these ongoing secular trends will help determine which investment styles will remain relevant in the future.

Disruption in the form of a structural trend towards digital products and distribution was emerging prior to the COVID-19 crisis. However, this disruption has been augmented because of the social distancing and shelter in place restrictions adopted globally to fight the pandemic. The resultant acceleration of revenues moving from traditional businesses to modern businesses is placing additional financial pressure on many large, listed companies. At the same time, the disruption is providing a forceful tailwind to modern businesses allowing them to take additional market share. We believe this shift in market leadership will be sustained even once the COVID-19 crisis has ended. This has implications for the long-term economic attractiveness of both passive and traditional value investing.

In a low growth economic environment, most businesses suffer because their profit growth is heavily dependent on the growth in underlying aggregate demand. If that lower level of corporate profit growth is combined with a high level of disruption, then a situation arises where most businesses stagnate or experience declining revenues, profit margins and returns on capital. If these businesses have debt, then financial leverage will magnify declining intrinsic values. **We believe most businesses will lose further market share to a few elite businesses with very strong value propositions under this new economic framework.**

A new economic environment is disrupting the traditional investment models of incumbent asset managers**.** We believe this trend toward a lower growth, disrupted economic environment is permanent. Traditional value-based investment models that rely on mean reversion or betting against change are no longer valid in a low growth, competitive, internet-enabled world. **Mean reversion of growth rates for businesses has been replaced with dispersion, and betting against change has been replaced with betting on progress.**

Investment frameworks that rely on traditional value investing will not work in this new economic environment.

We think this low growth, disrupted economic environment will negatively impact the attractiveness of returns from passive forms of investing over the next decade. Benchmarks are typically dominated by large, average quality, old world businesses. These businesses will be unlikely to produce significant future earnings growth as a collective. This means benchmarks will struggle to produce returns that are as attractive as the returns produced over the past few decades. Active funds management with an investment philosophy tailored to identify those few elite business that will take market share in this new low growth, disrupted world will create long-term alpha going forward.

2) The philosophy and process were never sound, and the value proposition is weak.

Most active investment management firms never raise enough funds under management ("FUM") to create an economically sustainable business because they do not possess the investment process necessary to deliver alpha. However, sometimes clever marketing will enable an active fund manager to achieve scale despite the investment process and philosophy being fundamentally weak and unlikely to produce long-term alpha. *There appears to be a growing belief in the industry that performance is not as important as good distribution, good messaging, and a suite of product offerings to suit every occasion. We believe this industry trend is based on a false narrative.*

No sustainable business can have two masters. A marketing culture is radically different to a research driven, alpha focused culture. The two cannot co-exist in an active asset management business over the long term. If the marketing culture defeats the alpha driven culture, then the active asset management business will fail in the long run. In a competitive market, the most important factor that determines whether a business is a success or failure is the quality of the product and the strength of its value proposition. A business with a weak value proposition will still ultimately fail even if the marketing is brilliant. On the other hand, a high-quality product with a highly disruptive value proposition will normally succeed even in the absence of a large salesforce and sophisticated marketing. Great marketing spin does not turn a poor product into a great one. Selling a poor-quality product ultimately results in unhappy clients, no matter how good the marketing message. Active asset management businesses only exist because clients believe that they can generate future excess investment returns over the long term. ***Sophisticated marketing such as complicated presentations or clever messaging will not fool clients indefinitely***. ***Ultimately, results and track records matter in funds management.***

An active asset management business can only be sustained over the long-term if it has a strong alpha driven proposition. This starts with an investment framework that exploits identifiable market inefficiencies. Consequently, we believe funds management businesses need to be led by experienced members of the investment team. Further, the key investment professionals should own equity. These members understand that the core inherent value in a fund management business is sourcing alpha and not in marketing, distribution, or product development.

Hyperion has traditionally focused on developing and maintaining a strong investment philosophy that is embedded in high quality research and has eschewed excessive marketing**.** The impact of this approach is reflected in the breakdown of the source of its funds under management as shown in Table 1. **Hyperion's total FUM has predominately been generated from investment performance, not client flows.** The table below

shows that alpha generation and market returns contribute $6.62 billion (85% of total FUM). This compares to $1.19 billion (15% of total FUM) from net client contributions.

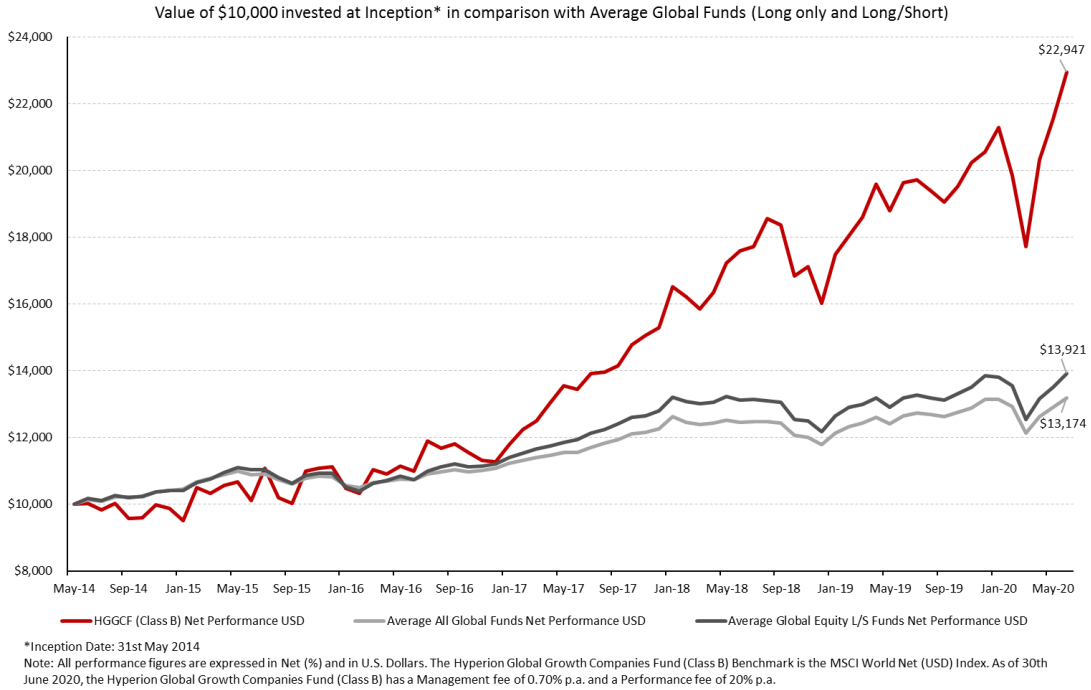
Table 1: Hyperion's funds under management profile

FUM Generation		$B (AUD)
Net Flows from Clients	15%	1.19
Market Return	49%	3.80
Alpha	36%	2.82
Total FUM*	**100%**	**7.81**

Source: Hyperion, *as of 30th June 2020

On the other hand, hedge funds have been notorious for over promising through aggressive marketing, aggressive trading strategies, employing shorting and other forms of leverage, as well as using complexity as a marketing tool. Hedge funds provide a good example of funds that have a questionable value proposition and a business model that relies on marketing and complexity to entice client investment. We believe a lot of these techniques are without merit and are no more than marketing gimmicks. Hedge fund returns overall have been underwhelming in recent years. Unfortunately, for many hedge fund products it has been more hype than substance.

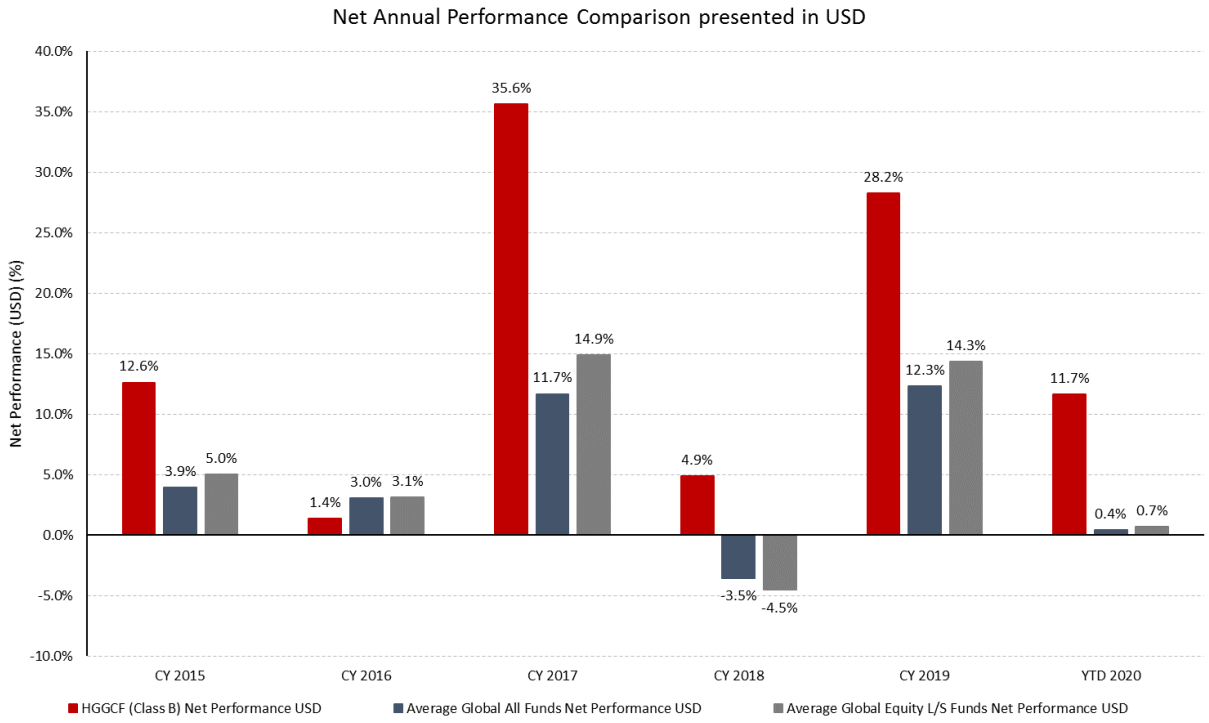
Figure 2: Hyperion's relative performance profile compared to traditional and hedged offerings



*Inception Date: 31st May 2014
Note: All performance figures are expressed in Net (%) and in U.S. Dollars. The Hyperion Global Growth Companies Fund (Class B) Benchmark is the MSCI World Net (USD) Index. As of 30th June 2020, the Hyperion Global Growth Companies Fund (Class B) has a Management fee of 0.70% p.a. and a Performance fee of 20% p.a.

Source: Hyperion and Morgan Stanley 2020

Figure 3: Hyperion's annual performance profile relative to traditional value and hedged offerings



Note: All performance figures are expressed in Net (%) and in U.S. Dollars. The Hyperion Global Growth Companies Fund (Class B) Benchmark is the MSCI World Net (USD) Index. The Inception Date of the HGGCF (Class B) Fund is the 31st May 2014. As of 30th June 2020, the Hyperion Global Growth Companies Fund (Class B) has a Management fee of 0.70% p.a. and a Performance fee of 20% per annum. CY2014 Performance figures have been excluded due to the Inception date of the fund not providing a full year of data.

Source: Hyperion and Morgan Stanley 2020

One of the common investment tools used by Hedge Funds is short selling. We believe that **short selling incorporates the worst aspects of the financialisation of society** in that it encourages short-termism and uses financial leverage to facilitate speculation on near term share price movements. Shorting also limits and reduces the benefits of the compounding effects of investing in successful businesses that can grow their revenues and EPS significantly over time. Shorting stocks is primarily a marketing gimmick used by hedge funds to play on clients' fears of short-term market-based declines and associated return volatility.

Hedge funds can use financial leverage to boost returns. This financial leverage increases the fundamental risk of the product and can potentially lead to disastrous end results. A classic example from the 1990s was the funds management business, Long-term Capital Management that was ultimately liquidated in 2000 after its earlier bail out. The firm employed significant leverage and used lots of data to identify small mispricing alpha opportunities. Marketing spin involving complexity and extreme leverage resulted in economic disaster for the firm and their clients in the end.

Hiding behind complexity

Competition has intensified and the world is moving towards a winner takes all competitive dynamic, whether it is in business, music, sport or investing. Winnings accrue to a few from the many losers. This is also true for the funds management industry where only a small fraction of participants will accrue alpha over the long term. Unless the market inefficiencies exploited by the active asset manager are very clear and the investment process is structured and repeatable the business will not generate alpha and will not survive in the long run.

Complexity of the product, relentless marketing, product proliferation, large investment teams nor the persistence of the distribution team will replace the need to generate alpha long term.

Of course, all managers will periodically under-perform, and clients should be educated that this is normal and acceptable. This contrasts with the overemphasis given to short-term movements in the market and media which puts intense pressure on fund managers to perform in the short term and to market products with a short-term focus. It is the long-term alpha that is valuable and should be the pursuit of active managers. Good active managers should be able to explain the inefficiencies they exploit as well as the market conditions in which they expected to out-perform and under-perform. This moves the conversation with clients from a litany of excuses to education.

Conclusion

The creation of excess long-term returns by active fund managers is valuable for clients. However, not all active funds managers are able to produce long-term alpha. In this paper we discussed two common reasons why investment frameworks fail to produce alpha. The first is that the economic environment has permanently changed, and the investment philosophy and process no longer work in the new environment. We have shown that an active investment style based on traditional value investing is not suited to the current low growth, disrupted world. The second reason that active fund management businesses fail is that the investment philosophy and process were never sound, and the value proposition is weak. We believe that there has been a trend in the industry for managers to focus on distribution and excessive product offerings to the detriment of alpha production. We argue that there is no value for clients in this approach. Over the long term, funds under management will be driven by sustained outperformance, not astute marketing.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

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Morgan Stanley 2020, *MTD & YTD Hedge Fund Return Dispersion*, data file, Morgan Stanley Prime Brokerage, viewed 10 August 3030, performance data retrieved from Investor Letters collected by Morgan Stanley.

U.S. Bureau of Economic Analysis, *Corporate Profits After Tax (without IVA and CCAdj*), electronic dataset, Federal Reserve Bank of St. Louis, viewed 7 August 2020, <https://fred.stlouisfed.org/series/CP>

Excessive FUM Destroys Active Asset Management Firms

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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The ability to generate excess returns after fees above a benchmark (alpha) requires an exceptional investment framework that is executed in a consistent, disciplined manner. A common way for successful funds management businesses to fail is by running products over optimal funds under management (FUM) levels. This action results in the significant reduction or disappearance of long-term alpha after fees. In effect, clients suffer from materially lower or poor alpha generation after fees while the owners of the asset management business benefit from higher short-term profits but end up risking the long-term sustainability of the business.

No organisation can serve two masters

Funds management businesses that are marketing and sales led, rather than research and alpha focused, are likely to impede long-term alpha generation by allowing excessive fund inflows. In successful organisations, there can only be one culture and set of values and beliefs. If the leadership is sales and marketing led, the value proposition to clients in the form of alpha generation is likely to suffer because FUM inflows and new product generation will be the dominant culture.

Short-termism, greed, and other behavioural problems

Human greed and short-termism are very effective ways to reduce the value proposition to clients and damage or destroy the long-term value of an active asset management business. Alpha centric funds management businesses, that are research driven and investment led, are more likely to be disciplined around capacity management and restrain FUM below their optimal levels.

An optimum level of assets under management exists where you have the scale to invest in research and other administrative support (often referred to as economies of scale) while having the ability to invest easily in a wide opportunity set (often referred to as the investment universe). Fund managers also need scale to be relevant to various market participants including brokers, management teams, boards, potential clients, and potential investment team members. However, going past your optimum FUM level results in diminishing relative, risk adjusted returns. In effect, taking more risk for less alpha.

There are significant diseconomies of scale in the active asset management business if FUM increases materially above optimum levels. Chen, Hong, Huang and Kubik (2004)[14] investigate extensive data (from 1969 to 1999) on U.S. equity funds and find that fund size erodes performance in most instances. This finding is consistent with an earlier study by Indro, Jiang, Hu and Lee (1999)[15] who comment on the adversity of diminishing marginal returns as a fund begins to exceed its optimal size.

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[14] Chen, J., Hong, H., Huang, M. and Kubik, J., 2004. Does Fund Size Erode Mutual Fund Performance? The Role of Liquidity and Organization. American Economic Review, 94(5), pp.1276-1302.

[15] Daniel C. Indro, Christine X. Jiang, Michael Y. Hu & Wayne Y. Lee (1999) Mutual Fund Performance: Does Fund Size Matter? Financial Analysts Journal, 55:3, 74-87, DOI: 10.2469/faj.v55.n3.2274

As your level of assets increases, the size of your investment opportunity set decreases. In the end, your investable universe reduces to only the largest listed companies. These are typically more mature, average, 'old world' businesses that do not have the ability to expand market share to organically grow their sales. Equity investing is about long-term compounding returns and typically you need to invest with companies relatively early in their life cycle to benefit from their higher rates of annual earnings per share (EPS) growth. These are the businesses that eventually turn into established blue-chip companies. **If you are too successful at marketing and the FUM levels move significantly above the optimal capacity of the product, then even a sound investment philosophy and process will fail.**

Too much FUM increases execution costs and reduces flexibility (often referred to as diseconomies in trading) as it is harder to allocate larger amounts of money at the same rate across the same investment universe. Even if the manager can carefully avoid any price impacts in either buying or selling, liquidity risks increase as the assets under management rise. That is, it takes longer to exit a position as days to trade increase and the consequences of any investment mistakes are amplified. Perold and Salomon (1991)[16] suggest the diseconomies of scale in active management are a result of the increased costs from larger transactions. FUM that is above optimal levels results in an increase in unexecuted trades. This additional trading related cost is often referred to as the implementation shortfall.

Active asset managers that are successful in growing their assets under management must eventually either restrict their FUM below estimated capacity levels and/or adjust their investment process. **Common adjustments to investment processes include increasing the number of stocks held, buying companies that are more liquid (which are typically higher market capitalisation stocks) or normalising the portfolio weights of holdings to minimise the level of portfolio turnover and resulting market impact.** For example, Chan, Faff, Gallagher and Looi (2009)[17] found that larger fund size is associated with more securities, less small stocks, lower bet sizes and less trading.

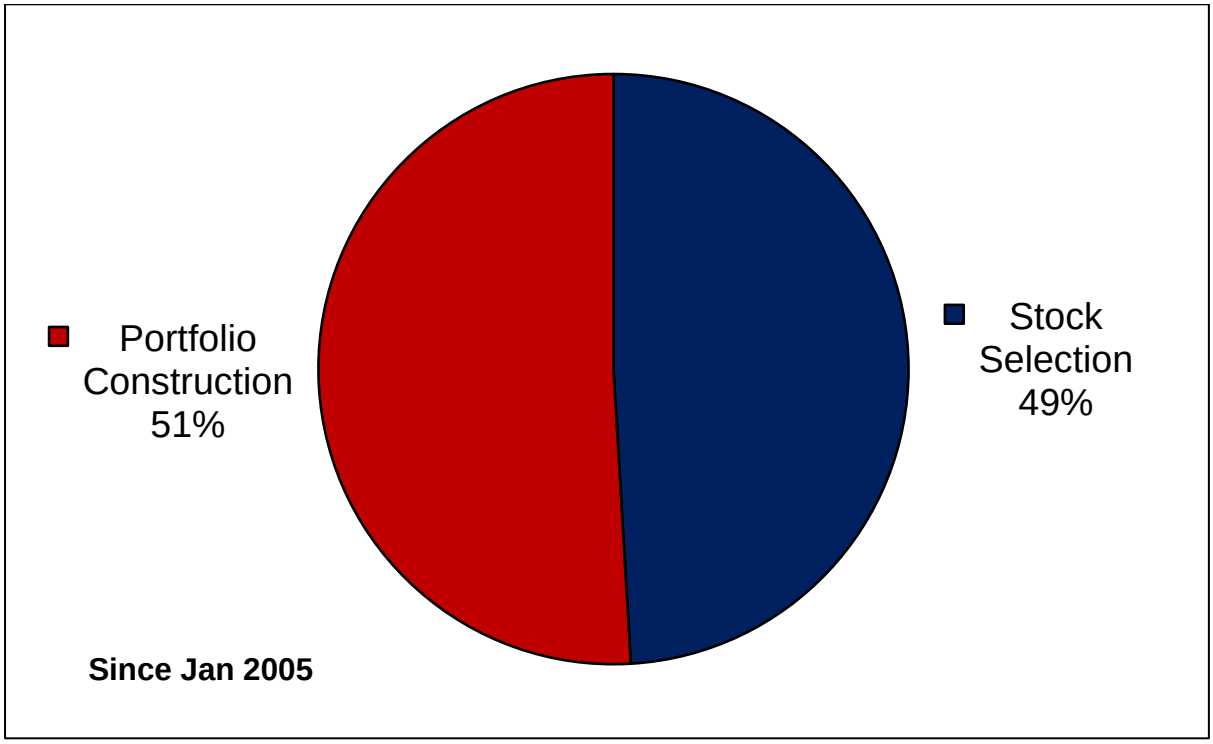
Large FUM levels that are above capacity inhibit effective portfolio management (often referred to as diseconomies in portfolio construction). Portfolio management should be a significant driver of alpha, as active managers should be able to take advantage of non-fundamental share price moves relative to a stock's intrinsic value. All things being equal, a lower share price should result in a higher forecast internal rate of return (IRR) and higher portfolio weight for that stock.

Over the past 15 years, the alpha within Hyperion's Australian Growth Companies composite can be attributed as 51% to portfolio management and 49% to stock selection. Thus, effective portfolio management (or setting the right weights at the right time) has effectively doubled the alpha achieved. If FUM becomes too great to move actual stock weights towards their target weights easily through buying or selling, then a valuable source of alpha is reduced.

[16] Perold, A., & Salomon, R. 1991. The Right Amount of Assets Under Management. *Financial Analysts Journal*, 47(3): 31-39.

[17] Chan, H., Faff, R., Gallagher, D. and Looi, A., 2009. Fund Size, Transaction Costs and Performance: Size Matters! Australian Journal of Management, 34(1), pp.73-96.

Figure 1: Split in Hyperion's domestic cumulative alpha



Source: Hyperion

A common way to absorb too much FUM is to spread it over a larger number of stocks. Typically, the more FUM a manager accepts above optimal levels, the more stocks a manager includes in their portfolios. Based on a study of U.S. mutual funds from 1992 to 2000, Shawky and Smith (2005)[18] concluded that when net fund flows are positive, managers tend to add new stock positions and when net fund flows are negative, managers tend to reduce the number of positions.

Once **adequate diversification** has been achieved through an optimal number of stocks, there is little benefit in introducing more stocks into a portfolio. In fact, we believe, adding too many stocks reduces the quality and increases the underlying fundamental business risk of a portfolio. In effect, a collection of elite businesses with low fundamental risk are diluted with a collection of lower quality businesses with higher embedded fundamental risk. For example, companies with relatively lower earnings growth, more debt on the balance sheet or weaker competitive positions may be added to the portfolio. If too many stocks, particularly large liquid stocks, are added to a portfolio, its characteristics and performance will move closer to mirroring that of the relevant benchmark. In this scenario the potential alpha reduces towards zero.

Petajisto (2013)[19] comments on the benefits to active stock selection in achieving outperformance. The report finds that funds which are "closet-indexers" essentially match the index performance and deliver underperformance after fees. Active share and tracking error are used as measures to provide evidence that

[18] Shawky, H. and Smith, D., 2005. Optimal Number of Stock Holdings in Mutual Fund Portfolios Based on Market Performance. The Financial Review, 40(4), pp.481-495.
[19] Petajisto, A. 2013. Active Share and Mutual Fund Performance. *Financial Analysts Journal*, 69(4): 73-93.

mutual funds that are the most active stock pickers generate outperformance – an implication of retaining optimal fund size and mitigating inflows. These patterns held throughout the GFC and despite this, closet indexing is a strategy that has increased in popularity since 2007.

Another way to deploy too much FUM is to buy more liquid companies, typically with higher market capitalisations. Usually, these businesses are mature, average quality companies with 'efficient' balance sheets. Often their returns are driven by capital allocation such as share buybacks or dividends rather than capital appreciation. They are generally at the end rather than the start of their life cycle. We believe, successful long-term investing is primarily about allocating capital to stocks that can produce long-term compounding returns driven by attractive levels sustained growth across sales, earnings and positive cash flows. The probability of finding these in the largest market capitalisation stocks is generally low.

Furthermore, if asset gathering is the primary focus of an asset management business, then marketing becomes more important culturally than alpha generation. When FUM levels become large and beyond the ability of the investment process to be implemented successfully, because of high impact costs and ownership levels, then the fund management business has the following choices:

1) hand back money;

2) allow the ownership of key stocks to increase;

3) add more lower quality companies with higher fundamental risk and lower return profiles; and/or

4) amend the investment process.

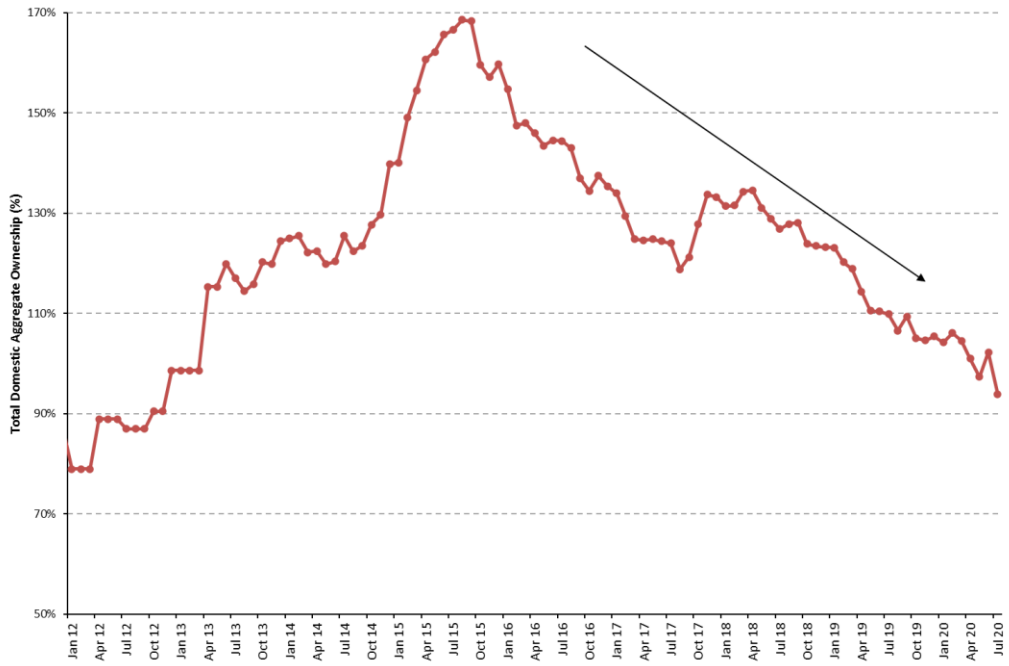
Many asset management businesses will choose to amend the investment process. As discussed, this normally involves increasing the number of stocks held in the portfolio. This allows the fund manager to manage more FUM with lower market impact, but it may result in lower capital allocations to key stocks and dilute the alpha generated from the process. Effectively, investment thresholds are being lowered.

A study conducted into mutual funds performance by Vidal-Garcca and Vidal (2016)[20] further suggested the negative effect of increases to FUM on performance. Diseconomies of scale led to small funds outperforming large funds. This study used a sample of 16,085 active equity funds domiciled in 35 countries around the world to confirm the diminishing returns of scale and evidence of lower stock picking ability in larger funds. The evolution of a typical fund is as follows: smaller funds deliver higher returns, outperformance attracts cash inflows, increases to FUM result in diseconomies of scale and consequently decreases the probability of outperformance.

Hyperion has always been obsessed with managing optimal fund levels carefully as one of our core values is being "alpha focussed". We believe we are comfortably below capacity levels as shown by declining domestic aggregate ownership levels over the past five years.

[20] Vidal-Garcia, J., & Vidal, M. 2016. Short-Term Performance and Mutual Fund Size. *SSRN Electronic Journal*. https://ssrn.com/abstract=2801930.

Figure 2: Hyperion aggregate domestic stock ownership levels



***Source**:* Hyperion

We know Hyperion only exists because clients believe that we can generate future excess investment returns over the long term. We are not prepared to risk under-performance from managing too much FUM despite the lure of higher short-term operating profits.

"No long-term alpha, no Hyperion."

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

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HYPERION
ASSET MANAGEMENT
a different horizon...

Hyperion's Alpha Framework - Leadership and Culture

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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We believe an active asset management business needs an effective decision-making framework to be successful in the long term.

Hyperion Asset Management (Hyperion) has a structured framework that guides its decision-making processes and we believe this framework is an essential part of the sustainability of the business.

Hierarchy of decision-making frameworks

The hierarchy in the execution of the decision-making framework is as follows:

1) mission;
2) values and beliefs;
3) investment philosophy;
4) investment process; and
5) execution of theory.

In this white paper we focus on the decision-making framework used to help Hyperion produce portfolios that are valuable to clients.

The ability to generate excess returns after fees above a benchmark (alpha) requires an exceptional organisational and investment framework that is executed in a consistent, disciplined manner. Good decision-making requires two key elements:

1) a sound theoretical investment framework; and
2) good execution of that framework under strong, experienced leadership.

Sound theoretical investment framework

The theoretical investment framework of an asset management business comprises an **investment philosophy** and an **investment process**. An asset manager's decision-making process is founded on an investment philosophy, which is supported by a system of core values and beliefs and guided by a mission. The investment process is a set of detailed procedures and rules that govern the behaviour of the asset manager to ensure decisions are controlled by the key tenets of the investment philosophy.

A sound theoretical framework for decision-making and the associated mission, values and beliefs are extremely important for the sustainability of any business. The mission and supporting values and beliefs of a business relate to what that organisation believes is important and the reason the business exists.

The mission, values and beliefs help frame the decision-making approach and procedures that are aimed at ultimately constructing portfolios for clients that produce attractive long-term returns in a sustainable manner.

In active asset management, an organisation's values and beliefs must include an awareness of the market inefficiencies the manager exploits and a disciplined framework to accrue these excess returns over time.

The reason an active asset management business exists is to generate returns after fees (net returns) to investors above the returns of passive asset management. In an active asset management business, the quality of investment decisions is determined by future events and outcomes, meaning investment decisions are made under **conditions of uncertainty.** An investment framework should provide guidance on the processes to follow, in the context of uncertainty, in making investment decisions that are consistent with the investment philosophy.

No organisation can serve two masters

We believe investment firms should be led by investment team members that believe and have conviction in the value of the investment decision making framework and the market inefficiencies that are being exploited. **Sustainable funds management firms are alpha driven and not marketing or product led firms.** Unfortunately, the active funds management industry is dominated by salesmanship, marketing and an asset gathering culture. We believe that sustainable active asset management businesses should have a predominant focus on the quality of the products produced and be investment led, research driven and alpha focused. Hyperion's belief is that focusing on producing a valuable product to clients that adds long-term alpha is the best way to create a sustainable business. We believe that active asset management businesses managed or heavily influenced by marketing and asset gathering approaches and cultures are doomed to failure in the long-term.

"As a group, we veered off-course almost 180 degrees from stewardship to salesmanship, in which our focus turned away from prudent management and toward product marketing." John Bogle

The ability of the asset manager to generate alpha and the expectation from clients that alpha can be generated in future periods, are critical to the perpetuity of a fund management business. If the asset manager's investment framework is unable to add value for the client over the long term, the business will eventually cease to exist. Marketing a poor product that is inferior to the benchmark is not a sustainable business strategy for an active asset management business.

Execution of the framework

If the theoretical decision-making framework is sound and when executed properly produces alpha, then the asset manager still needs to remain disciplined and execute its decision making under conditions of uncertainty. This requires internal conviction and a rejection of short-term pressures.

"In theory there is no difference between theory and practice, in practice there is." Yogi Berra

There is little benefit or value-add if the organisation cannot execute on the decision-making framework consistently. The asset management business needs to have an organisational culture and structure that facilitates and enables the process and philosophy to be executed effectively.

If the key decision makers in the organisation do not understand the investment philosophy and process or cannot or will not execute it, then the asset management business will ultimately fail.

Reasons for failure to execute include:

1) behavioural biases;
2) cultural problems including poor leadership and incentive structures;
3) lack of necessary knowledge, intelligence and experience;
4) insufficient client support and belief; and/or
5) business-related economic resource shortages or impediments.

In terms of cultural problems, a clear decision-making structure, appropriate incentives, and strong, experienced leadership is required to prevent business failure. Examples of where strong and experienced leadership and appropriate organisational structures are absent include:

1) new, relatively inexperienced members of the team attempt to set their own narrative rather than adopt the pre-existing mission, values, and beliefs of the organisation;
2) new but experienced members of the team use their seniority to adopt their own mission, values, and beliefs as leaders that differs from the firm's mission, values, and beliefs; and/or
3) the existing leadership do not follow and execute the framework.

If new, relatively inexperienced members of the team attempt to set their own narrative rather than adopt the existing mission, values and beliefs of the organisation they are in effect developing their own new framework rather than executing on the existing, successful framework. Existing frameworks must be written down and followed. We believe hiring junior investors from outside the organisation is risky if they are not successfully indoctrinated with the existing mission, values, and beliefs. This requires good communication and high expectations from established members of the team.

If new but experienced members of the team use their seniority as leaders to adopt their own mission, values, and beliefs they are in effect changing the existing, successful framework. We believe hiring senior investors from outside a successful organisation is extremely risky as they will inevitably attempt to introduce their own beliefs and methodologies (leading to a "cultural clash").

Since decision making is made under constant uncertainty, it is important that the key decision makers in the organisation have the conviction and belief to continue to follow the process in the face of external (and/or internal) parties questioning the process during periods of underperformance. Strong leadership and communication of the framework is also required internally as otherwise the broader team will set their own framework. If these key decision makers do not "buy into" and protect the investment framework or execution process (from both external and internal parties) then the asset management business will fail in the long term.

The conviction to continue despite external parties or newer members of the investment team questioning the process must be **evidence based**. This means that the key decision makers must understand the pricing inefficiencies that the investment philosophy and process exploits, as well as the market and economic circumstances in which the process is likely to outperform and underperform.

Blind belief without knowledge and understanding of why the investment process and philosophy produces alpha will result in the business also ultimately failing. Of course, the process and execution should continue to evolve and improve as circumstances fundamentally change but the core of a successful framework should remain largely unchanged.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

ESG Framework – Hyperion Asset Management

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Sustainability has been core to Hyperion's investment philosophy and process since it was established in 1996. Hyperion has a long-term investment horizon of 10 years or greater and we have always invested as business owners, not short-term share traders. This is evidenced by the fact that historically our average stock holding period for our portfolios is approximately 10 years. We only invest our clients' capital in those businesses that we believe are extremely high-quality with strong and sustainable value propositions to all stakeholders. The stakeholders include the wider community and an assessment of the company's future likely long-term impact on the overall natural environment, including its carbon footprint. Sustainability assists in reducing the risks of any permanent loss of capital across our holdings. Eventually, companies that externalise costs, will be forced by external stakeholders to internalise them – either through regulation or changing expectations of society. As such, long-term sustainability is a core component of our philosophy.

We believe our portfolios contain very low ESG risk due to this long-term focus and the substantial qualitative and quantitative research completed on all our holdings. Short-term share traders do not care about the long-term fundamentals and sustainability of the businesses they trade as their sole focus is on short-term share price performance (alpha generation) during their (brief) holding period. These alpha traders do not need to worry about the long-term sustainability of the business because they are merely short-term "renters" of the stock.

We actively avoid companies with -

1) low long-term predictability,
2) operations that pollute the natural environment in a material and unsustainable manner,
3) large carbon footprints,
4) low quality/opaque disclosure practices,
5) significant operations in countries with high corruption levels where the business is likely to have to be a party to that corruption in order to be economically viable in those regions,
6) questionable governance, and/or
7) poor organisational cultures.

Our long-term investment framework is based on fundamental research as business analysts with a particular focus on the sustainability of the company's value propositions.

Our detailed long-term based fundamental research is highly structured, and all the key qualitative information and insights are captured in our proprietary research document. This detailed document, called a 'Research Template', is regularly updated for each portfolio company. This document addresses ESG and sustainability factors including isolation of potential long-term risks, composition and quality of the board, and company specific ESG policies and initiatives. This analysis extends to a company's broader stakeholder group, including its supply chain. This ultimately feeds into a company's 'Business Quality Score' (BQS) which is the key output of the research template, and a key factor in the portfolio stock selection and construction process.

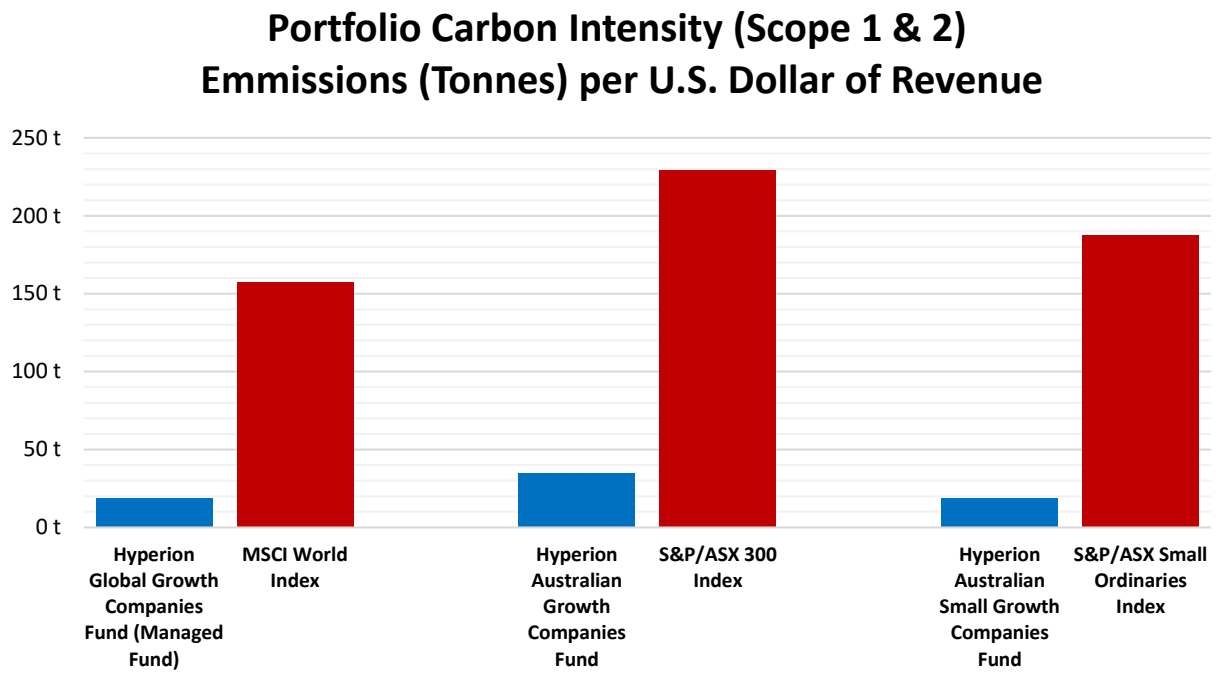
As required by the UN Principles of Responsible Investing, if the company is judged to not be upholding a strong ESG culture, it is not included in the portfolio. Hyperion has been a signatory to the PRI since February 2009.

Hyperion is also an official supporter of the Task Force on Climate-related Financial Disclosure (TCFD) and has implemented these required reporting standards in our reporting. We also encourage Hyperion portfolio companies to implement TCFD recommendations. Hyperion has long had the goal of ensuring our portfolios have a significantly lower weighted average carbon emission score than their respective benchmarks. Since we started tracking this data in 2010, we have succeeded in this regard, with Hyperion's portfolios carbon emission scores being consistently and significantly lower their respective benchmarks. Typically, our portfolios are less than a tenth of their respective benchmark's carbon intensity.

Hyperion has two analysts tasked with ESG oversight; however, all members of the investment team are required to consider ESG-specific elements as part of the qualitative step in our investment process. We leverage ESG research from our broker panel and subscribe to Sustainalytics for carbon and sanctions data. We use Ownership Matters, ISS and CGI Glass Lewis for proxy voting services and general ESG advice. We believe our role as proxy voters for our clients is important and a task we do not take lightly. We take time reviewing third-party research, completing our own research, and talking with company management when a vote is required, and we express our thoughts and/or concerns.

Hyperion expects the rate of growth in the global economy to decline over the coming decade and beyond due to several structural headwinds. One of the most challenging of these is the constraints on our natural resources and the environmental impact of using fossil fuels as our main source of energy. Structural disruption due to renewable energy is likely to be far-reaching, initially impacting resource, utility, transport, and infrastructure sectors. Further, the finite nature of our natural resources makes unbridled consumerism unsustainable. We have structured our portfolio to reflect this and enable our investors to prosper from this disruption through a group of companies that are implementing strong ESG values and/or actively moving the world to a cleaner future.

At a firm level, our goal is to follow best practice guidelines that are relevant to our business and to put our principles into action. Hyperion is aware of its carbon footprint and has developed strategies to negate our impact on the environment. Hyperion is taking steps to remove its firmwide carbon footprint and going beyond that by purchasing more credits than required to take further carbon from the environment. Hyperion has been effectively carbon negative since 2015 through the purchase of carbon credits. Furthermore, we have calculated our carbon footprint since inception in 1996 and plan to completely offset this as well.



Source: Sustainalytics (FactSet), Hyperion Asset Management. The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

Hyperion's Mission, Values and Beliefs

Mark Arnold, Chief Investment Officer, Hyperion Asset Management

Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Hyperion's mission
Hyperion's mission is to protect and grow our clients' capital sustainably over the long term.

Since the business was established in 1996, we have successfully protected and grown our clients' capital. The trust that we have built with our clients and other stakeholders over more than two decades, and their belief that we can continue to achieve our mission in the future, is the key reason that Hyperion still exists in the ultra-competitive and globalised funds management industry. A track record of long-term alpha (excess returns above a relevant benchmark) is rare and valuable. It provides objective and verifiable evidence to third parties that we have a philosophy, process and structure that exploits inefficiencies in equity markets. It also provides the clients and other key stakeholders the confidence that we can continue to add value longer-term.

The key elements of our mission are to:

3) protect client capital; and
4) grow client capital over the long term.

We seek to construct and manage share portfolios that are designed to protect our clients' capital first and then grow that capital over the long term. We call this "protect and grow" and it is fundamental to how we analyse businesses and construct portfolios.

1) Protect Capital
We view risk as a permanent loss of capital at the portfolio level, not the volatility of market-based returns. We believe traditional metrics such as beta, Sharpe ratio and tracking error have limited inherent value in assessing the risk, quality and structural growth embedded in a portfolio of stocks.

Permanent loss of capital is where the underlying intrinsic value of the portfolio suffers a permanent decline that is so material that it is unlikely to be recovered in real terms. We do not believe a large decline in the market value of the portfolio during an economic or market crisis is a fundamental risk, provided the long-term intrinsic value of the portfolio remains intact and the share prices and the market value of the portfolio are likely to recover. We believe you cannot predict short-term share prices consistently, but you can take advantage of these share price movements by comparing them to the long-term intrinsic value of the related business.

We protect client capital by only investing in businesses that have high quality attributes, including strong value propositions, sustainable competitive advantages, innovative creative cultures and large addressable markets. These elements, together with our proprietary portfolio management system that sets stock weights based on risk adjusted long-term forecast returns, help protect clients' capital. Our portfolios comprise a group of well selected stocks that have both the quality attributes we seek and trade at a significant discount to their estimated long-term intrinsic values.

Our portfolios are defensive in nature because they comprise listed businesses that are robust, resilient and have significant long-term structural growth. The long-term earnings growth of our portfolios should not only be higher on average than their relevant benchmarks, but they should also be more resilient to economic shocks. Potential customers become more discerning in difficult economic conditions, and in turn they drive accelerated market share shifts towards better value products during these periods.

In difficult economic and market circumstances, clients tend to be more focused on capital protection. It is during these challenging periods that it becomes more obvious who has taken extra fundamental risk, because higher risk businesses tend to suffer more in depressed economic circumstances.

"Only when the tide goes out do you discover who's been swimming naked." Warren Buffett

2) Grow Capital

Over long time periods, we expect our portfolios to produce total returns after fees that are well above the returns of the relevant equity benchmarks. This has been the case since 1996, and all three of our products (Australian Large Cap, Australian Small Cap and Global VSG) have achieved substantial alpha after fees since their inception.

We have successfully achieved long-term attractive returns through varied economic and market cycles. This includes both the generally strong economic conditions from 1996 up until the GFC in 2008 and in the more difficult economic conditions since.

Sustainability and "long-termism" are core to our philosophy. We are long-term business owners that buy the highest quality companies in the relevant investable universe. We do not buy stocks with a particular exit strategy in mind. When we buy a listed business, we ideally want to own it over the long term and benefit from sustainable growth in its positive free cash flows.

Over time, the businesses in our portfolios tend to compound their sales at double digit rates. This strong underlying structural growth also results in double-digit earnings per share (EPS) growth for our portfolios over extended time periods. Share prices tend to follow the long-term earnings trajectory of a security. Alpha accrues as the compounding EPS growth at the portfolio level exceeds the EPS growth of the benchmark.

The businesses in our portfolios typically can grow their underlying revenue organically even when the overall economy is stagnant or shrinking. These businesses generally have addressable markets that are much larger than their current revenues, and they also have attractive products and services that many potential customers have not purchased. Thus, the raw underlying demand for the company's products or services is much larger than the current ability of the business to supply that product or service.

We believe "good things happen to good businesses," such that the intrinsic value of the best listed businesses should be able to grow at double-digit rates over the long term. Through innovation, long-termism and R&D, these businesses have significant embedded positive optionality in their long-term future free cash flows. Thus, not only do we purchase businesses at prices significantly below their intrinsic values, but we expect these intrinsic values to increase over time.

Hyperion's Values and Beliefs

Our core belief is that portfolios managed in a disciplined manner in accordance with Hyperion's investment process and philosophy will produce attractive investment returns over the long term.

Our six core values are summarised as follows:

7) Research driven, not marketing driven

Our organisational culture is research driven and investment led. We are not a marketing or sales-based business. Hyperion exists to produce attractive levels of alpha after fees. Our primary focus is stewardship of our clients' capital, not salesmanship.

We are an alpha generating rather than an asset gathering organisation. Most of our current funds under management (FUM) is from investment returns including substantial long-term alpha, with client contributions representing a minority of FUM.

We believe in growing our FUM primarily through compounding capital not gathering assets. Our staff are heavily invested in Hyperion's products so that both the staff and clients benefit from this alpha generation over time. The Lead Portfolio Managers' financial incentives are primarily based on rolling five-year alpha.

8) Evidence based; merit based

Fundamental research and understanding are central to how we invest. We invest based on knowledge and evidence. We do not speculate or chase short-term momentum. This relates to our mission of protecting and growing clients' capital and to our long-term investment approach as business owners. We complete a standardised detailed research report and financial model for every stock in our universe. The vast majority of stocks do not possess the characteristics we are seeking, and we remain disciplined not to deviate from our process. In every investment decision we make, we try to be rational, objective and employ relevant evidence.

9) Think long-term

We think and invest using a long-term framework and process. Our investment process and proprietary portfolio management system are designed to generate long-term alpha. It is difficult to overstate the importance of a long-term framework for decision making. Our portfolio turnover levels are low. Our stock name turnover is typically around 10%, meaning on average we will hold a stock for 10 years. We also expect our staff to take a long-term view regarding how they act, make decisions and direct their energies within the business.

We believe that short-termism is pervasive across the active funds management industry. Hyperion fights this short-termism in many ways, including our mission, values, beliefs, our structured investment process, the way the investment team is structured and the way the business is managed. Everything we do has a focus on the long term and sustainability of the value that we create for our clients and other stakeholders. Our investment team members are always expected to take a long- term view when guiding their decision making and behaviour. This is reflected in our remuneration model, with the key element being potential equity ownership for key long-term contributors.

10) Alpha focused

We know Hyperion only exists because clients believe that we can generate future excess investment returns over the long-term. It is long-term alpha that we seek to achieve for clients, not short-term alpha through trading activity. "No Long-term Alpha, No Hyperion."

11) Business owners, not share traders

We invest in listed equities with a long-term business owner mind set. We do not seek to make short-term trading-based profits. When we buy a stock, we are hopeful that we will end up holding that business in the portfolio for decades. We do not buy stocks with a view to an exit plan or some catalyst to realise a short-term profit. We believe this an important point of difference where many market participants say they are long-term investors but have high portfolio turnover and a trading-based mindset and culture.

12) Collective First

We focus on the collective group of stakeholders and place clients and the firm first and ourselves as individuals second. A group should be able to out-perform an individual, but only if the collective functions well as a team.

Conclusion

Hyperion's values are centred around our belief in the inherent worth of investing our clients' capital with the mindset of long-term business owners. We are not interested in investing in most listed businesses, because

these businesses have poor long-term economics. We believe in investing exclusively in the highest quality modern businesses within our relevant investable universe. These high-quality businesses have structural growth and superior economics. We believe that high quality structural growth companies are typically undervalued by markets and that creating a portfolio of these businesses will result in attractive returns over the long term. Our investment process includes our standardised research template (report), standardised financial model and proprietary portfolio management system. We believe if we execute this process well as an investment team, we have the framework to create portfolios that protect and grow our clients' capital over the long term.

Meaningful long-term alpha generation (after fees) is incredibly rare and is thus valuable to our clients. Hyperion has demonstrated an ability to generate long-term alpha since its establishment in 1996. Provided clients and other stakeholders believe that the portfolios Hyperion creates have the attributes that protect clients' capital and produce sustainable, attractive long-term returns, then Hyperion will continue to exist and thrive.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

HYPERION
ASSET MANAGEMENT
a different horizon...

Environmental Social and Governance (ESG) Guidelines

INTRODUCTION

Hyperion Asset Management Limited (Hyperion) believes in sustainable capitalism. We recognise our duty to behave responsibly and sustainably in our business activities.

Hyperion's mission is to protect and grow our clients' capital sustainably over the long term. Our values and beliefs include making decisions using a long-term framework and placing the interests of the collective before the individual.

As an investment manager, we believe that a high standard of business conduct, as well as a responsible approach to social, environmental, and ethical issues, makes good business sense and enhances shareholder value. Conversely, poor management of these issues may pose a risk to the reputation and value of a business.

Sustainability has been core to Hyperion's investment philosophy and process since it was established in 1996. Hyperion has a long-term investment horizon of 10 years or greater and we have always invested as business owners, not short-term share traders. This is evidenced by the fact that historically our average stock holding period for our portfolios is approximately 10 years. We only invest our clients' capital in those businesses that we believe are extremely high-quality with strong and sustainable value propositions to all stakeholders. The stakeholders include the wider community and an assessment of the company's future likely long-term impact on the overall natural environment, including its carbon footprint. Sustainability assists in reducing the risks of any permanent loss of capital across our portfolios. Eventually, companies that externalise costs, will be forced by stakeholders to internalise them – either through regulation or changing expectations of society. As such, long- term sustainability is a core component of our investment and business philosophy.

Hyperion has been a signatory to the United Nations sponsored Principles for Responsible Investment ("PRI") since February 2009. Institutional investors are increasingly requesting investment managers to incorporate ESG issues into their investment framework. Evidence of an investment manager's commitment to ESG principles is to become a signatory to the PRI. The principles provide a framework by which all investors can incorporate ESG issues into investment analysis and ownership practices.

The first part of this document focuses on Hyperion as a business and the principles that guide us. The second part of this document deals with our approach to ESG issues as an investment manager. Our goal is to follow any best practice guidelines that may be relevant to our business and to put our principles into action.

We have developed these guiding principles to express how we view our responsibilities and how they apply in a practical way to the day to day running of our business. They are reviewed frequently to ensure they remain relevant.

PART 1

GUIDING PRINCIPLES

1. **ENVIRONMENT:** ***To minimise any negative impact on the environment arising from our business activities we have adopted the following practices:***

At a firm level, our goal is to follow best practice guidelines that are relevant to our business and to put our principles into action. Hyperion is aware of its CO_2 (carbon) footprint and has developed strategies to negate our impact on the environment. Hyperion is taking steps to remove its firmwide carbon footprint and going beyond that by purchasing more credits than required to take further carbon from the environment. Hyperion has estimated its carbon footprint including business related emissions for activities at both work and home, work related travel and travel between home and work. Hyperion has been carbon negative since 2015 through the purchase of carbon credits. We plan to buy sufficient carbon credits to more than eliminate the businesses' entire historical carbon footprint since inception in 1996. We aim to achieve this total historical elimination of Hyperion's carbon footprint by December 2022.

Our goal is to be a carbon negative business and Hyperion will continue to seek ways to further reduce its carbon emissions where possible.

We purchase carbon credits via an account with southpole.com.

We switch off lights and electrical appliances when not in use.

We support recycling by:

- Recycling our cardboard, paper and using recycled paper products;
- Purchasing green office stationery products where possible;
- We recycle our used printer cartridges; and
- Ensuring that the glass, cans, and plastic which we use are recycled and reused wherever possible.

We are committed to reducing the amount of paper we use:

- By encouraging staff only to print if it is absolutely necessary;
- By using 'double-sided' printing; and
- By increasing the proportion of documentation sent via email and using digital documents.

Hyperion is committed to further reducing its CO_2 footprint and air pollution levels by:

- Encouraging the use of teleconference and video conference technologies in preference to staff travelling for business related meetings; and
- Supporting staff who choose to work from home rather than travelling to a centralised office.

2. SOCIAL

STAFF RELATIONS

We provide our employees with a flexible, supportive, healthy, and safe working environment. Policies and practices are adopted which encourage an appropriate work/life balance and drive values of client focus, teamwork and being open and fair. Hyperion provides a stimulating work environment where employees can grow and expand their skill set.

Wellbeing of staff

Staff members who wish to incorporate physical exercise into their working day are encouraged to do so. Hyperion pays for gym membership for all employees.

Sharing close relationships with our team members

Hyperion is a small business with a small team of professionals. Our culture is collegiate, and we are passionate about what we do.

Adopting policies and practices which encourage an appropriate work/life balance

Staff are all entitled to take their birthday as an additional day of paid leave.

For every twelve-month period worked, team members are strongly encouraged to take a minimum of 3 weeks leave.

For every public holiday worked, staff are given a day off in lieu.

Furthermore, broadband connections are paid for by the company to facilitate staff working from home where required. Working from home is supported.

Staff need written permission from the Managing Director to work more than 60 hours per week.

Providing a stimulating work environment where employees can grow and expand their skillset

Staff are encouraged to continue their learning by attendance at professional development conferences etc.

COMMUNITY INVOLVEMENT

We support the community, but especially those communities in which our offices are based and encourage our employees in their charitable and community involvement. Hyperion supports the Principles of Fair Trade and does not contribute to any practice where there may be potential abuses of human rights or exploitation of any kind.

Team members are encouraged to volunteer a working day to a charity or social enterprise.

Supporting and encouraging our employees in their charitable and community involvement

We are pleased to support those staff members who perform their own charitable works wherever possible. This includes approving leave where required to pursue charitable work.

3. GOVERNANCE

We conduct our business ethically, maintaining good corporate governance, compliance & risk management, and promoting responsible business practices.

Hyperion believes that good corporate governance and effective management are vital to the successful implementation of our corporate objectives.

EMPLOYEE REMUNERATION

- An employee's total remuneration has three components:
- Base salary which is determined by the going rate in the market;
- Short-term remuneration. The company may pay the employee a short-term bonus which is determined by the employee's base salary and the employees' performance against a set of predetermined KPI's; and

- Long-term remuneration through ownership of equity in Hyperion which is acquired at a price set by a pre-set formula.

Board Independence and Succession Planning

Board representation is broadly based on the level of equity ownership. Pinnacle Investment Management Limited (Pinnacle) is entitled to appoint board members based on its large minority equity ownership in Hyperion. There is a comprehensive shareholders agreement that details the legal framework, agreed rights and structures for the individual shareholders including the executives and Pinnacle, management, and the board.

Compliance

Hyperion, as an AFS Licence (AFSL) holder is required to ensure that it has policies and procedures in place to meet its licence conditions.

To ensure that Hyperion staff are aware of their responsibilities in meeting compliance requirements, all staff are required to complete training on key Hyperion policies each year.

We have a Risk & Compliance Team who monitor compliance and has an independent reporting line to the Hyperion Board.

In addition, each year, an AFSL audit and internal controls audit are conducted by an external auditor.

Risk Management

We have a Risk Management Statement and Business Continuity Plan designed to maintain resiliency and ongoing performance of the business.

PART 2

HYPERION'S APPROACH TO ESG

ESG and sustainability-based analysis is core to our investment decision making process.

1. OVERVIEW OF OUR APPROACH TO ESG AS AN INVESTMENT MANAGER

We only invest our clients' capital in those businesses that we believe are extremely high-quality with strong and sustainable value propositions to all stakeholders. The stakeholders include the wider community and an assessment of the company's future likely long-term impact on the overall natural environment, including its carbon footprint. Sustainability assists in reducing the risks of any permanent loss of capital across our portfolios.

We believe our portfolios contain very low ESG risk due to our long-term focus and the substantial qualitative and quantitative research completed on all our holdings. Short-term share traders do not care about the long-term fundamentals and sustainability of the businesses they trade as their sole focus is on short-term share price performance (alpha generation) during their brief holding period. These alpha traders do not need to worry about the long-term sustainability of the business because they are merely short-term "renters" of the stock.

We actively avoid companies with:

1) Low long-term predictability,
2) Operations that pollute the natural environment in a material and unsustainable manner,
3) Large carbon footprints,
4) Low quality and/or opaque disclosure practices,
5) Significant operations in countries with high corruption levels where the business is likely to have to be a party to that corruption in order to be economically viable in those regions,
6) Questionable governance, and/or
7) Poor organisational cultures.

Our long-term investment framework is based on fundamental research as business analysts with a focus on the sustainability of the company's value propositions.

Our detailed long-term based fundamental research is highly structured, and all the key qualitative information and insights are captured in our proprietary research document. This detailed document, called a 'Research Template', is regularly updated for each portfolio company. The document addresses ESG and sustainability factors including isolation of potential long-term risks, composition and quality of the board, and company specific ESG policies and initiatives. This analysis extends to a company's broader stakeholder group, including its supply chain. This ultimately feeds into a company's 'Business Quality Score' (BQS) which is the key output of the research template, and a key factor in the portfolio stock selection and construction process.

As required by the PRI, if the company is judged to not be upholding a strong ESG culture, it is not included in the portfolio.

Hyperion is also an official supporter of the Task Force on Climate-related Financial Disclosure (TCFD) and has implemented these required reporting standards in our reporting. We also encourage Hyperion portfolio companies to implement TCFD recommendations. Hyperion has long had the goal of ensuring our portfolios have a significantly lower weighted average carbon emission score than their respective benchmarks. Since we started tracking this data in 2010, we have succeeded in this regard, with Hyperion's portfolios' carbon emission scores being consistently and significantly lower than their respective benchmarks. Typically, our portfolios are less than a tenth of their respective benchmark's carbon intensity.

Hyperion has three analysts tasked with ESG oversight; however, all members of the investment team are required to consider ESG-specific elements as part of the qualitative step in our investment process. We leverage ESG research from our broker panel and subscribe to Sustainalytics for carbon and sanctions data. We use Ownership Matters, ISS, and CGI Glass Lewis for proxy voting services and general ESG advice. We believe our role as proxy voters for our clients is important and it is a task we do not take lightly. We take time reviewing third-party research, completing our own research, and talking with company management when a vote is required, and we express our thoughts and/or concerns.

Hyperion expects the rate of growth in the global economy to decline over the coming decade and beyond due to several structural headwinds. One of the most challenging of these is the constraints on our natural resources and the environmental impact of using fossil fuels as our main source of energy. Structural disruption due to renewable energy is likely to be far-reaching, initially impacting resource, utility, transport, and infrastructure sectors. Further, the finite nature of our natural resources makes unbridled consumerism unsustainable. We have structured our portfolio to reflect this and enable our investors to prosper from this

disruption through a group of companies that are implementing strong ESG values and/or actively moving the world to a cleaner future.

Our process encapsulates our philosophy by carefully screening out all but the highest quality companies and constructing benchmark insensitive portfolios from the remaining 'universe', weighted according to risk adjusted ten-year total returns. The evaluation of ESG issues is undertaken by the analysts as part of the fundamental analysis and quality determination. The link between analysis and portfolio construction is an important feature of the Hyperion investment process.

The foundation of our investment process is comprehensive research on a select group of stocks. We strive to build an extensive knowledge base on this group of stocks, and we continue to supplement this level of knowledge through time. The conclusions drawn by analysts from their qualitative assessment feeds into the business quality score applied to each company's valuation. Accordingly, conclusions drawn from the assessment of a company's ESG activities will affect that company's overall score and its weighting in the portfolio.

The main portfolio construction technique that Hyperion uses is based on expected return. The key principle in the construction of our model portfolio is the direct linkage between a stock's portfolio weighting and its forecast risk adjusted ten-year internal rate of return (IRR). Consequently, stocks with a higher ten-year IRR have a higher portfolio weighting and vice versa. This weighting is adjusted for various risk factors which include business quality. It follows, therefore, that a poor ESG evaluation will result in the sustainable competitive advantage failing the threshold test and hence reducing the company's chances of being included in portfolios.

2. FACTORS CONSIDERED IN OUR ESG ASSESSMENT

a. Environmental

We believe activities that are detrimental to the environment are not sustainable in the longer term and this will lead to increased costs or lower returns or capital.

We only invest our clients' capital in those businesses that we believe are extremely high-quality with strong and sustainable value propositions to all stakeholders. The stakeholders include the wider community and an assessment of the company's future likely long-term impact on the overall natural environment, including its carbon footprint.

We actively avoid companies with:

1) Operations that pollute the natural environment in a material and unsustainable manner, and/or
2) Large carbon footprints.

Factors that are considered in this process are:

- Overall impact the company's activities are having from an environmental perspective;
- Compliance with environmental requirements of regulatory bodies;

- Where impacts are considered to have a high impact, what remediation is being carried out to minimise future impact; and
- Scrutiny of activities that are high impact and in countries which do not have strong regulations around environmental impact.

There will be certain circumstances where the environmental impacts of a company's activities are so great that the company is considered non-investment grade. In these situations, the company will be excluded from consideration for Hyperion portfolios regardless of other circumstances such as valuation.

We actively engage with our portfolio companies to encourage them to implement the TCFD recommendations. This includes better climate-related disclosures, encouraging the calculation and disclosure of their carbon footprint, a company plan to reduce their carbon footprint, and identify climate- related risks and opportunities.

b. Social

Our view is that company activities that do not respect human rights and have a detrimental impact on the society they are involved in will not be conducive to longer term economic performance.

An evaluation of the social impact of a company's activities forms part of the analysts' overall sustainable competitive advantage assessment. The conclusions of the assessment can result in stocks either being excluded for consideration for Hyperion portfolios or, in less extreme circumstances, a discount is applied to their business quality score and valuation which results in a lower stock weight in the portfolio.

We actively avoid companies with:

1) Significant operations in countries with high corruption levels where the business is likely to have to be a party to that corruption in order to be economically viable in those regions, and/or
2) Poor organisational cultures,
3) Do not comply with the Australian Autonomous and UNSC Sanctions lists, and/or
4) That have Modern Slavery practises in their business or supply chain.

Factors that are considered in this process are:

- Overall social impact of activities of the company;
- Where activities do have a detrimental social effect, to assess how strong the regulation of the company's activities are;
- Whether the company adhere to all the regulatory requirements that apply to them; and
- Whether the company has been subject to many complaints from stakeholders (whether they are employees, shareholders, or other parties interacting with them).

The activities that will result in companies being excluded for consideration occur where the social impact of the activities of the company is so great that the companies are considered non-investment grade regardless of other factors.

Activities that are included in this situation include:

- Mistreatment of employees, particularly in emerging markets or jurisdictions where regulations surrounding such activities are poor or non-existent;

- Mistreatment of other stakeholders (such as suppliers or purchasers), particularly in emerging markets or jurisdictions where regulations surrounding such activities are poor or non-existent; and
- Engaging in any illegal activities.

c. Governance

Our view is that poor governance will result in companies being unattractive investments. Good governance and effective management are vital to the successful implementation of a company's objectives.

The governance assessment forms part of the analysts' overall sustainable competitive advantage assessment. The results of the assessment can see stocks either being excluded for consideration for Hyperion portfolios or, in less extreme circumstances, a discount is applied to their valuation.

Factors that are considered in this process are:

- Integrity of management's actions;
- Whether management and key board members have significant "skin in the game";
- Equity based remuneration and long-term incentive structures for management;
- Founder led management and board attitude and culture;
- Adherence to standard business principles of transparency, honesty, and fair dealing;
- Scrutiny of related party transactions to ensure they are kept to a minimum and accompanied by full disclosure;
- Effective functioning of the board;
- Some degree of diversity across management and board;
- Board structure that provides protection and alignment of interests with outside shareholders;
- Board composition and structures that encourage long-term, evidence-based thinking and decision making;
- Scrutiny of remuneration;
- We subscribe to Ownership Matters, ISS research and CGI Glass Lewis which provides Hyperion with reporting on governance feedback and recommendations on voting; and
- Hyperion votes on all governance matters on behalf of clients and reports its voting history.

The decision to exclude companies from consideration in Hyperion portfolios on governance grounds will depend entirely on the severity of the company's poor governance procedures. A company will be excluded where the poor governance is so great that Hyperion considers the company non-investment grade – that is the uncertainty created from these governance issues is so great that Hyperion would not include them in portfolios.

Again, less severe breaches of good governance practices will result in a lower business quality score. As with the other parts of the sustainable competitive advantage assessment, this will be undertaken as part of the qualitative assessment of each company.

Mark Arnold (CIO) and Jason Orthman (Deputy CIO)

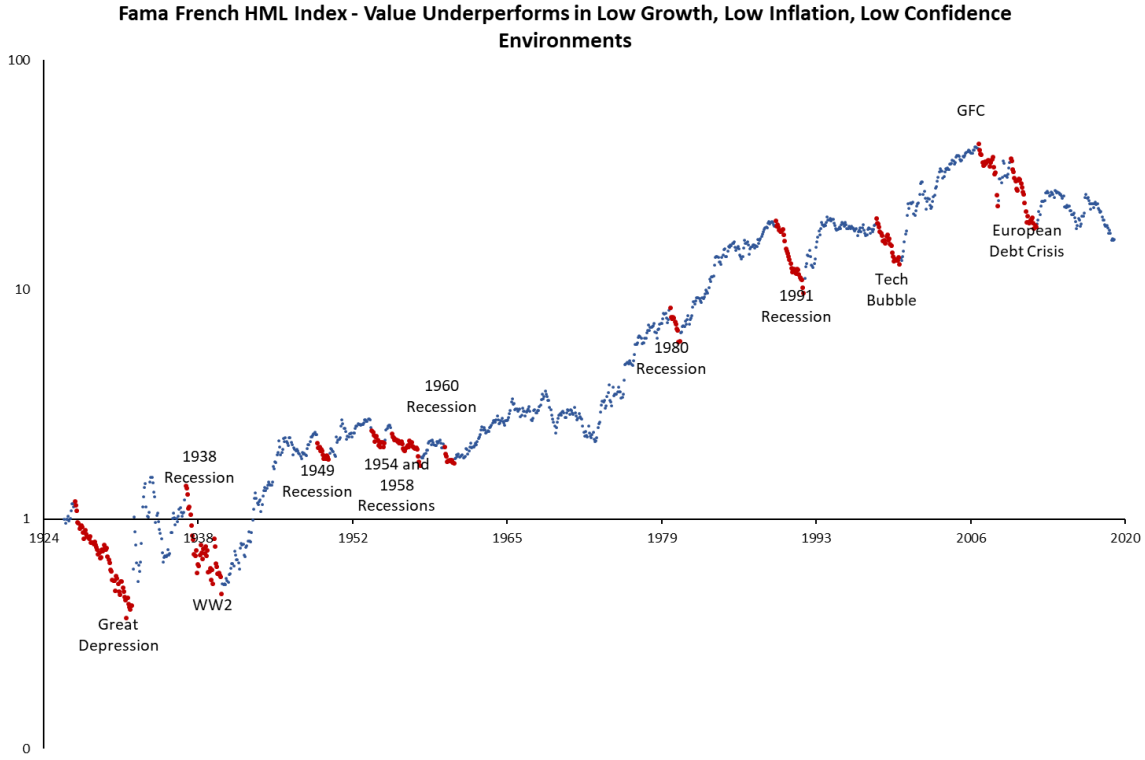
Why the Value Anomaly is Dead

- ***In a structurally low growth, low inflation, low interest rate world***

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

This white paper is based on a lecture given to the Portfolio Construction Forum in Sydney on the 22nd of August 2019 by Mark Arnold.

Figure 1: Value underperforms in periods of low nominal GDP growth



Source: Kenneth French; Hyperion

Although value investing has, on average, resulted in strong performance since the Second World War due to extremely high levels of economic growth, our premise is, that in times of low growth and low inflation value investing underperforms. Figure 1 illustrates this point by plotting the performance of the Fama French HML Index since 1926. It shows that in low nominal GDP growth environments, value investing underperforms (the red dots in Figure 1). Without a doubt we are entering a low growth world, in this world we purport that the value anomaly is dead.

The following paper covers six key points that underscore our thesis: in a low growth, low inflation, low interest rate world the value anomaly is dead.

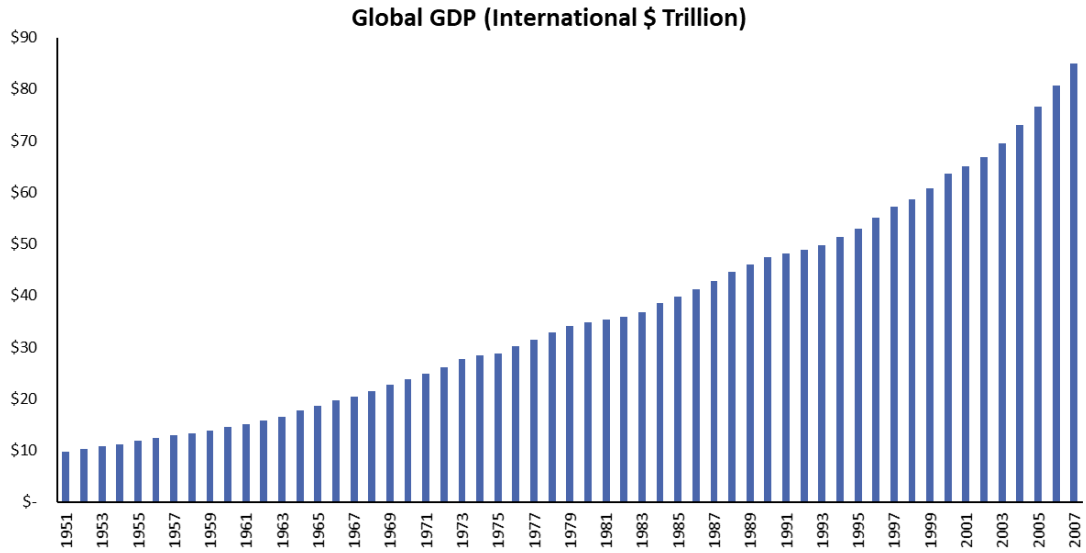
1) We review the evidence that the extraordinary "economic growth bubble" that occurred primarily during the period 1950 to 2007 and gave rise to the value anomaly was the result of tailwinds that have weakened or expired.
2) We explain that the nature of value investing relies on the performance of average quality businesses whose economic success is highly reliant on broader economic growth and confidence.
3) We review economic growth over a longer time horizon to show that more recent levels of economic growth have been abnormal in the context of a wider history and consider what this implies for future economic growth rates.
4) We observe that global economic growth has slowed since the GFC as a result of reducing tailwinds and increasing headwinds. The world is in the process of turning "Japanese" in terms of growing acceptance of ultra-loose monetary and fiscal policy settings.
5) We forecast that low growth will persist as a result of increasing global economic headwinds.
6) Finally, we analyse the implications of a low growth, more competitive world for average quality businesses and portfolio construction over the next decade. We focus on the importance of being style aware and investing selectively in quality winners, not value.

(i) 1950s to 2007: Substantial tailwinds support the value anomaly

The period from the 1950s to 2007 was one of extremely strong economic growth that was unprecedented in history. There were substantial tailwinds that contributed to this strong six-decade period of economic growth. In this "economic growth bubble", average quality businesses performed well because extremely high economic growth rates resulted in the benefits being shared amongst many. During this period, competition levels were generally benign which also benefited average businesses more than higher quality businesses. Low levels of competition were at least partly a function of the strong economic growth rates experienced during this period. **There is a general inverse relationship between economic growth rates and levels of competition.** In addition, disruption levels were low during this six-decade period. Value investing was the dominant investing style during this period.

Although this period is still familiar to most of us and we would like to return to this period of strong economic growth, there are real fundamental reasons to think that this high growth period permanently ended over a decade ago. Further, from a long-term macroeconomic perspective, this six-decade period was an extremely abnormal and unusual period in history. It was a period that is unlikely to be repeated over the next decade.

Figure 2: Global GDP growth during the "economic growth bubble" period



Source: Our World in Data; World Bank; Angus Maddison; Hyperion

Figure 2 shows Global GDP in the "economic growth bubble" period leading up to the GFC. This was a period in history of extraordinarily strong economic growth. Global GDP growth averaged 4% in real terms and over 8% in nominal terms and the size of the global economy increased by 8.5 times over this time. Strong nominal growth is particularly important for the value anomaly because average quality businesses are highly reliant on rapid nominal GDP growth for their sales growth.

Substantial tailwinds during this period, supported both strong growth in nominal GDP and the value anomaly.

These **economic tailwinds** included the following.

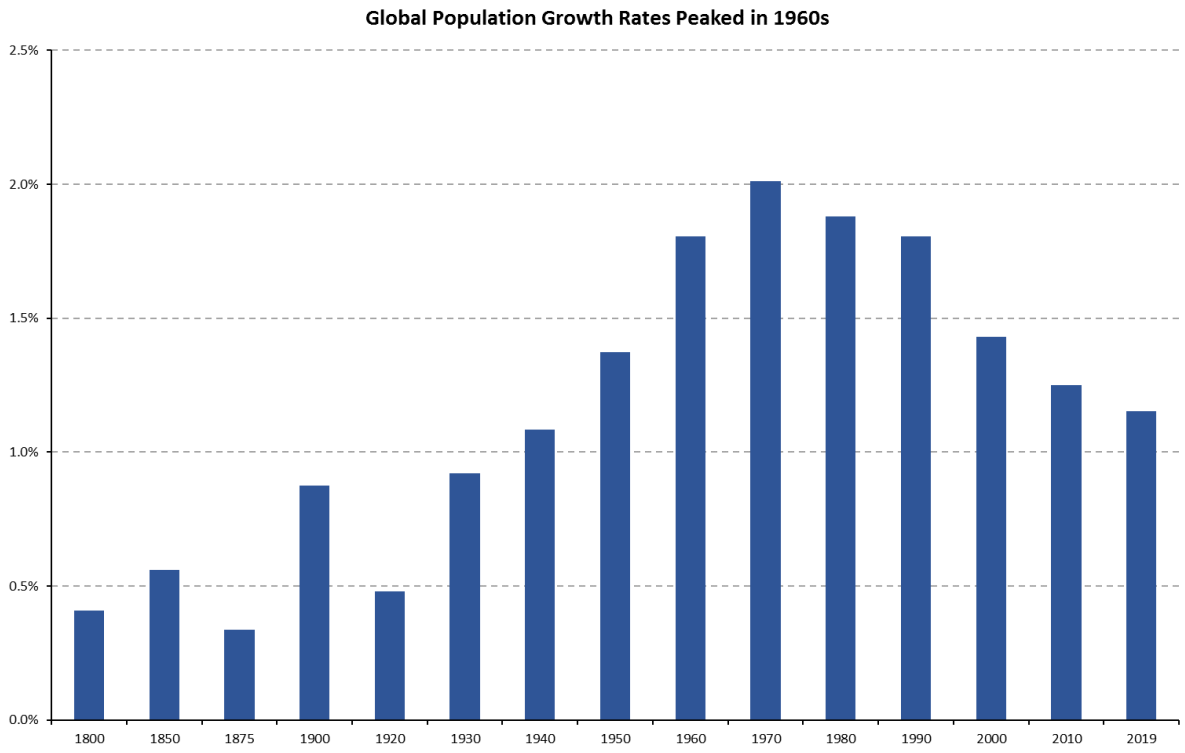
8) A massive increase in economic growth as a result of strong population growth. Productivity growth was boosted by young populations, lower levels of disease and sickness, longer life expectancies and women entering the workforce.
9) The financialisation of society, which allowed people to spend more than they earned and brought forward economic growth.
10) An expansion of a robust middle-class, at least up until the 1970s, which boosted levels of economic growth. A large and growing middle class is key to high levels of economic growth, given that consumer expenditure represents the largest component of most major developed economies.
11) On-going confidence in the economic outlook partly because of recency bias, momentum-based feedback loops, and a general belief that central banks and governments had the power to ensure that future economic growth rates would be strong. Even during periods of low growth or recession there was a general confidence that governments and central banks would be able to restore high rates of economic growth in the future. People born into the high growth world accept this as normal and permanent.
12) The development of powerful machines driven by cheap fossil fuel-based energy. Moving from an economy with no powerful machines to an economy with an abundance of powerful machines dramatically boosted productivity growth during this period.

13) A general belief that there were abundant natural resources that would always be available to fuel strong economic growth. The natural world was considered large compared with the global economy and climate change was not considered a threat to growth.
14) Lower levels of competition and more limited levels of globalised competition.

These tailwinds were considered normal and permanent at the time. However, these tailwinds were unique to this phase of economic development and when viewed in the context of the history of civilisation were temporary and one-off in nature. Even though the high rates of economic growth were considered normal and sustainable, from a long-term historical perspective, they were very abnormal, unusual and unsustainable.

Population growth was a key tailwind that peaked in the 1960s when it averaged in excess of 2% per annum. However, since the 1960s global population growth has been in steady decline, as shown in Figure 3.

Figure 3: Global population growth rates peaked in the 1960s



Source: United Nations Population Division; Hyperion

The financialisation or gearing up of society was a unique occurrence. Moving from low levels of debt to high levels of debt brought forward consumption and investment. However, this increased level of gearing only provided a one-off boost to economic growth. High debt levels impede future levels of economic growth because it makes households and businesses more fragile and risk adverse.

The creation of a strongly growing middle class was also a one-off driver of strong economic growth. In developed market economies, consumer expenditure growth is a key determinant of economic growth. Prior to the second industrial revolution the middle class was weak, the standard of living for most of the population was low and inequality levels were high. **The unique combination of the creation and growth of a large middle**

class and the simultaneous achievement of massive increases in productivity formed a virtuous loop driving extraordinarily high levels of economic growth in the period from 1950 to 2007.

The development and commercialisation of powerful machines, driven by cheap oil and coal, had a massive positive impact on productivity. This resultant lift in productivity is unlikely to be replicated over the next decade.

The benign levels of competition were also a temporary occurrence that was largely a function of the extraordinarily strong levels of economic growth, reducing the natural level of competition in key industries. In addition, internet and smart phone enabled global competition emerged only in the last decade or so and until the emergence of those technologies disruption levels were generally low.

Economies, industries and businesses go through life cycles. The global economy experienced peak growth in the six decades leading up to the GFC. This was an "economic growth bubble" that was temporary and directly resulted in the creation of the value anomaly.

(ii) The value anomaly was born on these tailwinds.

In the "economic growth bubble" of 1950s to 2007, average quality companies grew revenues at high rates (in-line with nominal GDP) as they shared in the strong growth of the economy. The average nominal rate of global GDP growth during this extraordinary period was above 8% p.a. and approximately 7% p.a. for the US economy.

Corporate sector revenues tend to grow in line with nominal GDP over time. For businesses there are two potential sources of revenue growth: 1) sharing in the growth of the overall economy; and 2) taking market share. Average quality businesses have limited ability to organically increase market share, therefore, they are normally highly reliant on economic growth in order to be able to grow their sales. Thus, during the "economic growth bubble" period, average quality businesses could grow their revenues organically at attractive, high single digit rates merely because the overall economy grew at these high rates.

Examples of average quality businesses include the large banks, mature traditional retailers, building materials businesses, cyclical commodity businesses, capital intensive industrial businesses and traditional manufacturing. These types of businesses benefited more than high quality businesses because their organic revenue growth is normally solely reliant on growth in the size of the economic pie. In contrast, high quality businesses are less reliant on the growth of the overall economic pie because they can organically grow revenues by taking market share.

The fundamental performance of average quality businesses was further enhanced by the natural inverse relationship between the rate of economic growth and the level of competition. Average businesses benefited relatively more than high quality businesses because they are more sensitive to competition levels. High quality businesses can deal better with higher levels of competition because they have stronger value propositions and competitive advantages. Thus, high quality businesses benefited less in a relative sense during the high growth, less competitive decades leading up to the GFC as it was easier for all businesses to get a share of the growing economic pie.

Further, disruption levels were low during the "economic growth bubble" period, with most major established industries enjoying extended periods of competitive stability.

During this high growth economic environment, operational and financial leverage was employed by average quality companies to further boost EPS growth.

Confidence in the sustainability of economic growth was high because people were conditioned to believe that high levels of economic growth were normal and sustainable.

Value stocks (low P/E, low P/B) did well for two reasons during this period:

1) EPS growth was strongly positive for average quality companies.
2) Growth in P/E was supported by confidence in future growth.

Successfully investing in equities is primarily about achieving growth in real earnings over the holding period. Traditional value investing relies on both EPS growth and P/E expansion during the holding period. If the EPS growth is weak during the holding period, then the value investor is solely reliant for success on P/E expansion. The problem is that the terminal P/E is determined by the **confidence** that the future EPS will grow. This assessment is at least partly influenced by recent historical fundamental performance. Thus, the terminal P/E (the P/E when the investor sells) is heavily influenced by recent historical EPS growth. These two factors, historical EPS and terminal P/E, are positively associated with each other. During strong growth periods more average quality businesses do well in terms of EPS growth and this tends to support market P/Es for average quality businesses. During the six-decade "economic growth bubble" leading up to the GFC, average quality businesses reported strong EPS growth. This strong EPS growth enhanced terminal P/Es for average quality businesses and contributed to the strong performance of value style investing during this period. Even if a value investor failed to predict a recession, they could be confident that the government and central bank would ensure a recovery and return to strong growth in a relatively short period of time because the tailwinds were still strong.

Value investing does not work if the earnings of the businesses do not grow over the holding period. If earnings decline materially over the holding period, then value investing will not protect capital and will result in poor investment returns.

Ben Graham, Warren Buffett and key academics made value investing the dominant style at this time.

The value anomaly was born as a result of the factors we have discussed above.

(iii) Looking at growth over a longer historical window

If we look further back in time, we find that the high economic growth rates achieved in the second half of the 20th Century were abnormal. Prior to the 20th Century and the Second Industrial Revolution, there was very little economic growth for thousands of years**.** In a long-term sense, low economic growth is more accurately described as "normal" and the strong economic growth rates experienced in the second half of the 20th Century are better described as "extreme and unusual". Moreover, the tailwinds that drove these periods of high growth rates were largely temporary in nature.

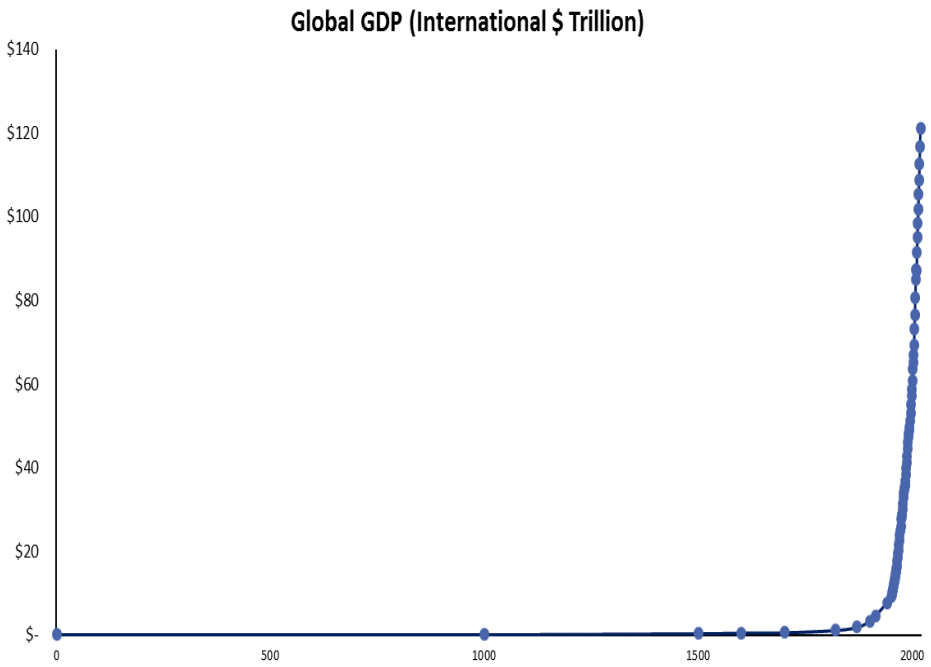
Prior to the second industrial revolution, the tailwinds that created the "economic growth bubble" did not exist.

1) Life expectancy was short, disease was rife and as a result productivity was poor and did not improve materially over long periods of time.
2) The banking system was not developed, and it was difficult and expensive to get credit.
3) The middle class did not exist, inequality was high, and most people lived in poverty. Feudal type systems dominated economies for long periods of time.
4) Confidence in future economic growth was low because the economy did not grow.
5) There were no powerful machines and virtually no specialization of labour, so productivity was low and did not improve significantly over time.
6) High levels of corruption hindered economic growth.

The following two charts, Figures 4 and 5, show in greater detail the long-term growth profile of the global economy.

Figure 4 shows that for thousands of years, prior to the first industrial revolution, there was very little economic growth and then there was explosive, exponential growth.

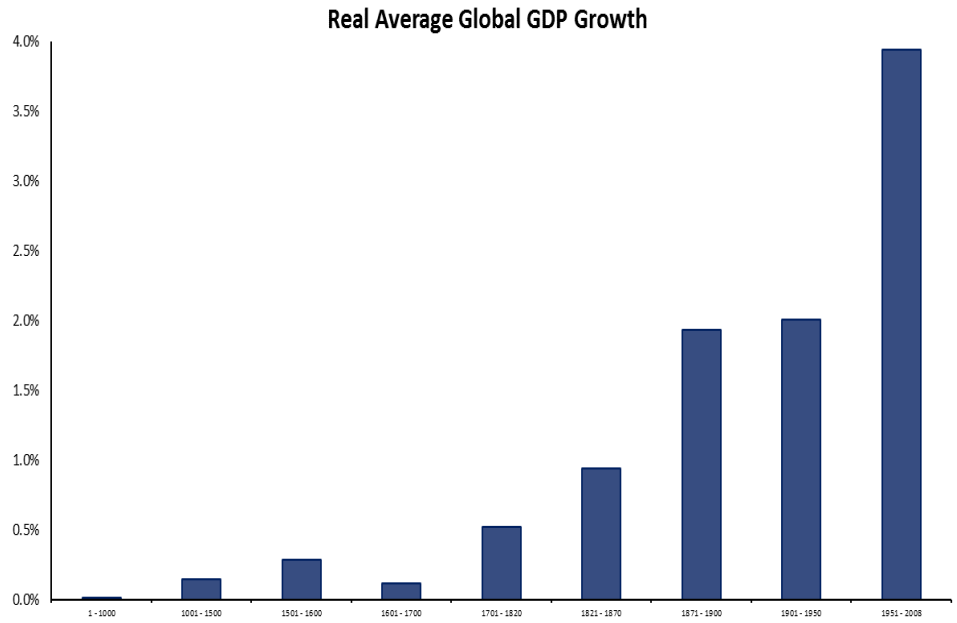
Figure 4: Explosive Growth in Global GDP Driven by Temporary Tailwinds



Source: Our World in Data; The World Bank; Angus Maddison; Hyperion

Figure 5 shows the rate of economic growth over different time periods. This chart shows the rate of economic growth started to accelerate rapidly in the late 19th Century and peaked in the six decades before the GFC, driven by temporary and unsustainable tailwinds. The average growth in real global GDP during the six-decades leading up to the GFC was approximately two times the average economic growth rate in the period from 1871 to 1950.

Figure 5: Real GDP growth peaked in the six-Decades leading up to the GFC



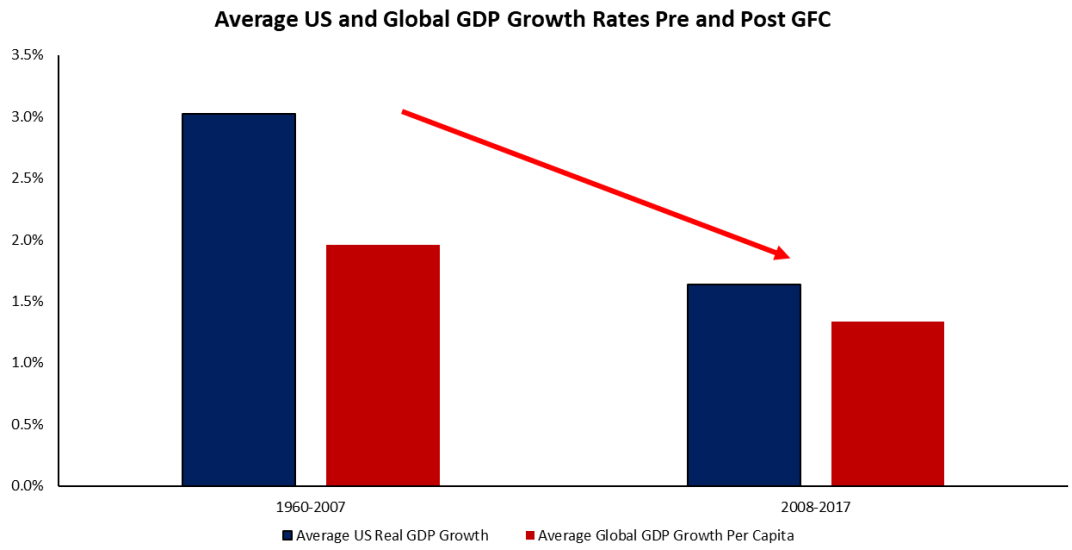
Source: Our World in Data; World Bank; Angus Maddison; Hyperion

(iv) Having seen that in <u>the long term, low growth is normal</u>, we can also now look at the period since the GFC.

Since the GFC, economic growth rates have slowed significantly from the peak levels achieved in the decades prior to the GFC and tailwinds have been reducing and headwinds increasing. During the last decade the value anomaly has disappeared, and traditional value style investing has significantly underperformed. **We analyse the consistent poor performance of the value style of investing in low growth and difficult economic circumstances and find that the evidence is clear; value does not protect you when you need it most, in times of economic and market stress.**

The following chart, Figure 6, shows the strong rates of economic growth experienced by the US and the Global economy prior to the GFC and the substantial decline in the average rate of economic growth after the GFC.

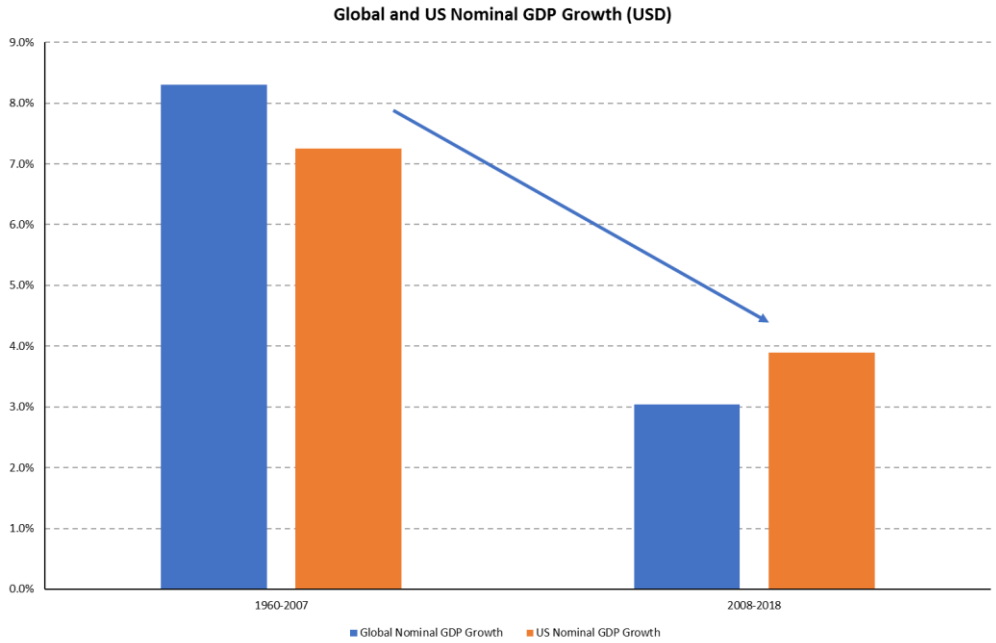
Figure 6: Economic Growth Rates Have Slowed Post GFC



Source: Federal Reserve Bank of St. Louis; World Bank; Hyperion

The chart in Figure 7 shows the significant declines in the average rate of nominal GDP growth in the post GFC period compared with the "economic growth bubble" period for both the US and global economies. Nominal GDP is particularly relevant to the success of value style investing because average quality businesses are highly reliant on nominal GDP growth.

Figure 7: US and Global Nominal GDP Growth Rates Have Declined Post GFC



Source: World Bank; Hyperion

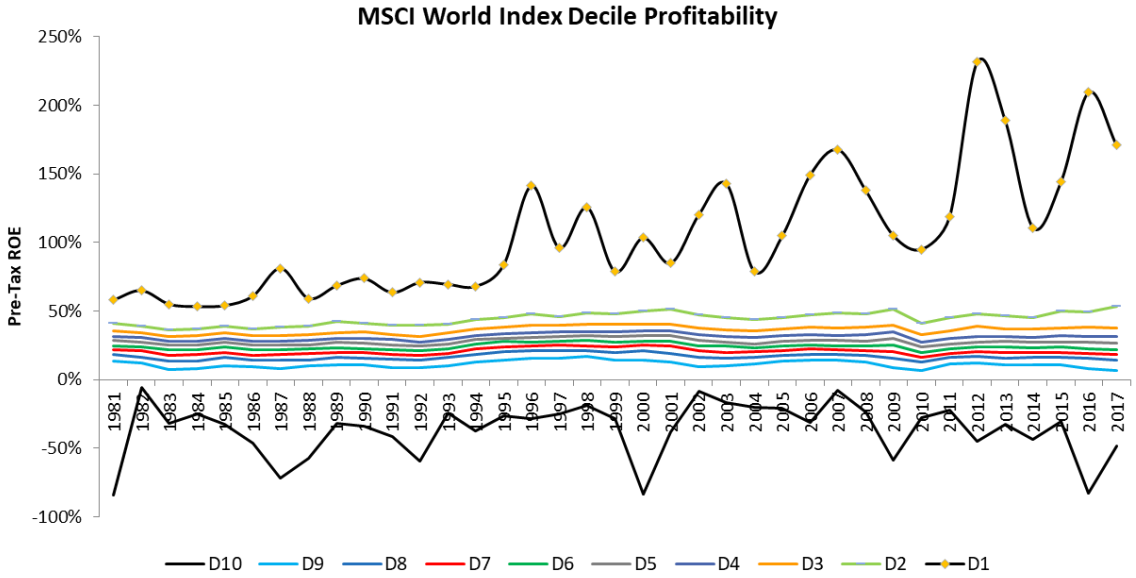
At the same time as the move to lower growth, there has been a material increase in the level of competition.

Figure 8 shows stocks in the MSCI World Index by decile ranked by profitability from 1981. The top line shows the most profitable decile. Prior to the internet, the top decile's relationship with the other deciles was relatively stable over time.

Higher economic growth and less global competition prior to the internet and the GFC helped average businesses maintain profitability and grow sales with the economic benefits more equally shared.

Since the internet became established the ROE of the most profitable companies (black line with yellow markers) has increased and average and below average businesses' ROE has deteriorated, particularly since the GFC.

Figure 8: The Internet Enables Globalised Power Law Distributions of Value Creation



Source: UBS; Hyperion

Over the past decade and a half, it has become an internet enabled; winner takes all market. However, even before the internet, returns for global equity markets had been dominated by a few highly successful businesses and lots of average quality businesses that produce long-term returns at or below returns of Government debt securities. The returns produced by US equities from 1926 to 2016 were derived from an extremely narrow group of stocks that generated abnormally large long-term returns.[21] This has been replicated in numerous exchanges globally. Positive skews and compounding actually create excess mean returns from large values in the tail (the winners). Power law distributions rather than normal distributions drive long-term stock market returns. Unless an investor has the ability to successfully select structural growth companies, the winners, portfolio returns will be unsatisfactory. Alternatively, 'investors' can attempt to out-perform over short-term time periods, although successfully predicting the direction of short-term share price movements is very difficult. This is an extremely competitive space and share prices are typically random over

[21] Do Stocks Outperform Treasury Bills?, 2018 Bessembinder H, Arizona State University.

short time periods. Short term speculation will become even more challenging as economic tailwinds and rising intrinsic values are replaced by economic headwinds and falling intrinsic values.

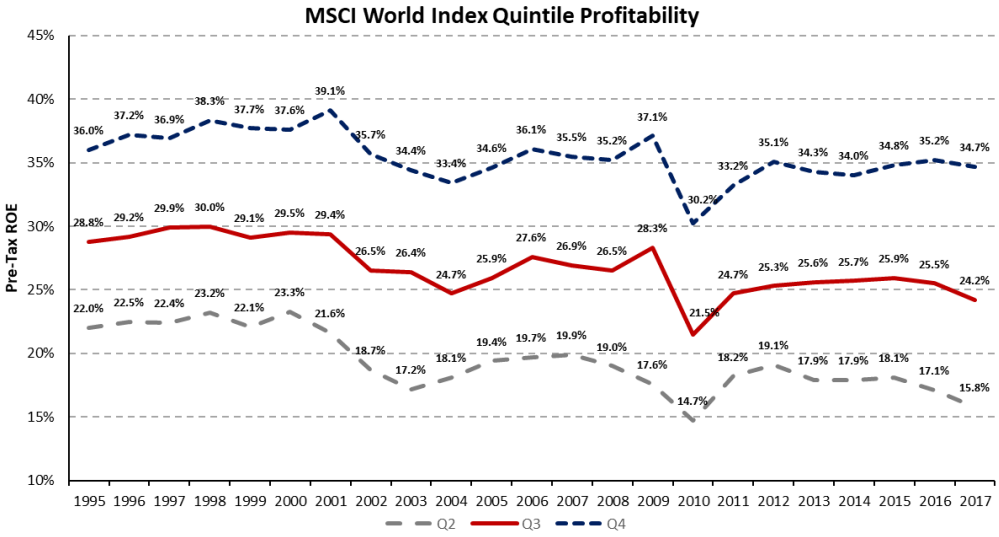
Historically your typical "average quality" equity has produced long-term returns either below or in line with treasury bills. The average US equity listing period from 1926 to 2016 was only 90 months despite largely being a golden period for economic growth and investment.

So even in the unsustainable "economic growth bubble" period, average quality businesses were unlikely to produce attractive long-term returns and thus short-term trading through P/E mean reversion and EPS recoveries was important. This short-term strategy becomes very difficult in a low growth, disrupted environment because average quality businesses are more likely to suffer future declines in economic fundamentals rather than recover through mean reversion. The implications for investing in average quality businesses in a low growth, internet enabled globalized and disrupted world are clearly negative for value investing as a style. It will progressively be harder to apply short-term mean reversion techniques (EPS growth and P/E arbitrage) in this more difficult economic environment. Stock selection and actively avoiding average and below average quality businesses will become even more important in a disruptive, competitive, low growth world. Most businesses will fail and die. We will return to this topic in more detail and with supplied references in future white papers.

Figure 9 shows stocks in the MSCI World Index by quintile, ranked by profitability, but only shows the middle 3 quintiles of average businesses. The red line represents the "core" average quality businesses and it shows a material decline in ROE over the past 2 decades.

Lower returns on capital combined with lower rates of sales growth means these average quality businesses have experienced deteriorating intrinsic values. This has made it a more difficult environment for value style investors, as the frequency of value traps has increased significantly.

Figure 9: The Intrinsic Value of Most Businesses is Declining in a Low Growth World

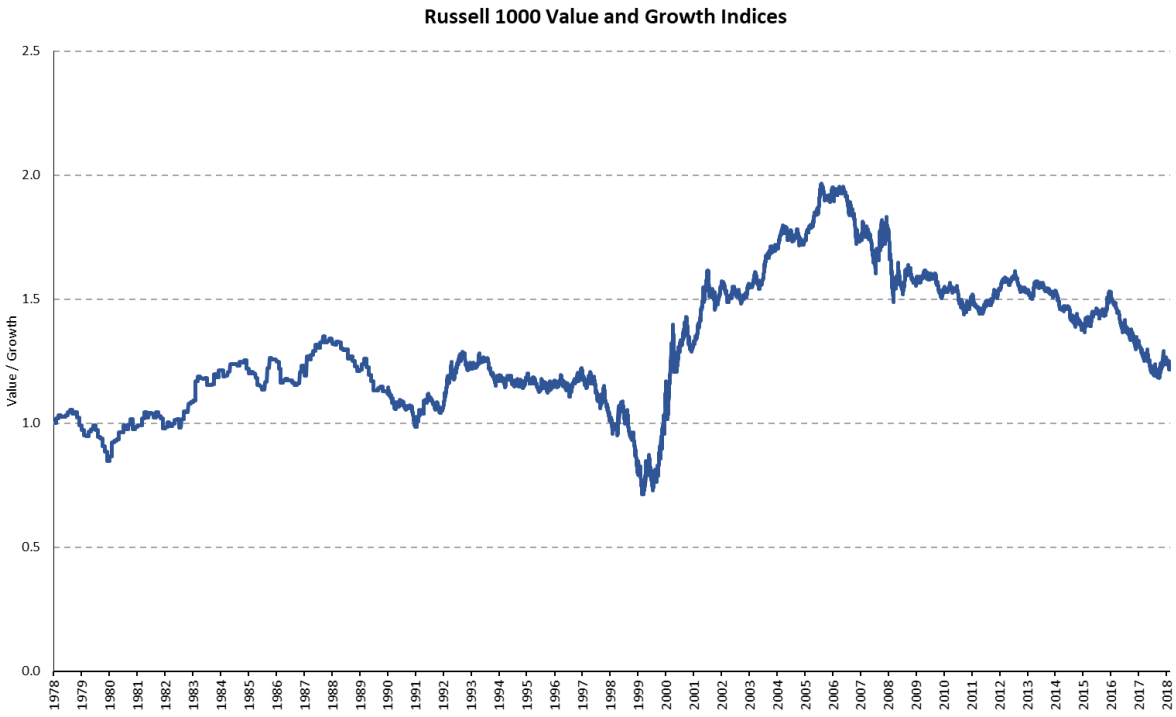


Source: UBS; Hyperion

Figure 10 shows the outperformance of the value style in the 3 decades prior to the GFC and the underperformance of the value style after the GFC.

The underperformance of the value style since the GFC has been caused by: 1) lower levels of economic growth; and 2) higher levels of competition.

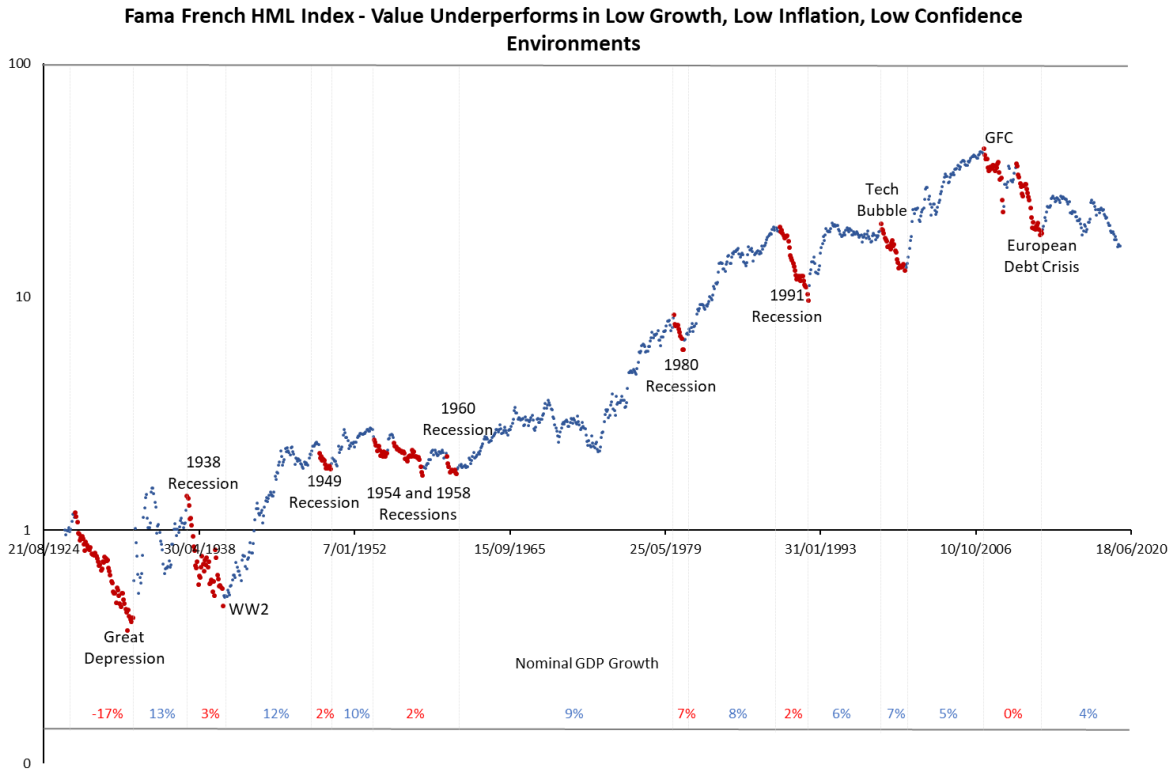
Figure 10: Performance of Value vs Growth



Source: Federal Reserve Bank of St. Louis; Russell 1000 Value and Growth Indices; Hyperion

But we should look back further in time to better understand value investing performance in different economic circumstances. The following chart, Figure 11, is based on the Fama French value versus growth portfolios since 1926. The chart shows that even though the value style outperformed significantly over the period from 1926 to today, almost all the outperformance was clustered in periods of strong nominal economic growth. Value outperformed because the periods of difficult economic conditions were relatively short and shallow, and the periods of strong growth were much longer.

Figure 11: Value underperforms in periods of low nominal GDP growth



Source: Kenneth French; Hyperion

Value has consistently underperformed in difficult economic circumstances where nominal GDP growth is lower and the outlook for average quality businesses is poor. **Value has generally not protected capital when you need it most, when economic growth is low.**

The red dots in Figure 9 show the periods associated with weak nominal GDP growth. In the vast majority of low nominal GDP growth periods, value has underperformed. Starting with the great depression in the late 1929s and early 1930s, value underperformed, in the recession in 1938, value underperformed – recession in 1947, 1953, 1958, 1960, right through to the GFC. Nominal GDP growth was strong during the recession in 1974 because inflation was at double digit levels and thus average quality businesses performed relatively well during this period because their sales growth (in nominal terms) was still strong. In addition, value stocks were less impacted by the material increase in bond yields that occurred during 1974 compared with growth stocks. Value tends to perform poorly in recessionary conditions unless these conditions are associated with high levels of inflation and higher interest rates. **Nominal GDP growth, levels of competition, severity of disruption and confidence in future nominal GDP growth rates are the key factors in determining value style performance.**

Value style investing is a fair-weather investment style. It is not a defensive investment style that protects capital in difficult economic circumstances. It is an investment style that does very well in accelerating and high growth economic environments, when confidence levels are high and competition levels are low and declining. Conversely value style investing performs very poorly in decelerating and low growth economic environments when competition levels are high and increasing.

The world is turning "Japanese"

We can see similarities between the policy setting of most major economies around the world since the GFC and the policy setting of Japan over the past three-decades. Japan has experienced low levels of economic growth for three decades. Aggressive fiscal and monetary policies have been ineffective in terms of returning the economy to high levels of sustained growth.

The rest of the world is copying the Japanese policy blueprint of low interest rates, quantitative easing and fiscal stimulus.

Our interest in Japan is around its policy settings not its investment framework. It should be noted that Japan has a very unusual operating environment driven by unique policies around immigration, management, competition and employment. Although many countries will most likely follow Japan's policy settings in a low growth world, the factors that drive investment related style performance will vary significantly.

(v) Economic headwinds will ensure lower growth in the 2020s and beyond

In the next decade, we are likely to experience further declines in economic growth rates as tailwinds continue to fade and headwinds continue to build. There are numerous headwinds building and we have selected four key headwinds to discuss in more detail.

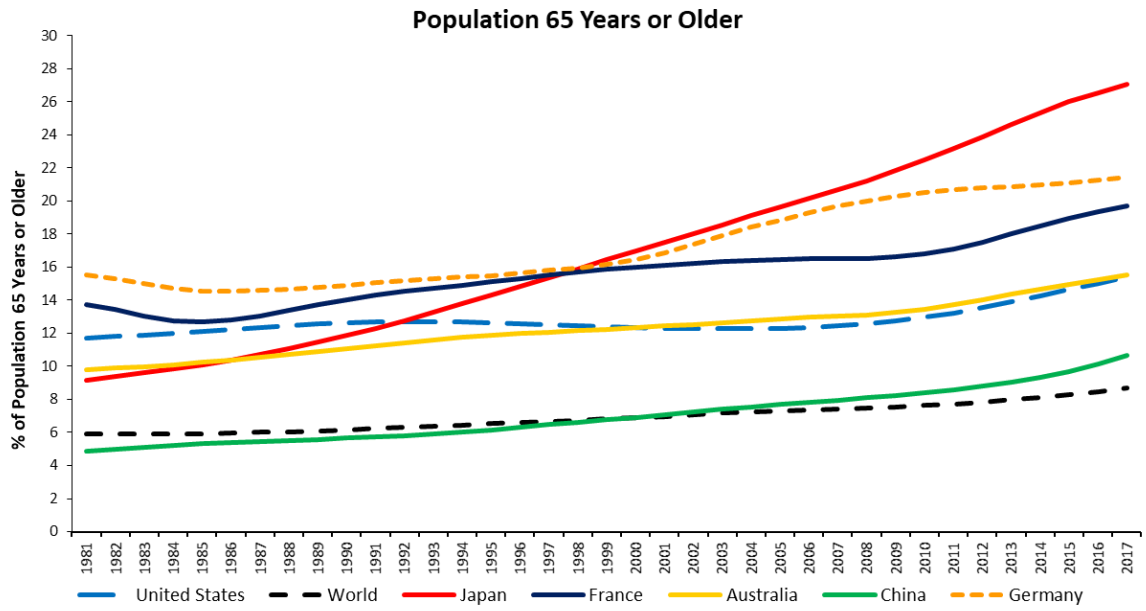
The key headwinds to consider are:

1) ageing populations and declining population growth rates;
2) high debt levels;
3) hollowing out of the middle class and rising wealth inequality; and
4) climate change.

Ageing populations and declining population growth rates

The first major headwind is an ageing population. Most major economies have ageing populations and low levels of population growth (refer Figure 12). Japan is the leader with over a quarter of its entire population 65 years or older (red line). Older people work fewer hours, earn less income and contribute less to GDP. This headwind will be a drag on future rates of economic growth.

Figure 12: Declining Population Growth Rates Are Driving Ageing Populations

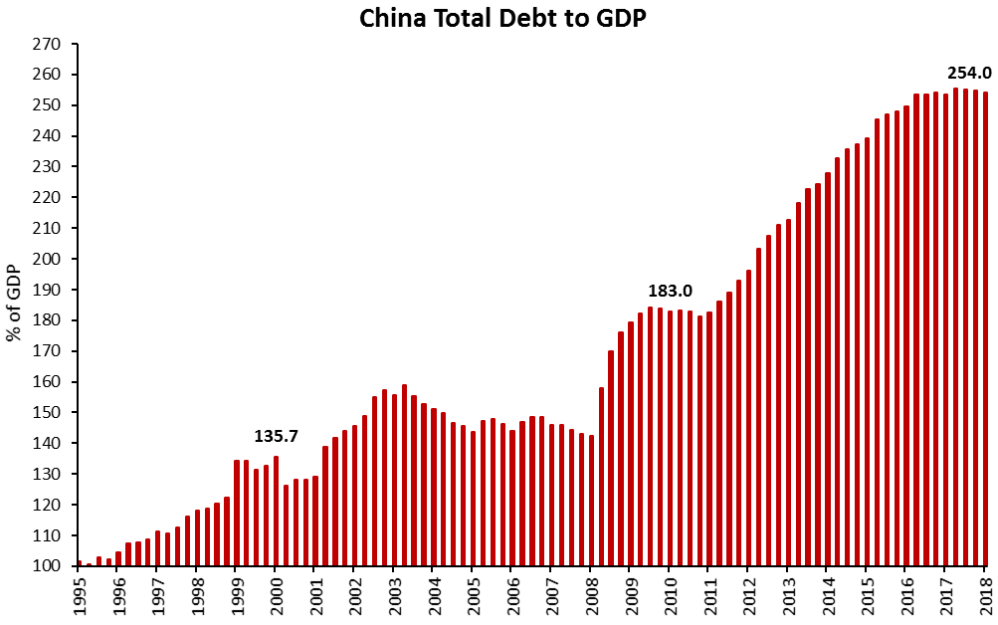


Source: World Bank; Hyperion

High debt levels

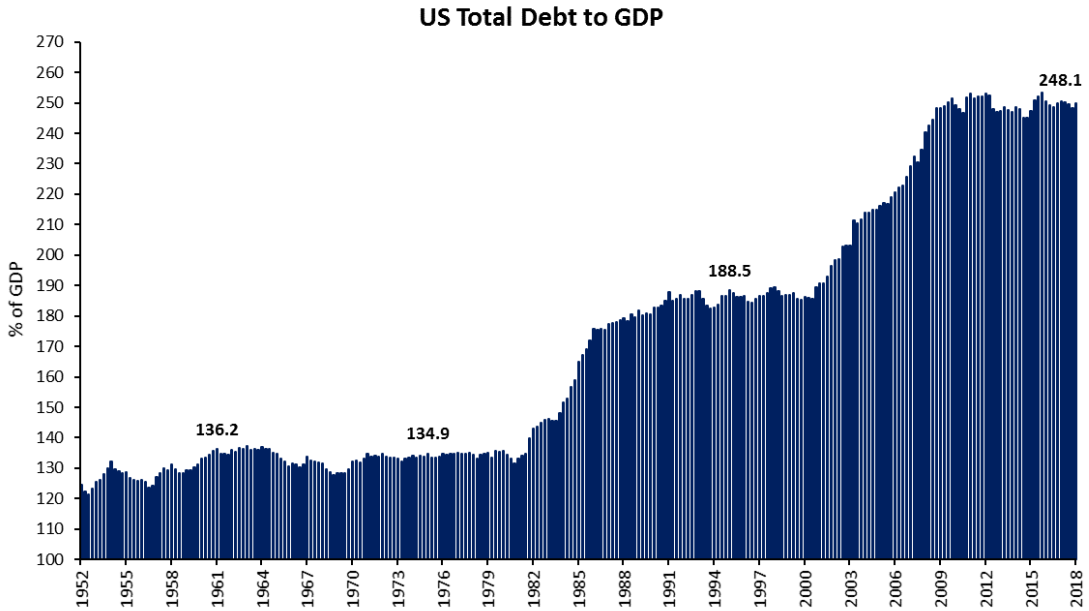
The second major headwind is high debt levels. The world has geared up since WW2. Figures 13 and 14 show the debt to GDP of the two largest economies in the world (US and China). China's debt to GDP as shown in Figure 13 has increased significantly since the GFC.

Figure 13: China Debt to GDP Has Increased Significantly since the GFC



Source: Bank for International Settlements; Hyperion

Figure 14: US Debt to GDP Has Increased Significantly since the GFC



Source: Bank for International Settlements; Hyperion

Both the US and China have geared up, households have geared up, businesses have geared up and governments have geared up. High debt makes households, businesses and governments more fragile and results in lower levels of future economic growth.

Hollowing out of the middle class and rising wealth inequality

The hollowing out of the middle class and the disruption of human capital markets by AI and robotics both represent major headwinds to economic growth over the next decade.

A robust middle class is essential for sustaining high levels of economic growth. There has been a hollowing out of the middle class since the 1970s, which originally started as a result of outsourcing jobs to third world countries, particularly China. This was a wage arbitrage strategy by large corporations. It led to significant middle-income job losses. At the same time there was strong growth in lower income "gig" economy and service jobs.

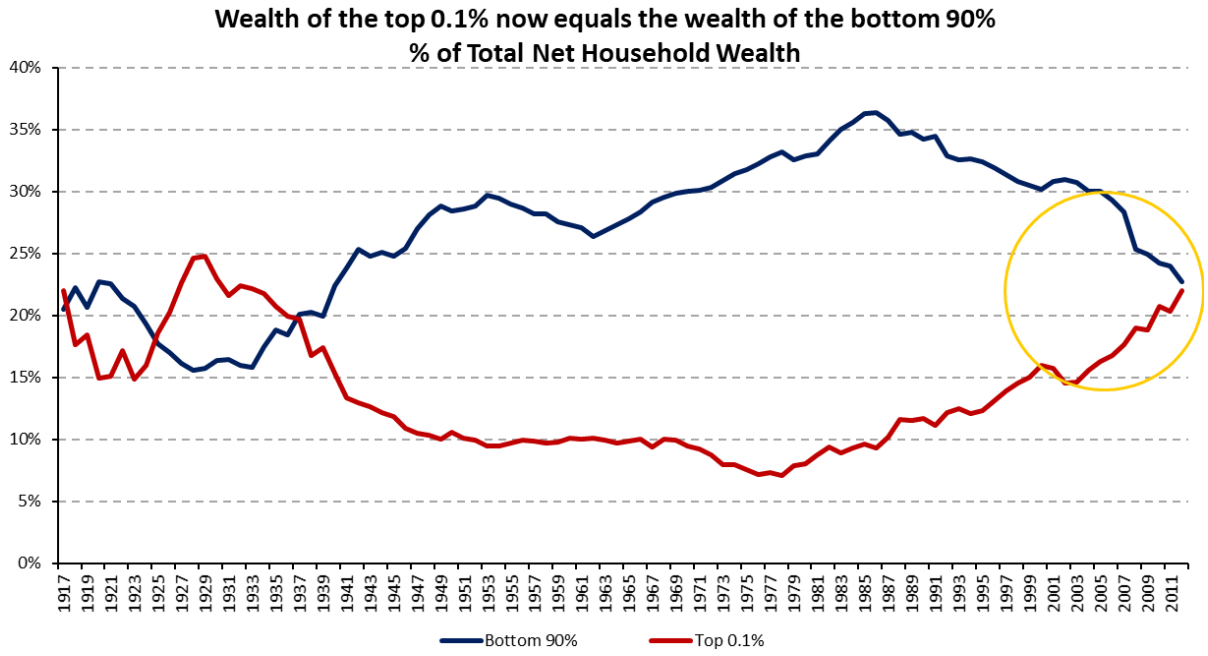
The hollowing out of the middle class is likely to continue as a result of AI and robotics further disrupting middle income jobs over the next decade. The trend to lower income jobs has been a drag on productivity and economic growth rates in the developed world.

At the same time the rich have been getting richer. The red line in Figure 15 shows that in the US the wealthiest 0.1% now control the same amount of wealth as the bottom 90% of the population (blue line). This increase in the wealth of a few combined with the weaker middle class is increasing social unrest and leading to populist politics.

The last time these lines were close was in 1920 and the 1930s, during this period radical politicians came to power. We are seeing an increase in radical and populist politics currently. These factors will be a drag on future economic growth.

Please note this trend towards income and wealth inequality is a natural function of a capitalist-based society. Over long periods of time the capitalists (those with capital) earn more income relative to workers (those without capital) because the former have two sources of income: (1) personal exertion; and (2) capital. The workers only have one source of income, personal exertion. The compounding effect of reinvestment of capital results in growing income and wealth inequality over time.

Figure 15: Wealth Inequity Has been Increasing

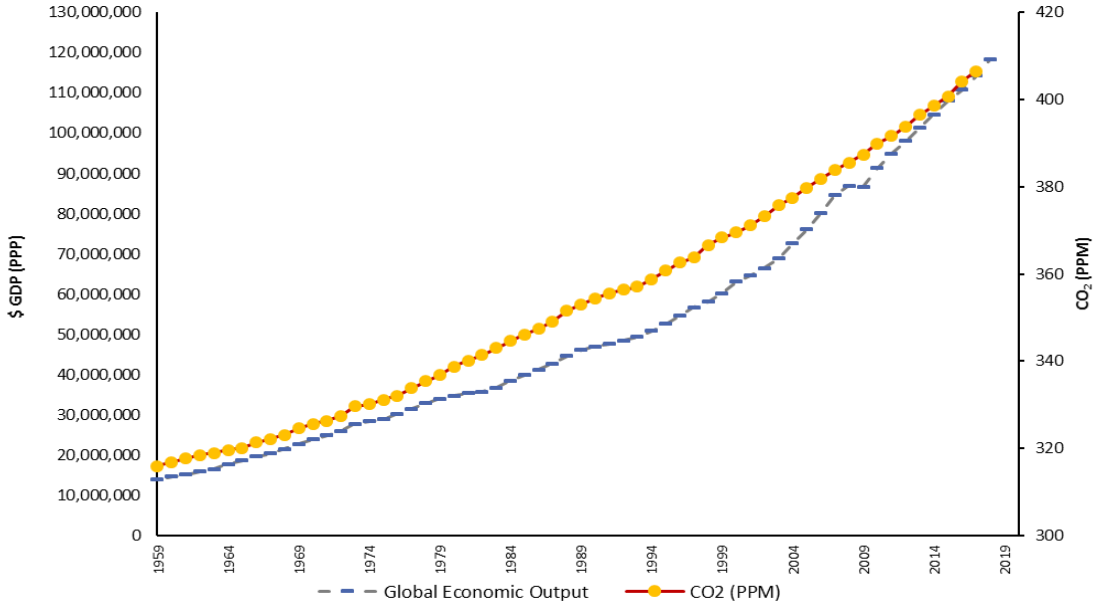


Source: Emmanuel Saaz & Gabriel Zucman. NBER working paper 20625; Hyperion

Climate Change

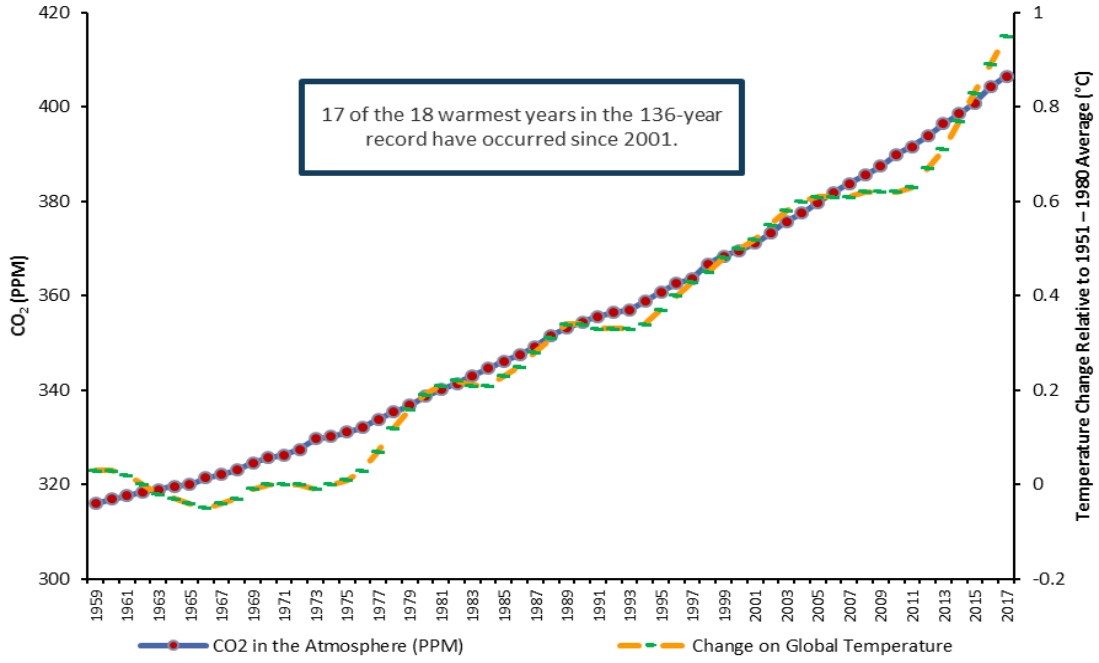
Another major headwind is climate change. Climate change is likely to be disruptive to the global economy over the next decade and beyond. Over 80% of the energy that powers the global economy comes from burning fossil fuels. Climate change is likely to result in flooding of populations, damage to infrastructure and disruption to food production. Figure 16 illustrates the strong correlation between economic growth and the increase in atmospheric carbon dioxide over time, while the graph in Figure 17 shows the strong association between rising carbon dioxide levels and global warming over time.

Figure 16: Economic Growth Increases carbon dioxide (CO_2) in the atmosphere



Source: NASA, New Maddison Project Database; World Bank; Hyperion

Figure 17: Higher Levels of CO_2 in the Atmosphere Leads to Global Warming



Source: NASA; New Maddison Project Database; World Bank; Hyperion

(vi) Investing in a low growth world

We have established the reasons why we face a structurally low growth world. In a low growth world, average quality businesses suffer more because they are reliant on economic growth for their own growth. In a low growth economy, average quality businesses can only grow their revenues organically in line with nominal

rates of economic growth. Only superior businesses that can take market share can produce organic revenue growth materially above nominal GDP revenue. Operational leverage and financial leverage will turn negative. **In a low growth world, competition will increase, the intrinsic value of average businesses is likely to decline, and value traps will become more widespread. The value anomaly is dead.**

Conclusion

Investing in businesses/equities is primarily about achieving growth in real earnings over the holding period. Traditional value investing relies on both EPS growth and P/E expansion during the holding period. If the EPS growth is weak during the holding period, then the value investor is solely reliant for success on P/E expansion. The problem is that the terminal P/E is determined by confidence in future EPS growth. This assessment is partly influenced by historical performance because of recency biases and linear thinking. Thus, terminal P/E (the P/E when the investor sells) is heavily influenced by recent historical EPS growth. The two factors, historical EPS and terminal P/E, are positively associated with each other and self-reinforcing. During strong growth periods more average quality businesses do well in terms of EPS growth and this tends to support their market P/Es. During the six-decade "economic growth bubble" leading up to the GFC, average quality businesses reported strong EPS growth and thus because of this self-reinforcing relationship with terminal P/E resulted in the strong performance of value style investing. However, in the more competitive, lower growth environment since the GFC, average businesses have underperformed. **Most businesses have been experiencing deteriorating economics since the GFC.** The outlook for economic growth levels over the next decade is poor and deteriorating over time. Value investors almost exclusively buy average quality businesses. These businesses have worsening economics as shown by the trend to lower ROEs over the past 2-decades. Value investing does not perform if the earnings of these value type businesses deteriorate over the holding period. This is the dilemma that value investors face.

The "economic growth bubble" period that occurred in the six-decades leading up to the GFC is permanently gone and the value anomaly associated with this abnormal period in history has disappeared with it. The value style was highly successful in the high growth economic world (high nominal GDP growth economic environment) with low levels of competition and disruption, but in a low growth, highly competitive world value is unlikely to perform well.

Investors should focus on businesses and investment styles that are not reliant for success on high levels of economic growth and low levels of competition. Over the long-term the value of businesses reflects their real earnings and thus only companies that can grow their sustainable earnings will grow investor wealth. Quality styles of investing are likely to outperform in a low growth, low inflation and low interest rate world.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

HYPERION ASSET MANAGEMENT
a different horizon...

Exponential growth and compounding returns – Part One

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Introduction

Hyperion Asset Management (Hyperion) exists to help our clients protect and grow their capital over the long term. When we invest capital in listed companies on our clients' behalf, we have the mindset of long-term business owners, not short-term traders. The average holding period for the companies in our portfolios is 10 years and long-term sustainability of the businesses we invest in is core to our philosophy. Sustainability is essential because over long time periods, the value proposition to all relevant parties associated with the business needs to be sufficiently attractive for the business to grow and thrive. In the very long term this includes the wider community, society and the environment. Long term capital preservation is a core part of our investment philosophy as we see risk as permanent loss of capital, not short-term market price volatility. Our mindset is centered on achieving attractive long-term absolute positive real (inflation adjusted) returns on our clients' portfolios. Our investment philosophy and process are designed to compound our clients' capital at rates of return that are not only positive in absolute (inflation adjusted) terms but also materially above the relevant passive benchmarks over long time horizons. Compounding returns on capital are core to how we invest and how we have been able to grow our clients' capital. Since Hyperion was established in 1996, we have achieved our goal of producing attractive positive absolute real returns (preserving capital) whilst also achieving long-term returns significantly above the relevant benchmarks (after fees). These attractive returns have added significant long-term value to our clients' portfolios not only in percentage terms but also in dollar terms. We estimate that total cumulative dollar alpha (the excess returns of our portfolios above the relevant passive benchmark) currently amounts to approximately $A1.3 billion. This cumulative dollar alpha currently represents 22 percent of our total funds under management (FUM) of $A5.8 billion.[22] We believe we are well positioned to continue to add value for our clients over the coming decades.

We have prepared a five-part series of thought pieces that are designed to explain how achieving attractive cumulative returns on capital over decades is key to building wealth.

This paper (part one) looks at the three components of capital accumulation in a capitalist society. Our second paper (part two) discusses the importance of investment style in determining the likely cumulative rate of return an investor is likely to achieve over the next decade. Part three focuses on traditional value investing and provides an explanation as to why it is unlikely to produce strong compound returns going forward. Paper four discusses the importance of good management in achieving attractive cumulative returns on capital over time. Finally, part five investigates the natural resource constraints to exponential economic growth and capital accumulation in the future.

Capital Accumulation

In a capitalist society there are two broad groups of people - workers and capitalists (investors). Capitalists fund the employment of labour (workers) and provide capital (such as plant and equipment) through

[22] As at 31 January 2019

businesses in order to create goods and services demanded by households. The workers earn income from businesses for primarily selling their time. The capitalists (investors) invest their money (capital) in:

1) ownership of businesses (equity);

2) loans to others including businesses (debt); or

3) other assets, including land and commodities.

Capitalist-based societies encourage the accumulation of capital by individuals and other legal entities through investment and its subsequent legal protection of ownership (property rights). Capital accumulation is a key characteristic of capitalism. Accumulation of capital is the process of investing capital with the objective of growing that initial investment over time through the production of profits. Those members of society who have access to capital and have the ability, skill and willingness to invest that capital, have the potential to earn attractive rates of return over time. If those returns are reinvested, they can enjoy exponential growth in capital over the long term.

Hyperion invests capital on behalf of its clients, taking the perspective of a business owner. We invest our clients' capital in high quality, structural growth businesses using our proprietary investment process in such a way as to protect and grow that capital. Hyperion's portfolios have benefited from cumulative returns above their benchmarks over long time periods. Most of our FUM is the result of the capital Hyperion has generated from cumulative returns rather than from contributions from clients. Two key aspects of Hyperion's ongoing success, in reaping the rewards of compounding returns, are:

1) identifying quality businesses that can generate sustainable attractive returns (even in the presence of ongoing economic headwinds); and
2) our long-term approach to investing.

"Compound interest is the eighth wonder of the world. He who understands it, earns it... he who doesn't... pays it."

Albert Einstein (attributed)

Capital and compounding returns

The three factors that influence capital accumulation are:

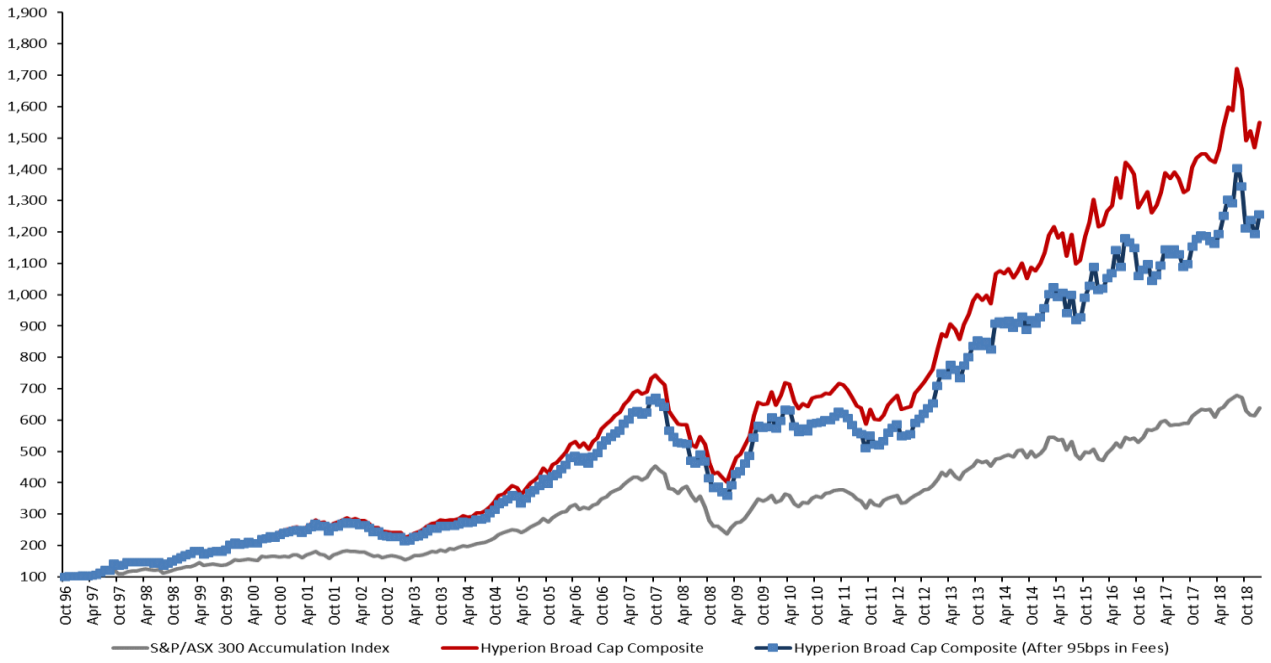
i) the amount of capital invested;
ii) the period the capital is invested; and
iii) the cumulative rate of return on that capital.

A compound return is the cumulative rate of return earned over multiple periods where the income, gains and losses on a capital investment are reinvested over the life of the investment. Compound returns are measured by comparing the final value of an investment with its original investment value, normally expressed in average per annum (p.a.) terms as a compound annual growth rate (CAGR).

The Hyperion Broad-cap Composite is an example of the long-term benefits of compounding returns (refer Figure 1). It has produced a CAGR of approximately 13.1% p.a. (before fees) and approximately 12.1% p.a.

(after assumed fees) since October 1996.[23] This means that if you had invested $A100 in this composite in October 1996 and had reinvested all the cumulative income and gains (after fees) over the 22 years from your investment, it would be worth more than $A1,256.[24] If you had invested in the S&P/ASX 300 Accumulation Index over the same 22 year period, your CAGR would have been approximately 8.7% p.a. and $A100 would be now worth approximately $A639.

Figure 1: Hyperion Broad-cap Composite vs S&P/ASX 300 Accumulation Index since 1996



Source: Hyperion

The Hyperion Broad-cap Composite did not produce a 12% p.a. (after fees) return every year. In fact, its returns varied meaningfully from year to year, but if the investment was left to compound over time it would be worth approximately 12.6 times the original investment, versus around 6.4 times if you had invested in the index.

Historically, growth in corporate profits has been beneficial for equity investors because this growth has resulted in growing income streams and intrinsic values through time. However, this aggregate corporate profit growth is predicated on an economy that continues to expand at an exponential rate over time. When we reach a point where the economy ceases to grow over an extended period, then the rate of compounding stock market returns will be significantly diminished overall. Average businesses are likely to suffer significant declines in value from the combination of poor economic conditions and loss of market-share to a smaller number of elite businesses. Index-based stock market investors could still enjoy some potential compounding returns from reinvesting income (dividends) they receive. However, they are unlikely to receive the returns they achieved historically, in a lower growth, more competitive world. To enjoy the full benefits of compounding returns it will be necessary to identify those companies with the ability to grow profits in more stagnant and difficult economic conditions. These companies will be hard to find and require significant skill

[23] As at 31 January 2019. Returns are before taxation related expenses.
[24] Assuming management fees of 95 bps

to identify consistently. Qualitative analysis will become much more important than short-term financial heuristics, such as price to earnings (P/E) or price to book (P/B) ratios.

i) The amount of capital invested

As mentioned previously, a capitalist society can be divided broadly into workers and capitalists (investors). Workers tend to have to rely primarily on their income from personal exertion and have limited equity ownership in businesses and other investments. Access to capital and ownership of capital are massive competitive advantages for the wealthy and a substantial impediment for the poor in accumulating material wealth. People who don't have much capital to start with need to:

1) achieve higher rates of return;
2) save more and invest more from their personal exertion income; and/or
3) invest over a longer period to match the ending capital of others who start with more capital.

Obviously, the more capital an investor starts with, the greater the dollar amount returned and the more capital that investor has to reinvest. Consequently, over time the wealthy get wealthier at an exponential rate. This increasing concentration of capital with the wealthy in society is a key reason for increasing income inequality in most countries, because income is derived both from personal exertion and capital. Since the wealthiest hold the most capital, they earn more income. This income and capital differential tends to expand over long time horizons as the extra income can create more capital, which in turn generates more income.[25] Hence, the generation of a compounding capital base. Figure 2 illustrates the trend towards increasing wealth inequality that has occurred in the U.S. since the mid-1970s. The wealthiest 0.1% of the U.S. population has approximately the same wealth as the bottom 90% of the population. The last time this occurred was in the 1920s and 1930s. Figure 3 shows that wealth inequality is on the rise in a number of countries and remains high in others.

Compulsory superannuation in Australia mandates employees to save and invest a portion of their income over their working life – the underlying concept being that, on retirement, workers will enjoy savings that have had the opportunity to benefit from the impact of long-term compounding returns. This compulsory superannuation system has partly contributed to Australians being ranked the world's wealthiest people according to the Credit Suisse 2018 Global Wealth Report.[26] The system has also acted to reduce wealth inequality in Australia by forcing most Australians to save part of their salary during their working lives.

The key takeaway is that without the benefit of a large starting capital base, workers need to start saving early in their working lives in order to enjoy the benefits of compounding returns. Savings can be regulated, as in the Australian system, forcing everyone to participate in compulsory superannuation. However, where conditions are such that the general populace is unable to accumulate capital as a result of economic circumstances such as insufficient employment opportunities, inadequate wage levels, high healthcare and education costs or highly restrictive credit conditions, we will continue to see a growing divide between the wealthy and the rest of society. The wealthy will continue to enjoy the advantage of compounding returns from a large capital base.

[25] Capital in the Twenty-First Century, Thomas Piketty
[26] Median wealth per Adult of $US191,453

Figure 2: Wealth inequality is high in the U.S.

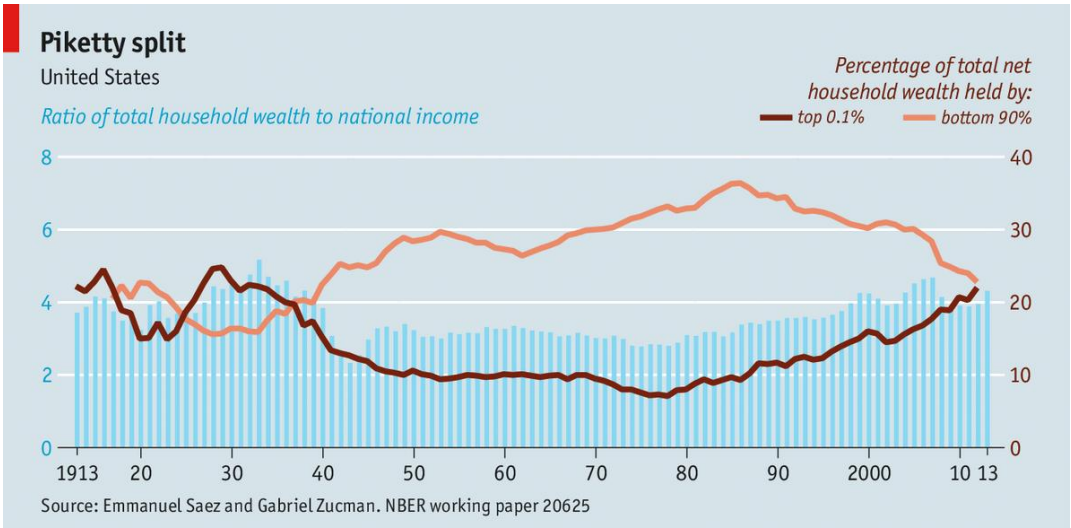
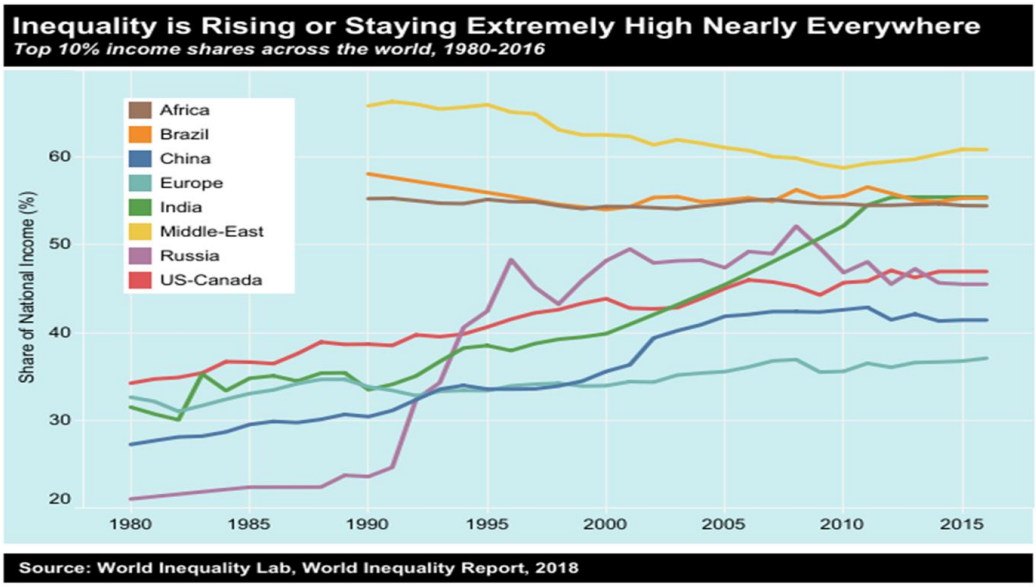


Figure 3: Income inequality is either very high or rising in most countries



ii) Time is the friend of compounding returns

The longer the period that capital is invested, the larger the impact of compounding returns on wealth. Starting to save and invest early in life allows time for returns to compound, resulting in larger amounts of capital later in life when individuals reach an age where they might like to retire.

The compounding effect can be illustrated by looking at Hyperion's FUM. **Total FUM currently stands at approximately $A5.8 billion, of this amount, only $A1.3 billion or 22 percent is from net client contributions of capital over the past 22 years.** [27] The rest of Hyperion's FUM is from cumulative returns on capital. That return on capital over the past couple of decades has created $A4.5 billion in FUM or 78 percent of the total.

[27] As at 31 January 2019

The alpha (after fees) component of Hyperion's FUM is approximately $A1.3 billion or approximately 22% of the total.

We believe, that in order to achieve the maximum benefit from compounding, an investor should:

1) invest in a portfolio of companies with superior economics and long-term structural growth i.e. companies that are not reliant on expansion of the overall economy for their profit growth;
2) take a long-term view and be patient, acting like a business owner rather than a share trader;
3) reinvest as much of the income and sale proceeds as they can afford, back into the portfolio continually over time; and
4) maximise the amount of capital that is invested over time.

This approach focuses on finding a small number of stocks with healthy returns that can compound multiple times over a long period of time.

iii) The cumulative rate of return

Capital investment can be broadly categorised as either equity ownership of businesses or debt related investments. Hyperion invests only on the equity side (although we also do hold short-term cash equivalents). The long-term rates of return from owning equity capital in businesses tend to be higher, on average, compared with returns available on interest bearing investments over similar periods. This is primarily because there is increased uncertainty associated with owning equity in a business compared with a debt investment. The risks associated with equity ownership relates to multiple factors including:

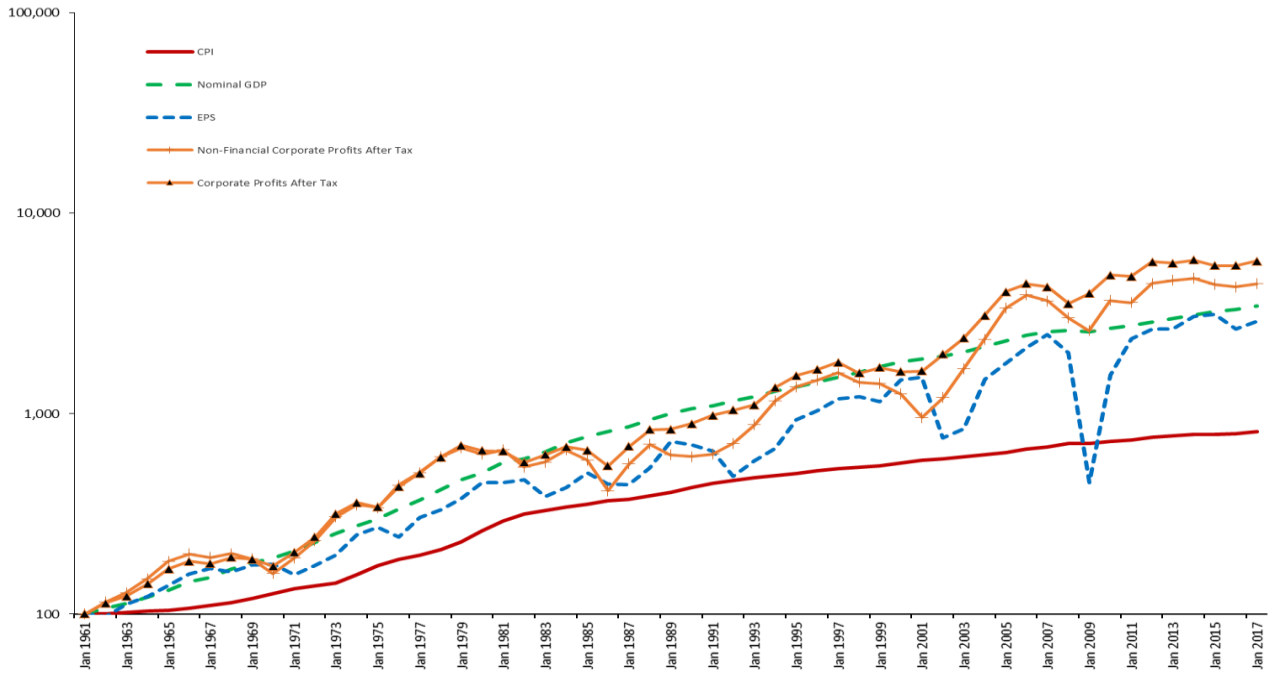
1) timing and quantum of future underlying cash flows is uncertain;
2) market value at the time of disposal is uncertain; and
3) the future sale date is uncertain (i.e. there is no fixed maturity date).

The long-term exponential growth from equities is generally higher than debt related investments because of the higher return on capital that is normally associated with business ownership and the ability for some businesses to expand their invested capital at attractive rates of return. The returns from debt related investments tend to be lower but more certain in terms of the income likely to be received, the duration of the investment and its terminal value. Thus, because of these lower rates of return on capital, debt related investments generally do not compound at the same rate as equity related investments.

For the broad-based indices, earnings growth is heavily linked to nominal GDP growth (refer to Figures 4 and 5). For those listed businesses that comprise the key stock market indices, the effective EPS (and DPS growth) over time will normally be below both the rate of nominal GDP growth (the green line in Figures 4 and 5) and the rate of corporate profit growth (the two orange lines in Figures 4 and 5) primarily due to dilution from increases in the number of shares on issue. The blue line in Figure 5 represents the effective EPS of these businesses. In the U.S., dilution in EPS has been reduced because of the large number of share buy backs that have occurred in that market.

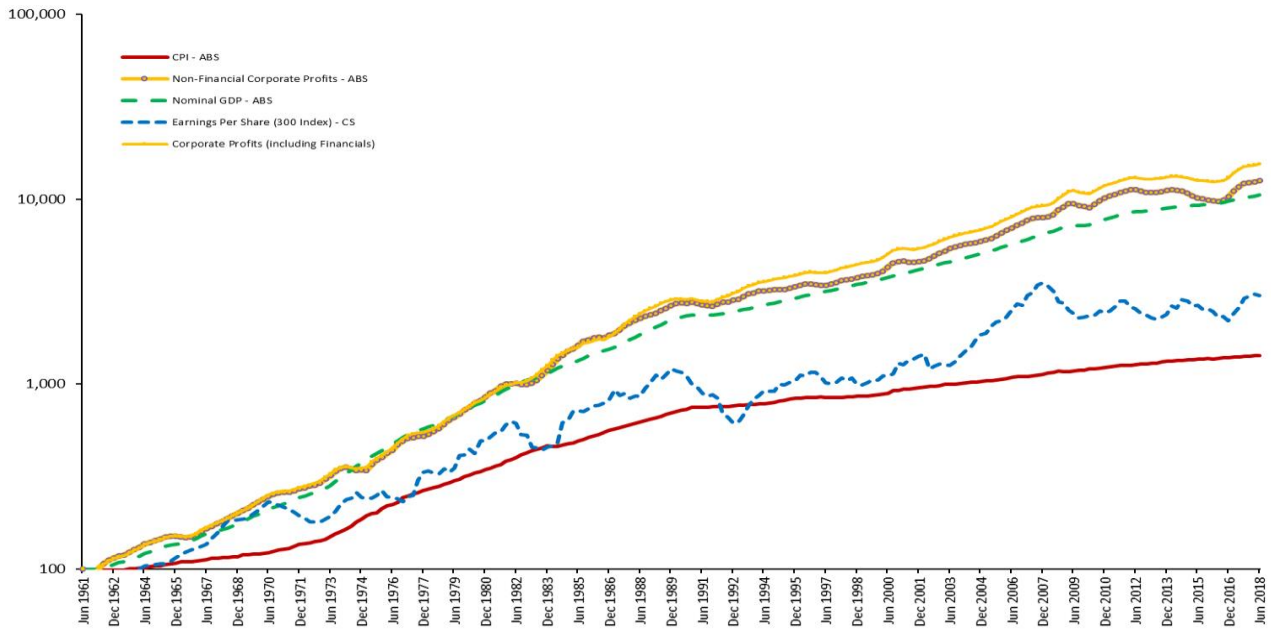
The rate of GDP growth in the U.S. has been declining over the past 50 years. The multiple tailwinds the U.S. economy enjoyed for most of the 20th century including high levels of innovation, cheap and abundant energy, a young population, increased financial gearing, and a robust and growing middle class have now given way to mounting structural headwinds that are forcing the sustainable rate of GDP growth lower.

Figure 4: Corporate profits, GDP, EPS and CPI – U.S.



Source: Federal Reserve Bank of St Louis, UBS, Hyperion

Figure 5: Corporate profits, GDP, EPS and CPI – Australia



Source: ABS, Credit Suisse, Hyperion

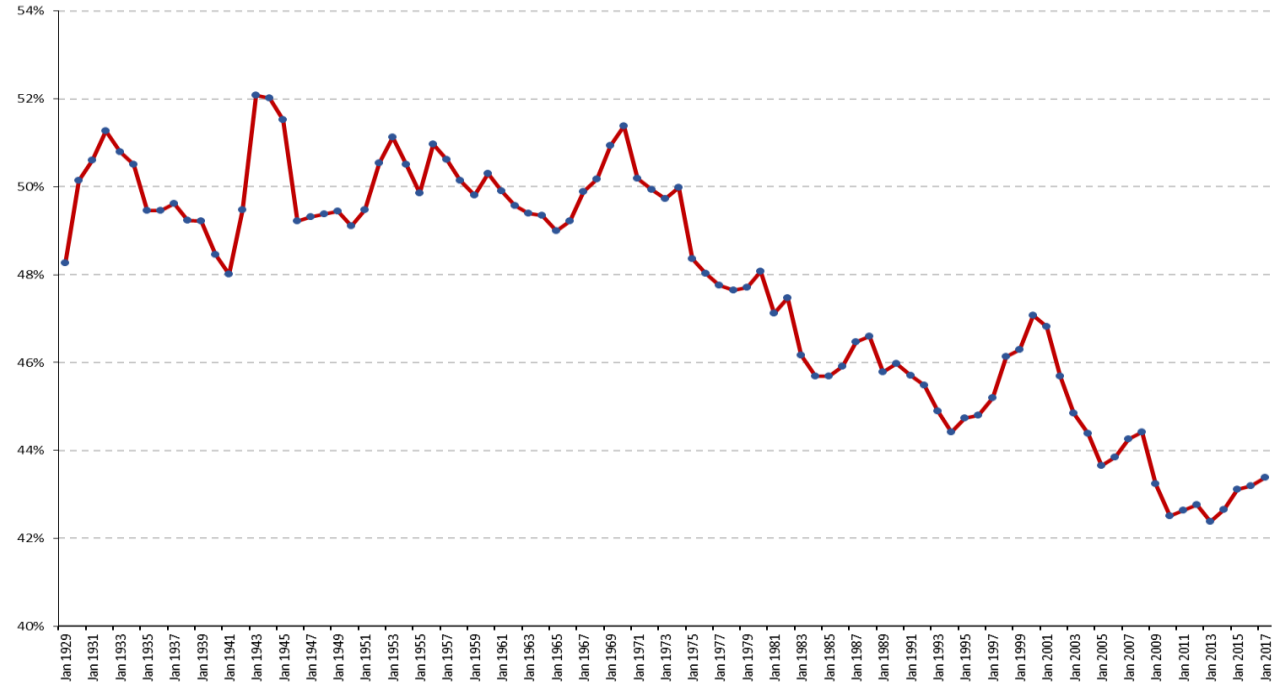
The businesses that supply the economy with many of the goods and services are in aggregate constrained by the overall growth of the economy. In most developed economies, this rate of overall economic growth is largely driven by the consumer sector. Generally, the higher the rate of economic growth, the higher the rate of growth in sales and profits for the businesses in that economy. The corporate profit share of the economy

can vary over time. In recent decades, the corporate profit share has been increasing and the wages share declining in key economies including the U.S. (Refer Figures 6 and 7). The increase in corporate profit has been achieved at the expense of wages growth. This profit growth has supported returns on capital invested in businesses but has also contributed to the hollowing out of the middle class and increasing income and wealth inequality. The expansion of corporate profits can also be seen in Figures 4 and 5 with corporate profit growth outperforming GDP growth since 1961 both in the U.S. and Australia. There are natural limits to how far profits can expand as a percentage of GDP without causing increasing social unrest. Thus, we believe it is unlikely that corporate profits will continue to expand as a percentage of GDP over the long-term. We think corporate profits are likely to remain range bound relative to the overall economy and the rate of growth in the U.S. and global economies is likely to continue to experience structural declines over the next decade. However, it should be noted that the mix of profits across the business sector is likely to change over time with modern businesses with strong value propositions and innovative cultures taking market share from the traditional, structurally challenged businesses. The profit shift to modern business models will result in a "hollowing out" of average and traditional business models over the next decade.

Figure 6: U.S. corporate profits after tax as a % of GDP

Source: Federal Reserve Bank of St Louis, Hyperion

Figure 7: U.S. wage income as a % of GDP



Source: Federal Reserve Bank of St Louis, Hyperion

Growth in the EPS and DPS of Hyperion's portfolios is a function of the stocks held in the portfolios and the weights those stocks are held at through time. Hyperion's Broad-cap composite has produced an EPS CAGR of approximately 9.3% p.a. over the past 22 years, compared with the benchmark that has produced EPS CAGR of approximately 4.1% p.a. The differential explains most of the alpha (pre-fees) of 4.4% p.a. since 1996.

Table 1 illustrates the long-term benefit of holding a portfolio of stocks that produce superior and sustained EPS growth.

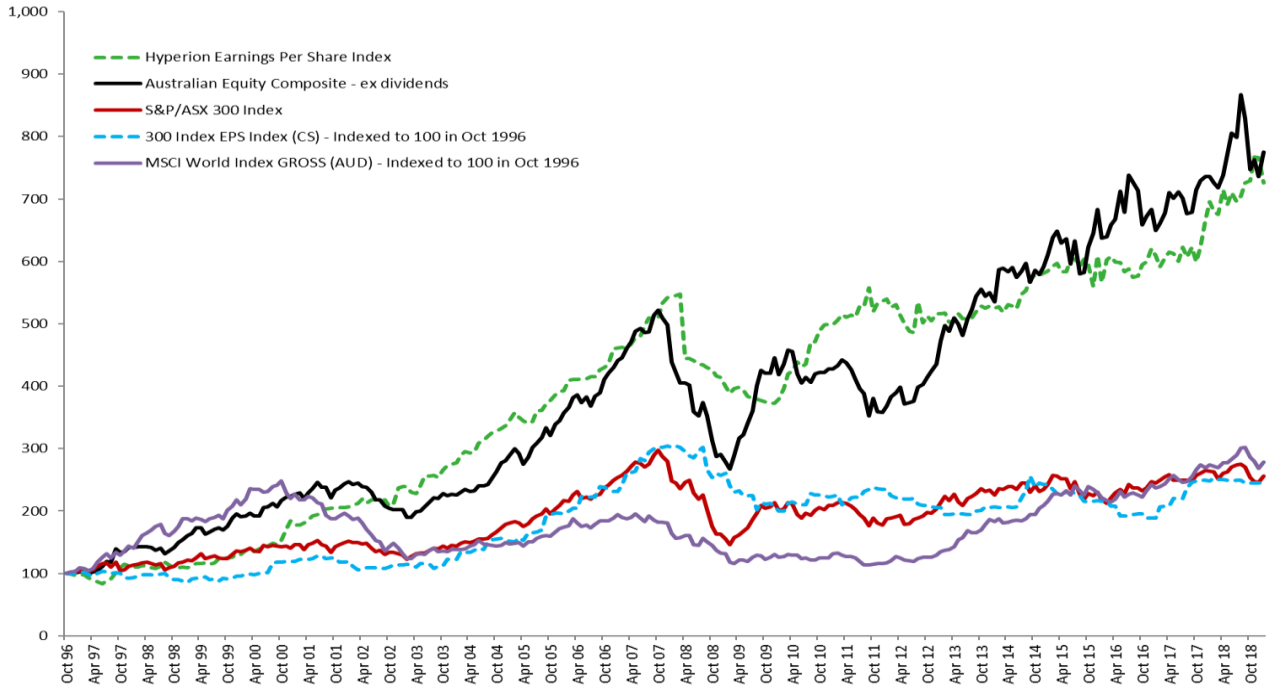
Table 1: The current value of a $A100 invested in the Hyperion Broad-cap Composite in 1996

	CAGR EPS	CAGR PER Change	CAGR Capital Only	Dividend Return (1)	Total CAGR (1)	Total CAGR (1)	Capital Index Value	Dividend Return (1)	Total Return (1) (2) $A100 investment in 1996
Hyperion	9.3%	0.3%	9.6%	2.4%	12.0%	13.1%	$775.17	$481.12	$1,256.29
Benchmark	4.1%	0.2%	4.3%	4.4%	8.7%	8.7%	$255.51	$383.51	$639.02
Excess	5.2%	0.1%	5.3%	(2.0%)	3.3%	4.4%	$519.66	$97.61	$617.27

(1) After assumed retail fees of 95bps applied to the Broad-cap Composite returns
(2) Value of $A100 invested in October 1996 as at 31 January 2019
(3) EPS data sourced from Credit Suisse and Hyperion
(4) Benchmark is the S&P/ASX300 Accumulation Index

Figures 8 and 9 below illustrate the long-term relationship between EPS and the market value of the shares. Both charts show that the Hyperion portfolios have produced superior EPS growth over long time periods compared with the relevant benchmark.

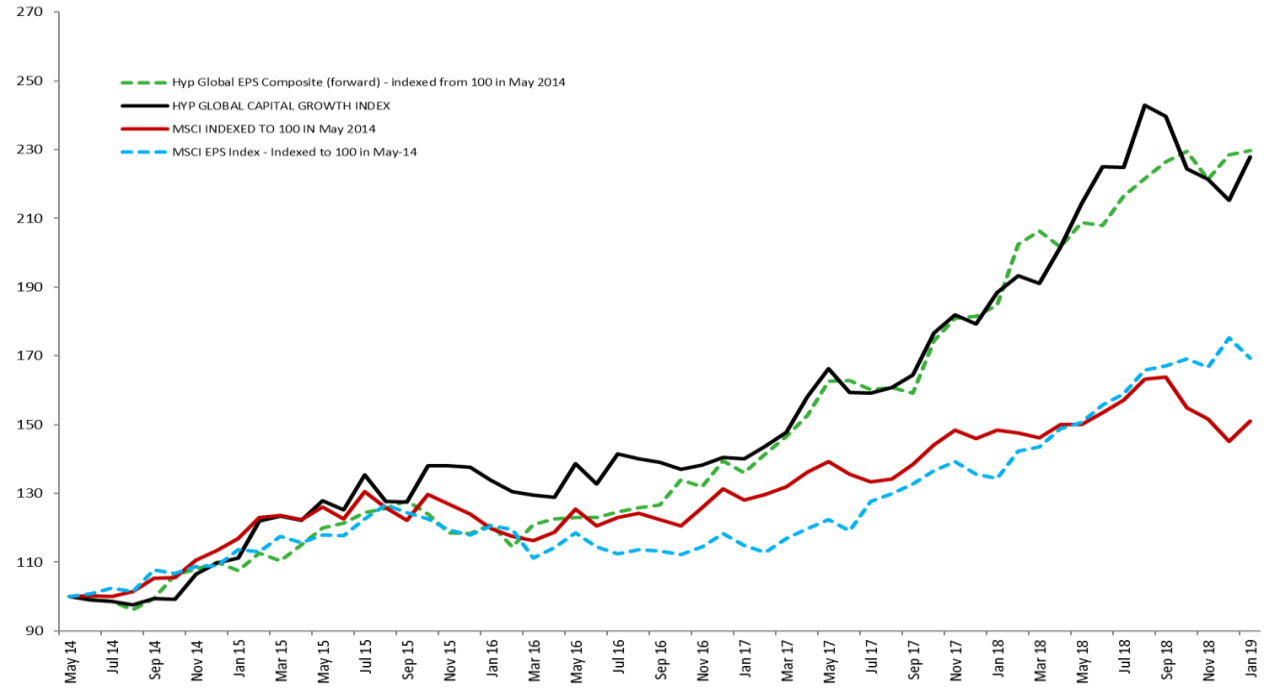
Figure 8: Hyperion Broad-cap Composite (ex-dividends), S&P/ASX300 Index and EPS



Source: Hyperion, Credit Suisse

We believe the EPS CAGR for the Australian Broad-cap composite should be higher over the next 5 to 10 years (compared with the last 22 years) because the current portfolio has a higher exposure to structural growth businesses. The portfolio also has a lower than historical exposure to the low-growth banking sector and other capital-intensive, low-growth industrial companies and zero exposure to the structurally challenged, low-quality resource sector. In contrast, the index has a very large exposure to all these sectors and a small exposure to structural growth businesses such as technology and healthcare. Consequently, we expect our Australian portfolios to produce stronger EPS growth over the next 5 to 10 years, whereas it is likely the index will produce weaker EPS growth than it has achieved historically.

Figure 9: Hyperion Global Growth Composite (ex-dividends), MSCI World Index and EPS



Source: Hyperion, Macquarie

The Hyperion Global Growth Fund (Managed Fund)[28] is expected to achieve higher EPS growth relative to our Australian Broad-cap composite over the next 5 years with a higher level of confidence. The average quality of businesses in the Hyperion Global Growth Fund (Managed Fund)[28] is superior to the Australian portfolios because there is a larger number of high-quality companies listed outside Australia than there is in Australia.

We expect low long-term EPS growth from major stock market indices because of the structural headwinds of ageing populations, high debt levels, growing income and wealth inequalities (hollowing out of the middle class), increasing technology-based disruption (negatively impacting human capital markets and traditional industries) and increasing natural resource constraints (including climate change related impacts). These factors will restrict economic growth levels and consequently long-term share market returns.

[28] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

Conclusion

In a capitalist society, the keys to wealth generation are saving capital to invest, investing for the long-term and identifying high quality businesses that are well-positioned to grow sustainably over the long term. Hyperion's portfolios have benefited from the application of the key concepts underlying compounding returns.

The global economy faces numerous structural headwinds. Average businesses are heavily reliant on a strong economy in order to be able to grow their profits. A lower growth world will make it more difficult for these traditional businesses to grow profitably. In addition, the world is becoming more competitive and technology-based disruption continues to increase. These factors are likely to continue to place downward pressure on index-based equity market returns over the next decade.

In a low growth and disrupted world, capital allocation becomes much more important and thus investors need to be very selective regarding stock selection. At Hyperion, we are extremely discerning and only invest in the highest quality businesses within the relevant universe.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

HYPERION ASSET MANAGEMENT
a different horizon...

The importance of compounding returns in a low growth world – Part Two

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Introduction

At Hyperion Asset Management (Hyperion), we believe the best way to achieve the financial benefits of long-term compounding returns is to invest in a portfolio of businesses that can achieve sustained earnings per share (EPS) growth. The search for companies that exhibit the potential for long-term compounding returns will become more important over the next decade and beyond as we confront a structurally challenged world of very low growth. Adopting a long-term investment mindset like that of a business owner rather than a share trader is an important factor in achieving attractive compounding returns. It requires the portfolio manager to focus solely on generating long-term alpha rather than trying to string together a series of unrelated short-term alpha generating trades.

Common short-term investment strategies such as predicting near-term earnings catalysts, mean reversion in earnings, buying average businesses on low price earnings (P/E) ratios or momentum will be less effective in a world where many average businesses are likely to suffer structural declines in both long-term earnings and intrinsic value. There are also numerous behavioural biases that further inhibit a successful long-term approach to generating compounding returns. These biases include recency bias, fear or embarrassment of losses, boredom, giving into client pressure regarding short-term underperformance, linear thinking and complacency.

In order to identify companies that can sustainably grow real EPS well above average levels over a long period of time ('compounding machines'), investors need to be skilled at identifying mispriced companies with long-term sustainable sales growth profiles. Investing in a global context makes the task relatively easier, as the investable universe is larger and there are more high-quality companies available for consideration. It is the intent of Hyperion to direct its research efforts to finding these long-term 'compounding machines'.

Emergence of a low growth world

From the end of World War II (WWII) up until the Global Financial Crisis (GFC) in 2008, the world enjoyed a period of robust economic growth. This was driven by solid population growth, a young and growing workforce, access to abundant low-cost energy and natural resources, a robust middle class (particularly up until the 1970s in developed economies), easy access to credit, strong productivity (particularly prior to the 1980s), mass market commercialisation of a wide range of technologies and growing consumer demand. Furthermore, over the past 36 years, equity market valuations have been supported by substantial declines in interest rates, lower discount rates and higher price earnings multiples. Low interest rates combined with strong fixed investment spending in China and substantial quantitative easing programs by key central banks in the U.S. and Europe, have supported global equity markets over the past decade.

Going forward, we believe most of these 'growth' drivers are likely to be absent. In this structurally challenged world, investors will be unlikely to achieve attractive compounding returns from index investing. This is because most broad-based indices are dominated by average businesses that are heavily reliant for their earnings growth on the overall expansion of the economy. If the overall economy is not growing or is only

growing at a low rate, then it will be very difficult for these average businesses and the associated indices to produce attractive long-term EPS growth and returns. That is, broad-based equity index earnings and returns normally reflect broader economic growth over the long term (assuming stable interest rates). In a structurally low growth economic environment, investors will need a portfolio of superior businesses that can take volume-based market share and/or generate organic growth through strong pricing power rather than relying on ever rising consumption.

Challenges with short-termism

We believe short-termism is the enemy of both successful wealth protection and wealth creation. As we have discussed in previous articles, many investors try to achieve long-term net alpha (the difference between a portfolio's return after fees and a relevant benchmark) by combining a series of short-term alpha trades. This involves searching for numerous short-term potential alpha events to exploit. Typically, multiple trades will be conducted in order to seek a small amount of alpha that can be sequenced together and potentially accumulated through numerous investment bets or speculation. This could involve searching for earnings catalysts to predict the reversion of a short-term P/E multiple to some historical average (including both long and short positions) or undertaking a short-term earnings revision or share price momentum strategy.

These short-term trading strategies are extremely difficult to execute successfully over long periods primarily because they are reliant on accurately predicting short-term share price movements and any successful factors are normally copied, resulting in a reduction in effectiveness. They are time intensive (if undertaken by humans) and are subject to a large degree of randomness, luck and imitation. Trying to predict and take advantage of short-term share price movements is very difficult because most market participants (including algorithms) are trying to do the same thing, using the same factors, at the same time. Most of these short-term trading strategies are quickly arbitraged away because many participants are trying to use the same or similar factors.

The market is directionally efficient in terms of news flow in the short-term. That is, if stock specific news is negative (positive) then the share price normally goes down (up) relative to the market. The problem is that the news flow tends to be unpredictable in most situations at the individual company level, the industry level and macro level. Financial markets and economies are inherently random and unpredictable in the short-term due to the influence of crowd-based behavioural factors and the general complexity of these systems. There are numerous variables to analyse and forecast when assessing short-term share price changes. Examples include market sentiment, tax driven trading, content of upcoming quarterlies, management guidance, analyst revisions, regulatory reviews, anticipated acquisition activity and changes in economic policy. Markets and economies are complex adaptive systems, heavily influenced by human sentiment and behavioural factors and thus, difficult to consistently predict in the short-term.

Effective short-term trading strategies require repeated success in the accurate prediction of both the direction and timing of short-term share price movements. It is very difficult to consistently time optimal entry and exit points in stocks as most investors are poor at selecting short-term share price highs and lows for individual stocks. However, when forecasting long-term share prices, the number of key indicators reduces significantly, as they are primarily driven by sustained long-term earnings growth and its predictability.

The mindset required to successfully exploit short-term alpha opportunities is the opposite of the mindset required to successfully exploit long-term alpha opportunities. Most market participants are obsessed with short-term alpha and share price-based returns because they don't have the patience, business model, client

backing or investment horizon necessary to implement a long-term alpha driven approach. This short-term mindset and approach effectively mean that the long-term fundamentals of the businesses underlying these stocks become less important and news flow and meeting or beating short-term consensus expectations become the dominant reason for going long or short a stock. In addition, if your mindset and investment process are centred around short-term investment performance, then it is much more unlikely that you will have conviction regarding each individual stock position. Conviction based on fundamentals is important because if market participants do not have a good understanding of the underlying economics and intrinsic value of the company, they are more likely to be forced out of the stock at an inopportune time.

Hyperion's approach focuses purely on maximising long-term returns, long-term capital preservation and long-term alpha. We believe Hyperion is different from most market participants in that we do not attempt to generate short-term alpha through trading strategies such as momentum, near term news flow, feedback loops, shorting or short-term macro trends. Our focus is on long-term business fundamentals and long-term valuation. Even though our investment process incorporates short-term share price volatility, we do not attempt to predict the direction and/or quantum of future short-term share price movements to generate alpha. That is, our investment process is not predicated on accurately forecasting short-term share price movements. Predicting short-term share price direction and quantum is not key to our ability to generate long-term alpha. The investment process can add long-term alpha regardless of the direction and quantum of relevant short-term share price movements. Again, this is in stark contrast to how most market participants try to generate alpha by implementing investment processes that are reliant on correctly predicting the direction and duration of short-term share price movements.

Most investors are unlikely to have numerous exceptional investment ideas. However, most experienced investors have some ability to recognise a few good investment ideas over time. By investing in a relatively concentrated number of high-quality businesses, being patient and holding these businesses over the long term, investors can focus on their best investment ideas and benefit from the compounding growth in their value. This is an extremely powerful and effective approach to wealth creation.

At Hyperion, we believe that in a permanently low growth world, an effective way to achieve attractive returns in equities is to be selective and combine a smaller number of stocks that have the potential to compound returns at high rates over the long-term, into a concentrated portfolio. The historical tailwinds of high GDP growth, falling interest rates and stable industry structures that have aided short-term investors in the past are unlikely to persist in the future.

Short-term momentum investing

Over the past couple of decades, there has been a rise in short-term momentum investing, supported by quantitative funds. Momentum investing seeks to hold stocks that achieve above average or rising share price or short-term earnings revisions (price momentum and earnings momentum trading, respectively). However, in order to maximise compound returns, we believe investors need to hold structural growth stocks for very long time periods, generally many years to decades. Value creation within a business is rarely linear. This means that a business with long-term growth potential can have good years and bad years where the rate of growth fluctuates. Even when investing in the best ideas, investments can still go through long periods of flat or negative share price returns and negative news flows. Earnings growth is unlikely to be steady as businesses go through their own business cycles where execution varies and the need to reinvest fluctuates. This is when an investor needs conviction to act as a business owner. Unfortunately, when implementing a short-term momentum approach, if the price or short-term earnings momentum slows, the stock is typically sold even

though the business can create further significant value over the longer term. In contrast, Hyperion tends to be contrarian due to our portfolio construction process. Typically, we tend to be selling a stock (decreasing our target weight within the portfolio) when its share price is outperforming relative to the rest of the portfolio holdings and we are buying a stock (increasing our target weight within the portfolio) when the share price is under-performing relative to the rest of the stock holdings in the portfolio.

Both value-based P/E arbitrage (based on current short-term earnings) and momentum-based strategies have significant disadvantages to a long-term fundamentally driven investment approach. Neither of these short-term based strategies attempts to rigorously estimate the long-term intrinsic value of a business (and compare it to the current share price).

Behavioural challenges to long-term investing - patience and conviction

Holding on to a position when share prices are flat or down for several years is difficult for most investors. The desire for trading activity is natural, particularly during periods of underperformance (relative or absolute), when perceived weaknesses in the investment thesis become hard to ignore and the level of uncertainty and pressure grows. There are many examples where stocks that have compounded 20% to 40% p.a. have gone through periods of up to 5 years, where the return has been flat or down in absolute terms or meaningfully less than its benchmark. This has been the case for Pfizer (PFE-US), REA Group (REA-AU) and Berkshire Hathaway (BRK-US).

"I don't know which is harder, buying right or knowing enough to hold on."

Thomas Phelps

Reinvestment at both the company level and the investor level is important to maximise the compounding effect. Structural growth companies need to reinvest in their product set to ensure their value proposition continues to improve and that new products are developed for the future. Individual investors need to reinvest income from the portfolio back into the fund to enhance the long-term compounding effect. To achieve extraordinary long-term results, investors need to focus on investing in businesses that are potential compounding machines. Pursuing short-term alpha provides entertainment through increased trading activity but it is very difficult to find sufficient numbers of good trading-based ideas over time. Banking small, regular profits may (in some cases) achieve satisfactory returns, but it is less likely to lead to attractive returns on invested capital over the long term.

"All the rest of my life I have risked too little and sold too soon."

Thomas Phelps

To have a long-term position in a stock, investors need conviction in the business model. Maintaining this conviction is difficult for most investors as share price data is available virtually instantaneously, companies report financial results over short time intervals and even the best companies will be beset with perceived short-term problems. Additionally, there are self-interested parties who benefit from negative news stories

(media and short-sellers) or short-term trading activity (brokers) and who are motivated to convince investors to sell their existing holdings. Stockbrokers are incentivised by commissions that are directly related to the stock turnover in their clients' portfolios, while the media is incentivised to grow its viewership or readership by sensationalising news in order to entertain. The rise of short sellers and their ability to influence the financial media is an additional challenge for long-term investors. Investor sentiment can turn negative quickly and dramatically. Without conviction founded on fundamental analysis and patience, investors can be shaken out of their position (normally at the worst possible time).

"The stock market is a device for transferring money from the impatient to the patient."

Warren Buffett

You cannot compound a short position beyond zero

The financialisation of society has been occurring over the past 70 years as financial institutions and their products have grown their relative importance and influence in the economy and society. The trend towards higher levels of debt can be seen in rising ratios of debt to GDP in most countries. At the same time there has been a trend towards other forms of financial leverage including derivatives and short selling.

We believe that short selling incorporates the worst aspects of the financialisation of society in that it encourages short-termism and uses financial leverage in order to facilitate speculation on future near term share price movements. Short selling involves borrowing shares from a third party and selling the shares with the hope that the stock price will fall so that you can buy them back at a lower price. The process involves taking on financial leverage so you can speculate on future declines in the share price. It is leverage because it creates an additional potential loss or gain on a financial position where the investor's equity capital remains unchanged. Short selling magnifies potential profits or losses and, as with any form of leverage, it involves taking on additional fundamental risk.

Short selling has gained popularity over the past couple of decades as hedge funds have marketed equity products that offer high returns and low short-term volatility risk. At Hyperion we are very cautious regarding investment strategies that involve taking on leverage because this magnifies the potential losses for any given equity capital base. **In addition, we do not believe that short-term market price volatility is risk. We believe that true risk relates to permanent loss of capital or destruction of capital.**

Permanent loss of capital can occur on both short and long equity positions. However, short selling increases the potential quantum of losses whilst placing a cap on potential profits. That is, a short position has a return profile that is asymmetric with unlimited downside and finite upside. The most you can ever make on a trade is known at the time the short position is placed whereas the downside is unlimited because shorting a structural growth stock over the long-term can result in enormous compounding losses. There are no exponential positive returns on the short side. This unlimited and leveraged downside makes many short sellers desperate to ensure the companies they have shorted suffer significant price declines in the shortest period possible. This desperation leads to short-termism and gives patient long term holders a significant edge. The negative potential returns on a short position are not only infinite but there are also material holding costs from having to borrow stock. We would argue that short selling is primarily a marketing tool for hedge funds to charge clients higher fees by playing on their fear of short-term market price volatility. Our observation is short sellers very rarely uncover fundamental or structural flaws in a business model.

Characteristics of long-term compounders

"But now and then a business demonstrates that it has the power to live. It is a terror to competition, not a prey. It has mastered its market."

Thomas Phelps

Occasionally a business emerges with a value proposition that disrupts huge markets, such as Amazon (AMZN-US). Amazon has appreciated more than 100 times over the past twenty years. There are several characteristics that we have identified in companies that compound substantially over time. The rate of organic sales growth, its duration and its ability to internally fund that growth through positive free cash flows are essential for a company to produce sustainable long-term returns. Reported earnings can vary significantly to economic earnings and often require adjustments to value the earnings stream appropriately.

Companies need to have both high returns on capital and to be capital light in order to grow quickly whilst still producing positive free cash flows. Companies that require heavy funding will typically offer only modest growth as such businesses will continually need to raise equity or debt. This disrupts and dilutes the effect of compounding. The need for capital, whether debt or equity, is like a gravitational pull on growth. Sustained compounding requires growing free cash flows.

A sustainable business model is essential for earnings to compound over time. This means value needs to be shared between vendors, including staff and suppliers. Exploiting partners will eventually derail growth as ultimately consumers and other stakeholders will find better alternatives. This includes the community needing to accept the product or service. It is important that growth is not derailed by an unsustainable business model or culture. This is becoming more important as the world faces limited finite natural resources and environmental damage. We will return to this concept in part five of our five-part series on compounding.[29]

Mean reversion is a real phenomenon as luck is temporary and high returns are competed away. This is the reality for most companies. However, a small number of elite companies have powerful competitive advantages that allows their superior growth rates and returns to be sustained for long periods of time. Warren Buffett refers to an "economic moat" while Thomas Phelps called this a "gate". High economic returns need to be protected by a strong brand, cost advantage, network effect or continual innovation. **Hyperion's core competency is identifying companies with sustainable competitive advantages whose stock is still being mispriced over the long term by investors.**

Investors should be aware of disruption**;** especially as disruptive forces continue accelerating and expanding their financial impact on traditional businesses across most key industries and sectors. Disruption is one circumstance in which investors should sell rather than hold long-term. Disruptive products and businesses tend to enjoy structural revenue growth at the expense of legacy businesses as they use their superior value propositions to attract customers. Buying a structurally challenged business and holding it long-term is the equivalent of financial suicide. A low P/E or a high dividend yield won't prevent permanent capital destruction because a business that has no long-term sustainable earnings has very little long-term value. A lower growth world post the GFC has resulted in rising competitive intensity and more disruption as companies compete in, often, finite markets for market share.

[29] The article is titled "Exponential growth and compounding returns in a world of finite natural resources – Part Five."

Having quality management is also essential to drive long-term returns. This includes fanatical founders ('intelligent fanatics' according to Charlie Munger) whose life meaning is about growing their business long term, rather than managing short-term expectations and results. We will return to this topic in part four of our five-part series on compounding. The article is titled "The search for management teams that can compound returns in a low growth world – Part Four."

The best companies have growing intrinsic values over time due to their inherent optionality value. Good things tend to happen to good companies. They have large embedded optionality value which becomes obvious with time. Thomas Phelps called this the "chance to profit by the unforeseeable and the incalculable". A P/E re-rating from a low P/E to a higher P/E typically won't generate significant wealth in the absence of sustained, strong earnings growth. In fact, a low P/E probably won't even preserve capital in a severe economic and market correction as the lower multiple is often associated with above average gearing levels or lower quality earnings streams, which tend to be illusionary as conditions tighten.

Global compounding

Hyperion has benefited from many multi-baggers since 1996, **including REA Group (REA-AU) which was initially purchased at less than $A0.85 in 2004 but now trades over $A75 per share.** Companies that can grow earnings at high rates for a long period of time, with large addressable markets, will produce strong compounding returns. Typically, this means searching a universe of global stocks.

"No matter how high the rate of return, the company cannot grow by plowing back earnings if it already has enough capacity to supply all foreseeable markets." Thomas Phelps

To grow earnings for decades, companies need large total addressable markets (TAMs). This makes it difficult for companies that only sell their products to local customers in countries such as Australia, as growth eventually matures at relatively low revenue levels. The business model of these domestic only companies then needs to be exported globally to maintain growth. This is usually difficult to do as companies are typically competing with entrenched incumbents who have spent their life spans building their footprint, infrastructure, brand and customer relationships in their geographical market. In order to more effectively exploit the benefits of investing in businesses with larger addressable markets, Hyperion has turned its attention to the global horizon in the form of the Hyperion Global Growth Companies Fund (Managed Fund)[30].

Conclusion

As time passes, and a well-chosen stock grows earnings and reinvests, its share price will increase. Such stocks will grow in value at multiples of the initial investment given enough time. As such, an investor's focus should be applied to the long-term earnings outlook rather than the recent share price trajectory. The best businesses normally appear expensive on short-term earnings metrics. We believe long-term value investing is more appropriate than short-term value investing. The long-term investor looks for characteristics such as quality

[30] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

earnings, a sustainable business model and quality management. Investing in a global context makes the task relatively easier, as the investable universe is larger, and the quality of the companies is higher.

Hyperion has benefited from applying the principles of long-term investing. At times the market has held a negative view on some of the stocks within the portfolio resulting in periods of flat or negative growth despite long-term value propositions remaining solid. In addition, there are significant periods of short-term volatility in share prices driven by short-term news flow and swings in noise-based sentiment. At Hyperion, we have a disciplined and structured decision-making framework that is constructed on accessing long-term return opportunities as business owners. This long-term decision-making process is founded on substantial ongoing fundamental research. Hyperion's investment style is characterised by research, conviction and patience. It is a long-term approach aimed at reaping the rewards of compounding returns. Since 1996, Hyperion has successfully identified and held numerous 'compounding machines' in its portfolios, and we believe we are well positioned to continue to take advantage of attractive investment opportunities over the next decade and beyond.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

The death of the value anomaly in a low growth world – Part Three

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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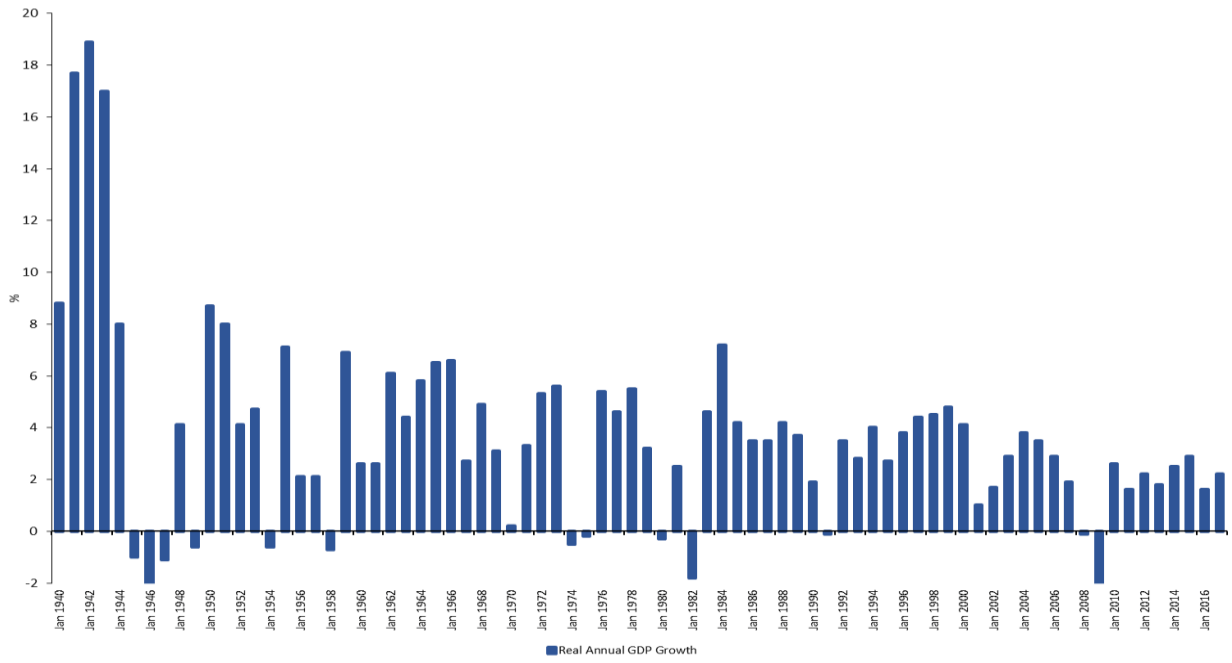
Traditional value investing typically relies on investing in average businesses that are heavily reliant on a strong economy for compounding earnings growth. Hyperion Asset Management (Hyperion) believes structural macro headwinds mean economic growth and overall earnings growth will be very low over the next decade in most major economies.

The value effect (anomaly) was identified in numerous academic studies that focused primarily on the period from around World War II (WWII) up until the Global Financial Crisis (GFC) in 2008. [31] These academic studies found that buying portfolios of stocks with below average price to book (P/B) ratios or price to earnings (P/E) ratios resulted in alpha generation that could not be explained by the efficient market hypothesis. The period that the value anomaly was identified by the academic studies was a very strong period of economic growth in both the U.S. and in most major economies. The combination of extremely low oil prices (except for two relatively short periods from 1974 to 1983 and 2006 to 2008), the commercialisation of a broad range of technological advances in the early to mid-20th century, a growing middle class (in developed economies up until the late 1970s), increasing female participation in the work force and young growing populations, resulted in an extraordinary period of economic growth.

Figure 1: U.S. real GDP growth was strong from WWII until the GFC



Source: Federal Reserve Bank of St Louis, Hyperion

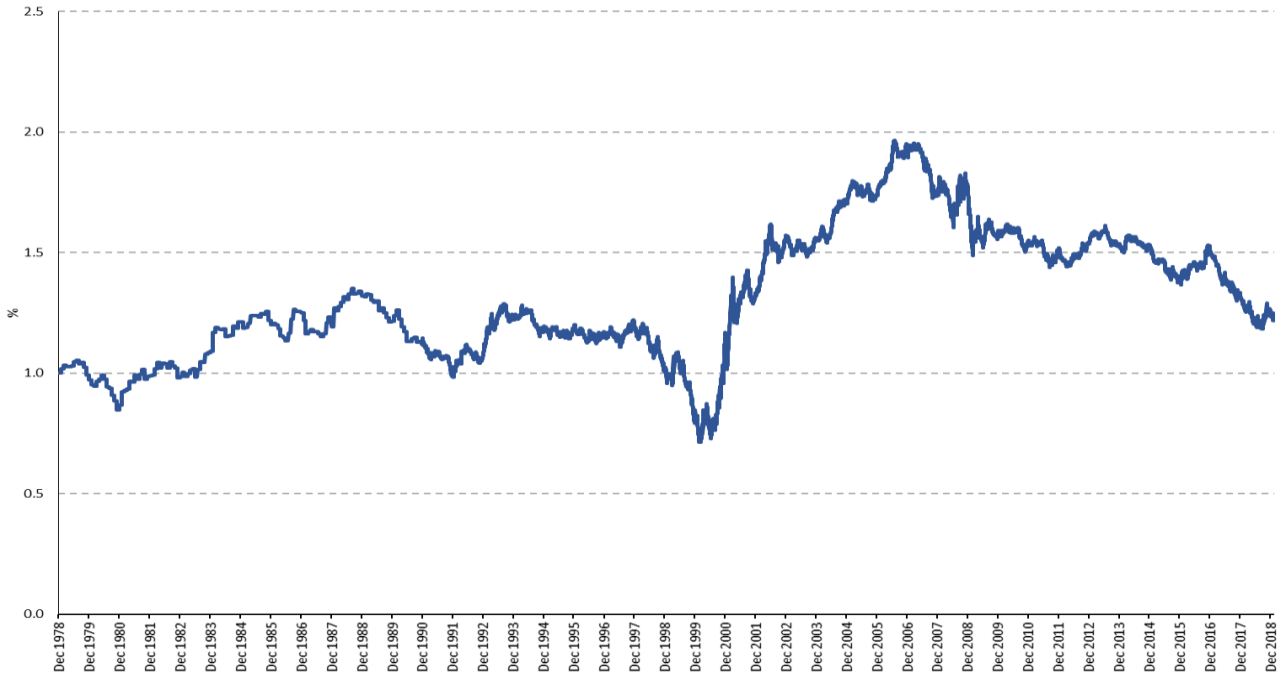
[31] The value effect (anomaly) has been researched extensively since the end of WWII. Ball (1978) identified that Earnings-to-Price ratio (E/P) was a proxy for expected returns. Basu (1977), Reinganum (1981) Rosenberg, Reid and Lanstein (1985), DeBondt and Thaler (1987), Dimson et al. (2017) and Fama and French (1993, 2012, 2017) have completed empirical studies that identified a positive relation between stock returns and the Book-to-Price ratio (B/P).

The period from WWII to the GFC was a period of very strong economic growth (refer Figure 1). It was also largely a period of benign competitive intensity with low levels of technology-based disruption. It was a period where average businesses selling average products to middle income consumers could perform reasonably well. Not only because consumer demand was growing and technology related disruption was low but also because many of these businesses could lower their costs by outsourcing manufacturing and other services to low wage emerging markets. It was also a period of corporate consolidation, supported by declining borrowing costs, where an average or poorly performing business had a reasonable probability of being taken over.

Traditional value investors tend to focus on investing in average businesses that are heavily reliant on the overall economy. If the economy grows strongly, then the average business tends to grow strongly. However, if the economy experiences low or negative growth, these businesses tend to suffer badly. The profits of these average businesses are highly leveraged into economic growth because they normally have significant operating and financial leverage. An average business can usually grow its sales organically in line with nominal GDP. With the help of operating and financial leverage, it can then grow its profits above the rate of sales growth. However, in a lower growth economy, the average business suffers because it has not spent heavily on improving and innovating its product set through R&D and thus finds it difficult to grow its sales above the rate of overall industry growth. In addition, in a low growth economic environment the competitive intensity of most industries tends to increase placing even more pressure on the profitability of average and below average businesses.

The value anomaly has disappeared since the GFC (see Figure 2) because the rate of economic growth has slowed, and the competitive intensity has increased in most industries. Lower levels of economic growth have forced businesses to act more aggressively in order to boost sales. In addition, the general level of technology-based disruption has also increased substantially over the past decade. The development of the internet and use of smart phones have fundamentally changed consumer behaviour and disrupted many traditional business models. Finally, these average businesses are generally capital intensive without substantial pricing power and thus need to use debt to boost their return on equity. Many of these businesses were forced to undertake highly dilutive equity raisings during the GFC at very low prices. These forced equity raisings were highly dilutive to EPS and portfolio returns.

Figure 2: Russell 1000 Value Index/Russell 1000 Growth Index



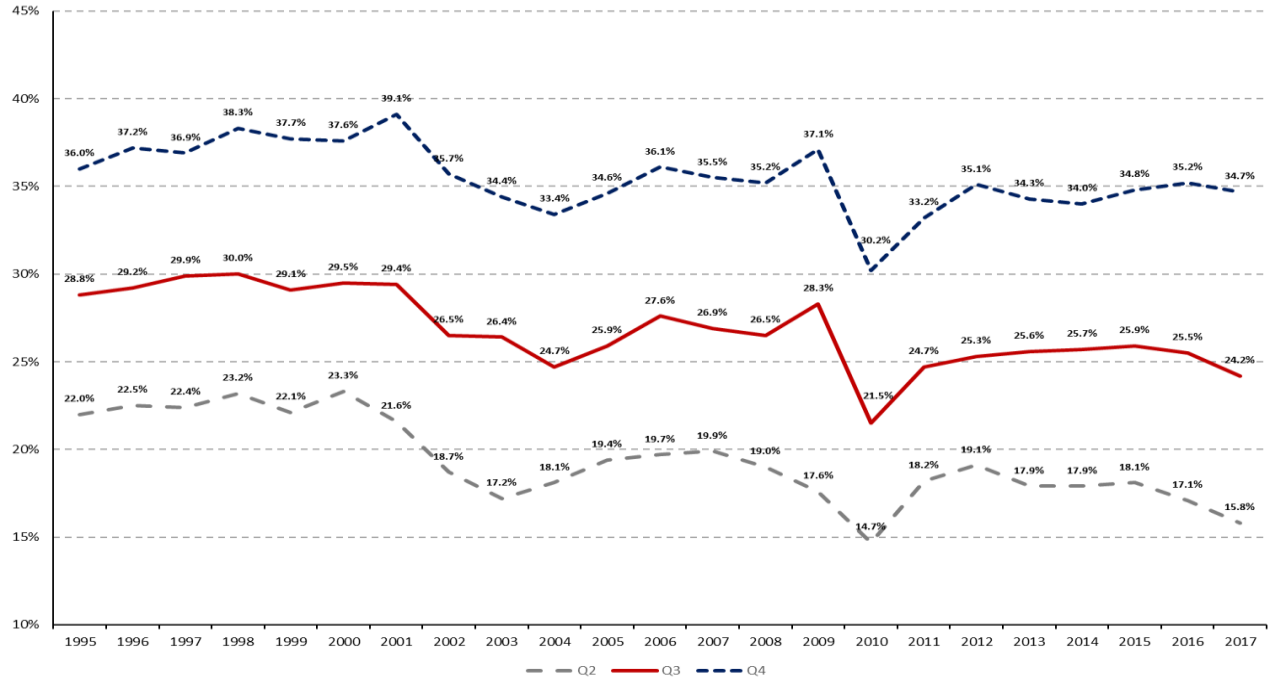
Source: Federal Reserve Bank of St Louis, Hyperion

According to the Morningstar Australian Institutional Sector Survey, the average 'growth' manager has outperformed its 'value' counterparts in Global Equities by 197 bps p.a. and 64 bps p.a. over 5 and 10 years, respectively.[32] The average 'growth' manager has outperformed its 'value' counterparts in Australian Equities by 161 bps p.a. and 107 bps p.a. over 5 and 10 years, respectively.

Traditional value investing generally relies on predicting short-term P/E movements within historically observed ranges. This applies directly to the company being considered for investment and a set of identified comparable companies ('peers'). For historical P/E averages or ranges to be meaningful, the underlying earnings and intrinsic value of an average company needs to rise over time and the P/E ratio needs to mean revert. This P/E ratio reversion typically relies on steadily growing corporate profits, underpinned by growing credit and consumption across the economy and ongoing scale and productivity benefits. It is also reliant on profits not permanently declining over time (classic 'value traps'). For example, if a stock is trading on a P/E multiple of 12x relative to its long-term average of 15x, a value investor would look to purchase the stock at a 20% discount to its long term average (for a potential 25% gain) with an expectation that the multiple will ultimately revert to its historical average (by increasing 3 P/E points) and the earnings of the business will also grow in the future. If share prices are rising over time in a growing real economy and nothing has structurally changed with the business model, management team or industry structure, then this P/E arbitrage approach is rational. However, if earnings growth moderates or there is market disruption, mean reversion becomes harder and value traps emerge more frequently where share prices remain permanently depressed. Following the GFC, the return on equity of average and below average companies has been declining because of increasing levels of disruption (Refer figure 3). In a low growth economic environment, the competitive intensity tends to increase because the businesses continue to try to grow their sales and profits at historical rates even though the economy is growing at lower than historical rates.

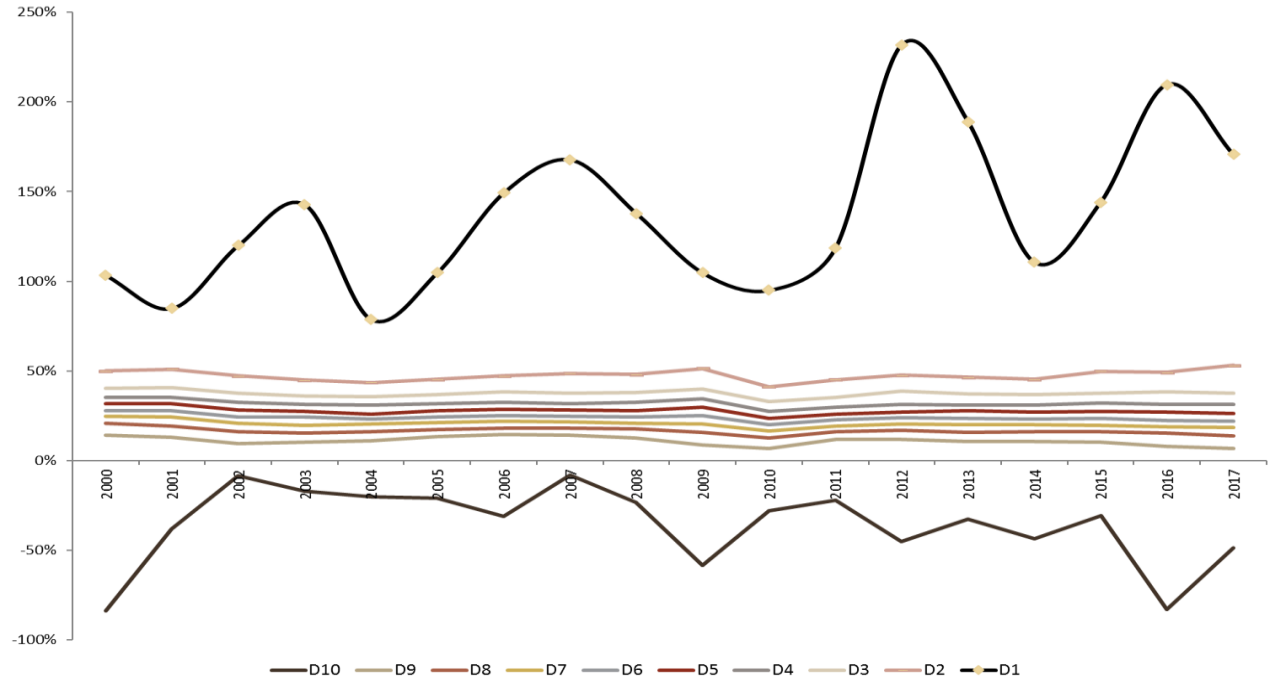
[32] *Morningstar Australian Institutional Sector Survey, February 2019, Issue 82*

Figure 3: Profitability persistence - three middle quintiles (MSCI World Index)



Sources: UBS; Hyperion Asset Management. Note: Operating profitability (OP) equals operating profits (sales minus cost of goods sold minus selling general and administrative expenses minus interest expense) divided by book equity at the last fiscal year end of the prior calendar year.

Figure 4: Profitability persistence over time by decile (MSCI World Index)



Sources: UBS; Hyperion Asset Management. Note: Operating profitability (OP) equals operating profits (sales minus cost of goods sold minus selling general and administrative expenses minus interest expense) divided by book equity at the last fiscal year end of the prior calendar year.

Historical P/E ranges are not relevant if the long-term earnings outlook of the company is deteriorating through time, as the current P/E will remain depressed as the earnings outlook of the business continues to deteriorate resulting in a significantly lower intrinsic value. In our example, the correct P/E may be 9x resulting in a 25% decline in share price rather than the anticipated 25% gain. In addition, if the earnings are declining then the capital loss will be enlarged because a depressed P/E will be applied to progressively lower EPS figures through time. If the business has debt, then the equity value of a structurally challenged business can quickly decline to zero if the bankers get nervous and call in the administrators – at this point the P/E does not exist and neither does the equity value. Traditional, low P/E value stocks did not provide capital protection in the GFC. Earnings for many businesses proved to be illusionary while their high debt levels persisted. Many of these 'cheap' low P/E businesses never recovered.

Hyperion is focused on long-term intrinsic valuations, not short-term heuristics. We estimate the intrinsic value of a business by estimating its long-term free cash flows. This requires adopting a ten-year time horizon. This is in line with our average stock holding period of ten years.

Conclusion

In conclusion, simple short-term value heuristics such as low P/E or P/B ratios are not likely be effective in a structurally low growth and disrupted environment. Conditions need to be supportive or at least steady for mean reversion to hold. If companies are losing market share or their business model is being fundamentally challenged, historical ranges will no longer be relevant. This is when value traps emerge and share prices can remain permanently depressed. We believe qualitative analysis is becoming more important in a low growth world. Attractively priced companies with the ability to compound earnings and free cash flows over long time periods will generate substantial alpha.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

HYPERION ASSET MANAGEMENT
a different horizon...

The search for management teams that can compound returns in a low growth world - Part Four

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Introduction

High quality business executives are essential for compounding returns, as good stewardship is required to grow earnings over a long period of time. Exceptional management has become more important in a low growth world where the multi-decade tailwinds from falling interest rates and rising credit growth have dissipated. Rising competitive intensity and growing disruption have also increased the need for good leadership. The intrinsic values of many average businesses with average management are likely to decline over the next decade.

The ability to evaluate the quality of management successfully is a critical skill of investors who seek to achieve attractive compounding returns. Identifying and allocating capital to 'intelligent fanatics' can be very rewarding for investors. Charlie Munger coined the term 'intelligent fanatics' to refer to driven, smart executives. Managers leave imprints on historical financial statements and are ultimately accountable for these results after adjusting for the quality of the business model and industry structure. However, a combination of factors, including good management, is needed over an extended period to produce compounding returns. Hyperion Asset Management (Hyperion) looks to assess the quality of management teams as part of its investment process.

Increasing importance of management in a low growth world

Human capital is an important component of value creation. Competitive intensity is rising, and business and product life cycles are falling as disruption spreads across more industries. In a low growth world, growth for one business is won at the expense of other businesses. Rather than businesses sharing general growth from ever-rising productivity and real GDP growth, the market has become a zero-sum game. Businesses need to invest for the long-term and innovate and be creative in order to win market share. However, for most companies, misalignment between long-term shareholders and the boards who control and reward executives on short-term horizons, can sabotage a firm's attempts to invest for the long-term and to innovate. In turn, the directors are beholden to an ever-changing mix of shareholders, many of whom also have short-term investment horizons.

In order to dominate an industry and benefit from compounding returns, you need to build a formidable business over a long period of time. Unfortunately, most corporate executives are 'mercenaries' not 'missionaries'. Their goal is to achieve the top role, whether CEO or chairman, with its high remuneration and status. Unfortunately, the appointment as CEO is the prize and is often the end rather than the start of a journey. Without continuity of top management, it is difficult to implement long-term projects and create optionality that have the potential to add considerable value in the future. Good management is needed to ensure compounding capital returns are not disrupted through permanent declines in the level of sustainable earnings.

Management's contribution to culture and sustainability

Arguably, the only way to truly sustain a competitive advantage is to protect that advantage through an enduring organisational culture of creativity, innovation and long-termism with senior management as the custodians of this culture. Culture is very difficult to change and hard to replicate. Most other aspects of a competitive advantage including capital, technology, unique products, brand, scale and patents can all be eventually imitated or disrupted through innovation by competitors. However, human ingenuity operating in a supportive culture can create growth opportunities and protect existing competitive advantages over the long-term. Organisations with these characteristics are flexible, adaptive to change and extremely valuable. They can generate their own long-term growth when it's hard to find. Culture is fostered, nurtured and protected by good management as it is an important element of a company's sustainable competitive advantage.

Management's influence

Great management and culture are rare. It's very difficult to master the soft elements. However, capital allocation, including sensible cost control, is an aspect of culture that can be enacted and controlled by management. Capital allocation is an extremely important skill that good management must have as these decisions drive long-term returns. Management teams that allocate capital to the development of successful new products and businesses and improving the existing product set have the potential to significantly improve long-term shareholder returns. Management also control the level of capital invested and the mix of funding sources. We prefer management teams that are cautious towards using excessive debt to fund growth in invested capital. Boards and management teams that can achieve attractive long-term returns on incremental invested capital should make shareholder distribution decisions that favour reinvestment of capital into these attractive opportunities. We believe it is better to have a balance sheet with limited debt and surplus cash because it allows management to take advantage of future opportunities. Management teams that use excess debt face the risk that nervous bankers will force highly dilutive equity raisings to repay debt when difficult economic circumstances arise in the future.

Most average companies do not invest adequately for long-term growth, particularly during periods of subdued economic conditions; rather their focus tends to be on maintaining or expanding current profit margins in order to support and enhance short-term earnings. Shareholders and boards demand consistent short-term earnings maximisation. This mantra of short-term profit maximisation is frequently inconsistent with achieving substantial long-term compounding returns, as the latter normally require higher levels of short-term investment and costs. This focus on consistent short-term earnings growth is a problem that is amplified in a structurally low growth world. Long-term compounding requires strong and sustained organic revenue growth. In many cases, short-term profits need to be forfeited in order to generate long-term returns.

One way that management can invest in the long-term growth of the business is to allocate a higher proportion of sales to research and development. Following the Global Financial Crisis (GFC), the most profitable firms in developed markets have enjoyed stable to expanding return on equity. They are the companies that have used technology well to enable organic revenue growth and have invested heavily to disrupt incumbents that have not embraced modern practices. Typically, these have been the platforms, networks and best in class software as a service (SaaS) businesses. Amazon is one of the more extreme examples. Short-term earnings have been sacrificed to generate higher long-term earnings. Compounding returns require step changes in long-term earnings not incremental short-term profit growth.

Cultures that embrace intelligent risk taking and accept some failure have a huge competitive advantage. Most people are concerned with career or business risk. It is difficult to adapt, evolve and transform without taking risks. Senior management needs to encourage and allow staff to take educated risks in a quest to add value. Investing capital or utilising human initiative effectively is not without risk.

"You adapt, evolve, compete or die." Paul Tudor Jones

Challenge of evaluating management

Quality management is an important contributor to achieving compounding returns. The importance of management will become more pronounced over the next decade as the competitive intensity of industries continues to rise. Missionaries have earned the right to take the time to grow earnings. They have some ability to fight off rampant short-termism in equity markets. Hyperion believes management can add value by taking a long-term view.

Assessing the quality of management is difficult. It is challenging due to human biases, including familiarity and the recency effect. There is also limited information in short-term share price movements. However, a proven track record over a long period of time is informative and meaningful.

Typical management teams and organisations

Often executives receive shares, options or rights as part of their performance package but sell them on receipt rather than accumulate a large equity stake. In these cases, there is an absence of "skin in the game" which is disastrous for the real risk takers, the long-term shareholders. In fact, it is standard practice for incoming CEOs to blame their predecessor and reset expectations and long-term goals to more attainable levels. Not setting and retaining reasonably difficult to achieve long-term targets is clearly driven by self-interest but gives an insight into the character of the new CEO. It is a practice that persists, and which boards have allowed to continue for far too long.

Successful companies tend to have executives who are open-minded and who challenge entrenched practices. Management can then articulate and set expectations in their businesses. The new world is too competitive, and winners are too few, to invest in businesses with average leadership, particularly in a structurally challenged global back drop.

"You can work long, hard or smart, but at Amazon.com you can't choose two out of three."
Jeff Bezos

Quality managers are resilient over long periods of time. Experienced executives understand growth is not linear and that failures are plentiful. The step change in value may not occur for years or even decades in the future. Thus, there needs to be an unwavering conviction in the business model and a faith that the benefits will eventually follow, both for the executives and the shareholders. Without this perspective, it is difficult to experience the rewards of compounding.

Management is one contributing factor to compounding

Nothing operates in isolation and a business is a complex combination of human ingenuity and capital, organised in such a way as to compete in an ever-evolving external environment. Identifying and assessing individual factors at a point in time is not enough. Good management on its own will not drive superior returns. Factors such as a difficult or deteriorating industry structure, regulatory pressures, poor or deteriorating business model, high financial gearing or a starting market valuation that is too high are just some elements that can overwhelm management and result in inferior long-term shareholder returns.

Occasionally backing an exceptional executive in a poor business or industry might be enough although this is a low probability investment. Even exceptional executives like Jeff Bezos at Amazon have been supported by the right business model and significant structural tailwinds.

"Occasionally, you'll find a human being who's so talented that he can do things that ordinary skilled mortals can't. But, very rarely, you find a manager who's so good that you're wise to follow him into what looks like a mediocre business."
Charlie Munger

Conclusion

Intelligent, driven, long term focused management has always been an important factor in investing. It has become even more important in a structurally low growth world where disruption has become more common. Competition has intensified as companies compete for market share with subdued broader growth. Management needs to effectively use the corporation's labour and capital to generate long term compounding returns. The quality of management is difficult to assess but there are some indicators. In reality, management is one variable of many that need to be continually assessed and monitored by investors. However, poor management will disrupt compounding, typically through poor capital allocation, lack of innovation or allowing the company's competitive advantage to erode.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

Exponential growth and compounding returns in a world of finite natural resources – Part Five

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Key impediments to long-term economic and capital growth

In prior articles, we have discussed the structural headwinds that the global economy faces over the coming decades including ageing populations, high debt levels, a disappearing middle class, growing wealth inequality, artificial intelligence (AI) and robotic disruption of human capital markets and natural resource constraints. In this paper we will focus on the last of these structural headwinds namely, natural resources constraints including climate change. On the supply side of the global economy, there are three key factor inputs comprising: (i) capital; (ii) labour; and (iii) natural resources. For the global economy to grow, there needs to be a sustainable supply of these three key elements. A key impediment to economic growth, and by extension, the benefits of compounding returns, exists with the third element. This is the ultimate structural headwind to long-term economic growth and most economists and politicians are reluctant to talk about it, as it is the most difficult to solve. Put simply, in a world of finite resources, humanity cannot continue to grow its GDP at high exponential rates over the long-term because of depletion of key finite resources and significant and permanent damage to our fragile biosphere. We have reached the point where the world economy and the global population are large relative to our natural environment. Broadly speaking, the global economic growth outlook is constrained due to the unsustainable environmental damage we have been causing. This damage includes carbon dioxide (CO_2) emissions from fossil fuel use, unsustainable farming practices, water and land degradation, over fishing and extinction of species.[33] At this time, climate change is the most pressing of the natural resource constraints and is the focus of this thought piece.

"What cannot go on forever will stop" Herbert Stein

Exponential growth

Exponential growth results in very large, growing numbers over the long term. The global economy is very large with the World Bank estimating global GDP was approximately $US80 trillion in 2017. The global economy has grown at a compound annual growth rate (CAGR) of 3.4% p.a. and is now 2.5 times larger than it was in 1990. It has grown approximately 7-fold since 1960 when it had a value of $US11.3 trillion.[34] Looking back further in time, global GDP is approximately 80 times larger than it was in 1820, representing a CAGR of approximately 2.3% p.a.[35] The average compound growth rate in the global economy since 1950 has been 3.65% p.a. If the global economy continues to grow at this rate it will be 200 times bigger than it was in 1950 by the end of this century.[36] The world population is currently 7.6 billion compared with approximately 1 billion

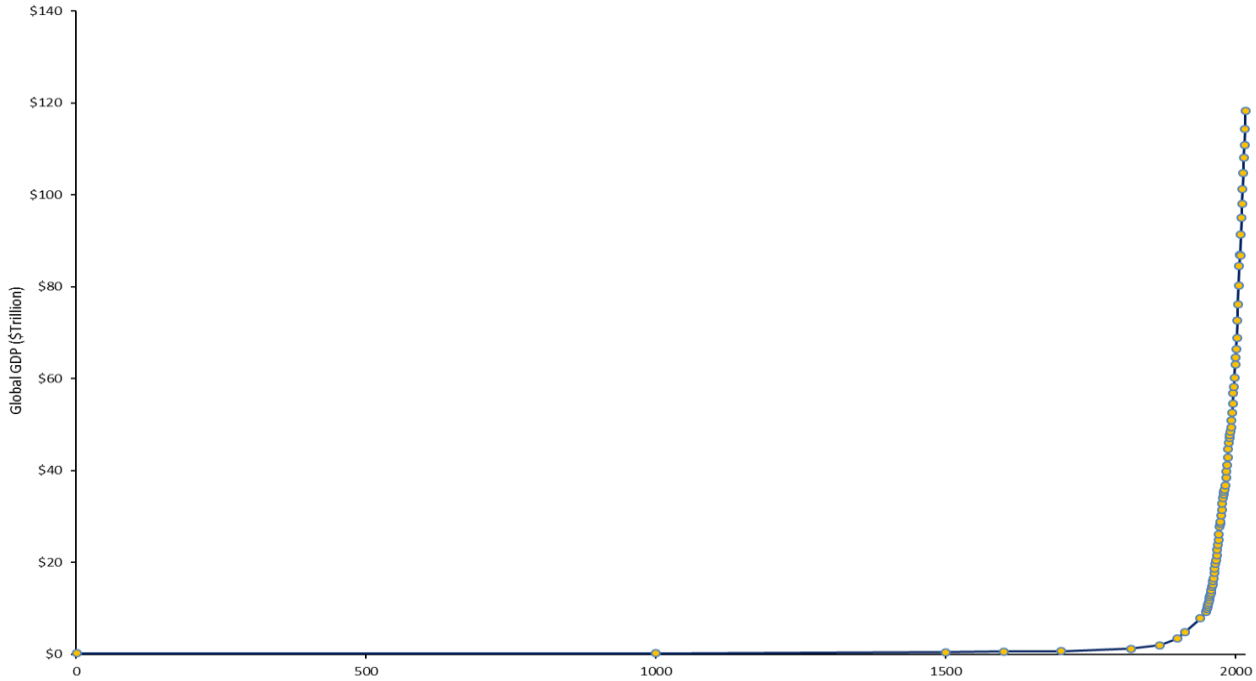
[33] Ross Gittin, "Facing up to our problems" Charter August 2012, p9-12
[34] The World Bank
[35] Prosperity without growth: Foundations for the economy of tomorrow, Tim Jackson
[36] Prosperity without growth: Foundations for the economy of tomorrow, Tim Jackson

in 1820.[37] The United Nations median estimate for the global population in 2050 is 9.7 billion, equating to average growth of 0.8% p.a.[38]

Prior to the First Industrial Revolution, the economic growth rates of the world economy were very low. The CAGR in the world economy from year 1 to 1820 was approximately 0.1% p.a.[39] The low rates of economic growth prior to the First Industrial Revolution and the exponential growth since then are shown in Figure 1, below.

The exponential growth in the global economy since the First Industrial Revolution looks likely to slow over the next decade and beyond forming an "S" curve which is a common growth pattern for populations, technologies, products, businesses and economies.

Figure 1: Global GDP growth for Past 2018 Years (int-$Trillion)



Source: New Maddison Project Database and World Bank; Hyperion

The low rates of economic growth prior to the First Industrial Revolution were a function of an agrarian based economy with most of the population involved in subsistence farming with very low standards of living. Improvements in agricultural technology improved crop yields and farming productivity in Britain in the 16th and 17th centuries. As a result of increased crop yields the population of Britain surged and many people moved from an agricultural subsistence living to non-agricultural employment and business activities. Industrialisation involved people employing new forms of energy to drive more efficient tools and machines. Up until the First Industrial Revolution, the main forms of energy used to drive economic activity were derived from burning wood, using animals, hydropower and human physical exertion. When coal was combined with steam engine technology in the 18th century there was a massive increase in economic productivity. The huge productivity growth from steam-based energy enabled capitalists to employ more workers and expand production allowing the larger workforce to afford to buy more products. It created a productivity and

[37] New Maddison Project database
[38] Prosperity without growth: Foundations for the economy of tomorrow, Tim Jackson
[39] New Maddison Project database

consumption driven virtuous cycle. The Second Industrial Revolution in the early 20th century built on the base created by the First Industrial Revolution. It was driven by increasing technological break throughs across a wide spectrum of areas including a combination of electricity and the light bulb, modern medicines, internal plumbing, modern fertilisers, plastics, telephones and the internal combustion engine.[40] The combination of these new technologies and oil as a new cheap energy source resulted in further substantial improvements in productivity growth during the 20th century. Our reliance on burning fossil fuels for energy to power the global economy has become entrenched over the past 200 years.

The virtuous cycle of a growing middle class, growing consumption and productivity growth, from cheap energy and better technology, resulted in growing economies and improved standards of living. The global economy has become dominated by consumer demand and the rise of consumerism. Consumerism has been described as "ordinary people spending money they don't have, on things they don't need, to create impressions that won't last on people they don't care about".[41]

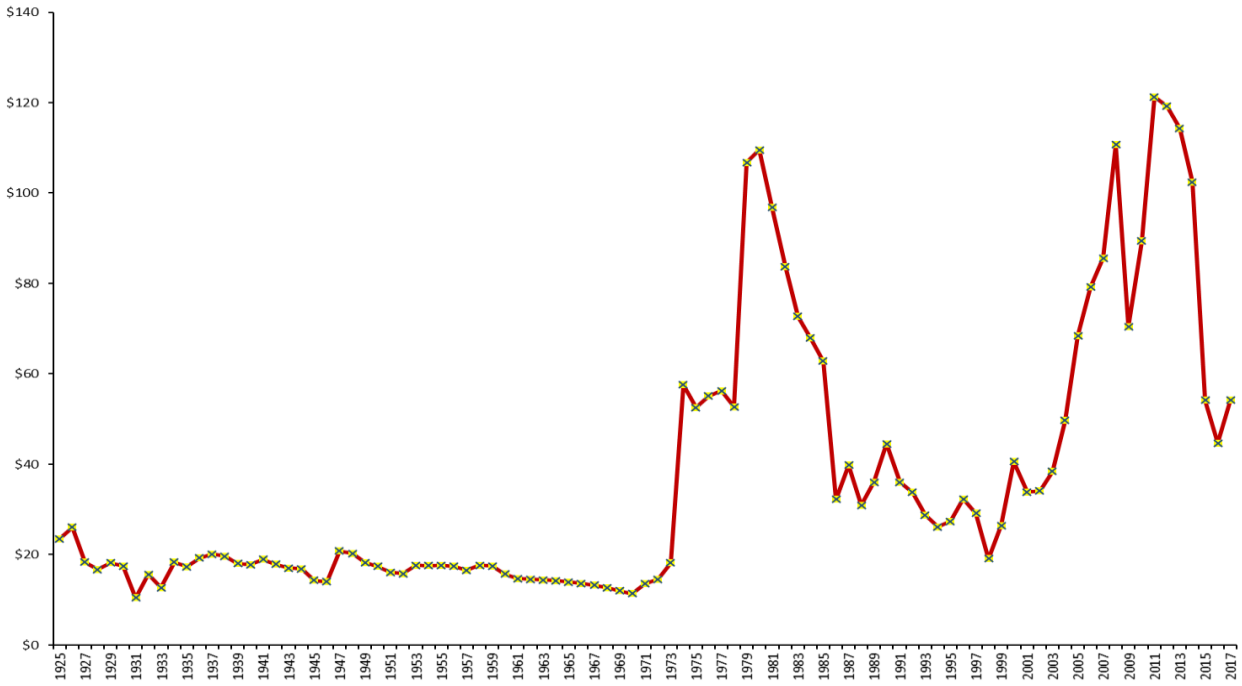
Fossil fuels and compounding returns

A stable and growing economy is reliant on low cost sources of energy. Inexpensive energy is used to power the engines, machines and other technologies that underpin the modern industrial world. Since the First and Second Industrial Revolutions, consumerism in the global economy has been satisfied, prima facie, using inexpensive (ignoring externalities) fossil fuel-based energy. Early on, the industrialising economy was small relative to the abundance of our natural environment and this led to humanity treating natural resources as a 'free good'.[42]

Figure 2 below illustrates that for the vast majority of the 20th century the oil price was low. When the oil price moved higher the global economy suffered severe downturns. This relationship between the cost and availability of energy and economic growth indicates that expensive and scarce energy is catastrophic for the global economy.

[40] The Rise and Fall of American Growth: The U.S. Standard of Living Since the Civil War, Robert J Gordon
[41] Prosperity without growth: Foundations for the economy of tomorrow, Tim Jackson
[42] Ross Gittin, "Facing up to our problems" Charter August 2012, p9-12

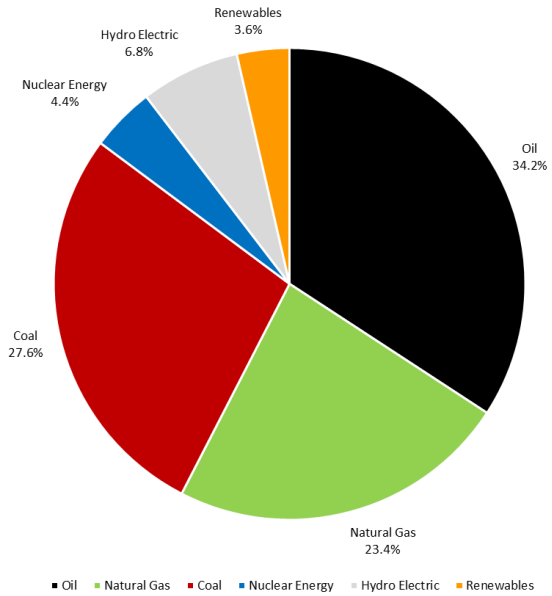
Figure 2: Oil prices since 1925 ($US per barrel)



Source: BP; Hyperion

A key problem with fossil fuel-based energy is that when it is used to power the economy it results in large amounts of CO_2 related emissions. Approximately 85% of energy that currently powers the global economy is derived from fossil fuels.[43] The pie chart in Figure 3 shows the breakdown of global energy sources. Only 10.4% of global energy was sourced from hydroelectric power and renewables in 2017.[44]

Figure 3: Sources of global primary energy consumption – 2017

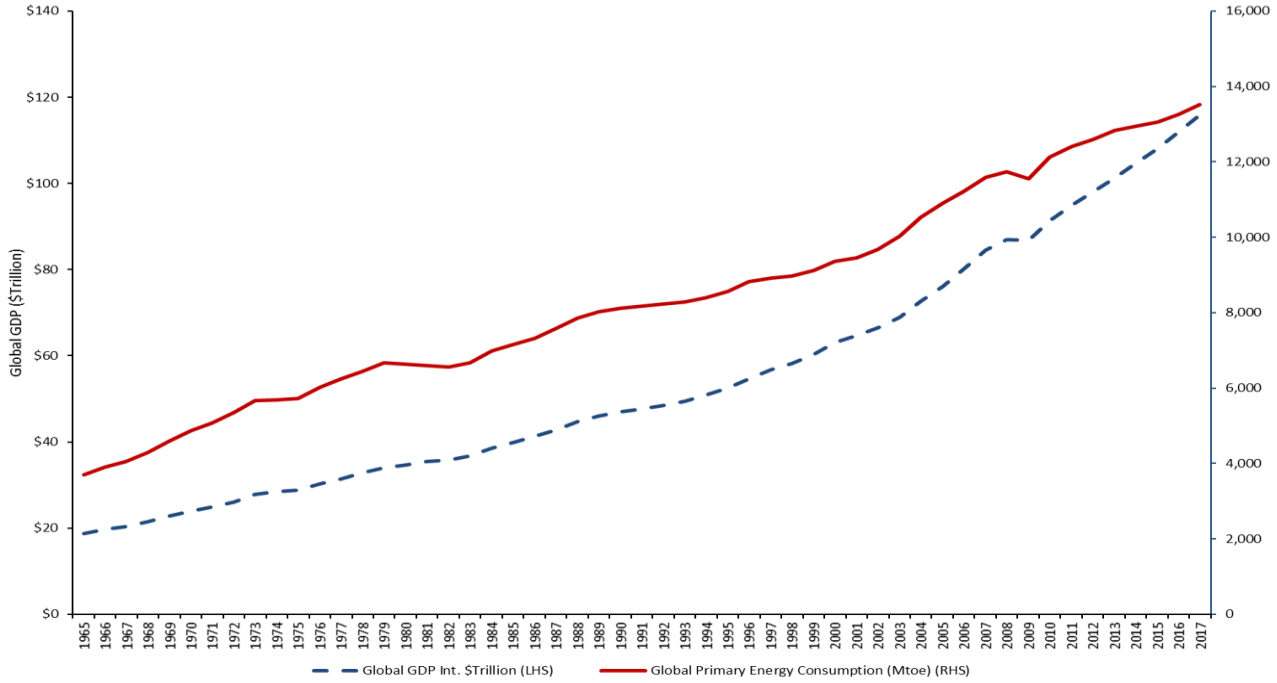


[43] BP Statistical Review of World Energy June 2018
[44] BP Statistical Review of World Energy June 2018

Source: BP Statistical Review of World Energy 2018, Hyperion

The growth in the global economy has been fueled by increasing global energy consumption, this positive correlation is depicted in Figure 4. Fossil fuel demand has grown exponentially over a period of 200 years, during which time it has powered industrial development and the growth of financial capitalism. The global economy has grown exponentially on the back of cheap fossil fuel-based energy that has been systematically underpriced by markets because fossil fuel producers have been able to externalise the long-term costs to society and the environment.

Figure 4: Global Energy Consumption and Global GDP



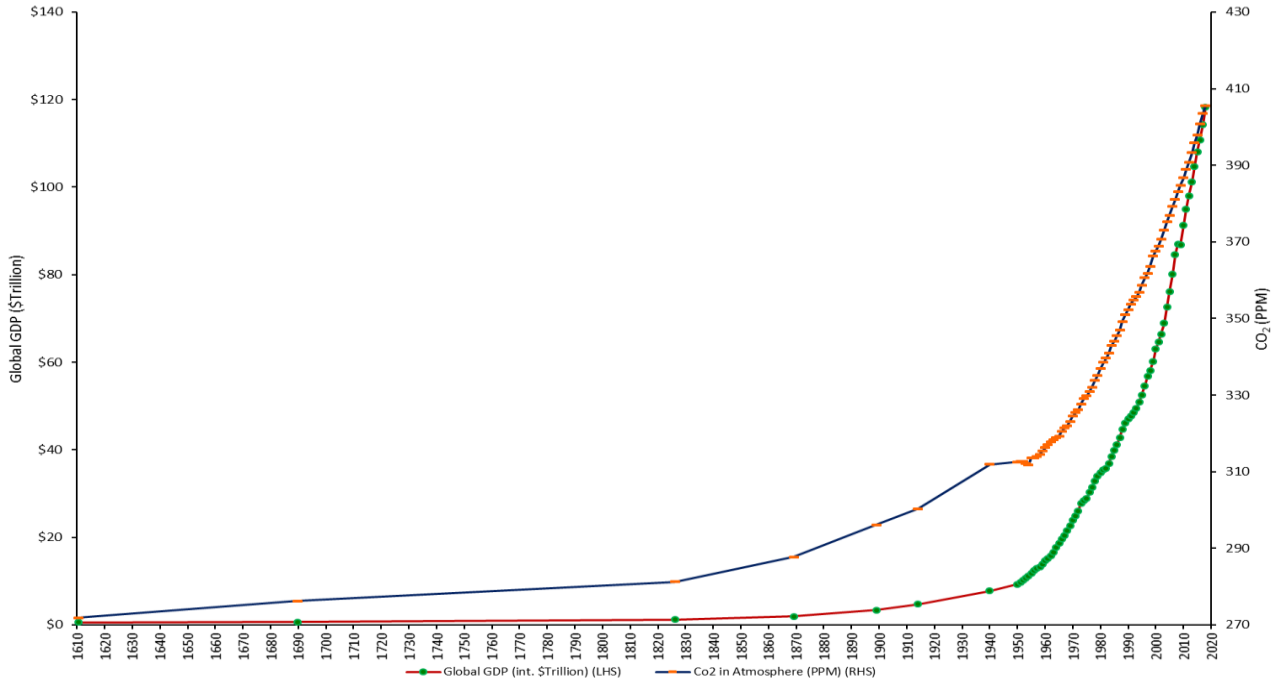
Source: BP; Hyperion

The emissions from burning coal, gas and oil have an impact on the atmosphere in the form of increased atmospheric CO_2. Figure 5 shows the relation between the size of the global economy and increasing levels of CO_2 in the atmosphere. The increase in energy consumption associated with global economic growth has resulted in growth in both CO_2 emissions and the amount of CO_2 in the atmosphere. The aggregate amount of CO_2 emitted by the global economy has been rising over the past few decades. Since 1990, the rate of growth in CO_2 emissions has been approximately 2% p.a.[45] The CO_2 intensity of the global economy needs to decline substantially over the next decade if we are to have any real chance of avoiding the worst effects of climate change. Over the next decade, the global economy will require large levels of sustainable, inexpensive energy to achieve dramatically lower levels of CO_2 emissions. The switch to more renewable energy systems to power the global economy needs to be rapid in order to avoid expensive and potentially catastrophic climate change. As CO_2 increases in the atmosphere so do global temperatures (refer Figure 6). Even if fossil fuels were not the cause of climate change, they would still eventually need to be replaced as a source of energy because there are finite stores of these fuels. The inability to make this change rapidly is a major threat to the third key element for economic growth – the availability of natural resources. Correctly pricing the true long-term cost

[45] Our World in Data

of depleting scarce natural resources including burning fossil fuels for energy is key to making the global economy more sustainable and minimising the negative impacts of climate change. The true cost to society of using fossil fuel-based energy needs to be reflected in the market pricing of this energy through a system of government taxes or related mechanisms.[46]

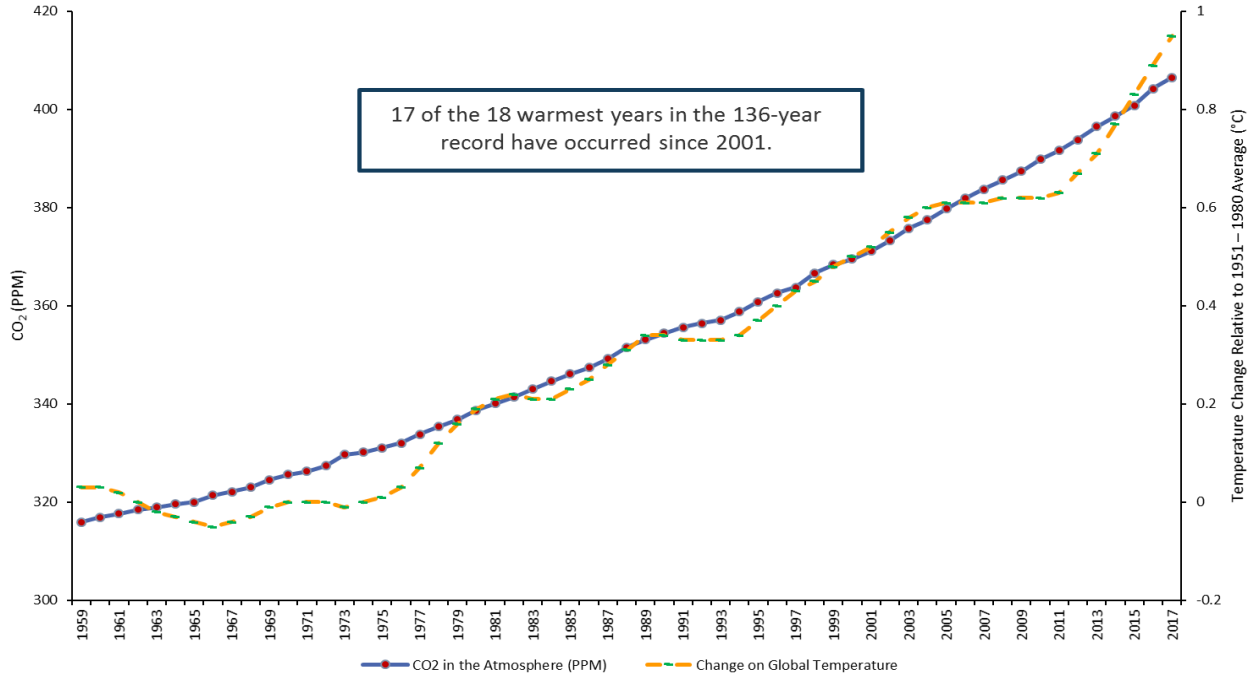
Figure 5: Global GDP and atmospheric CO_2 levels since 1610



Source: NASA; Scripps Institution of Oceanography (SIO); New Maddison Project Database and World Bank; Hyperion

[46] Ross Gittin, "Facing up to our problems" Charter August 2012, p9-12

Figure 6: Levels of atmospheric CO_2 and Change in Global Temperature

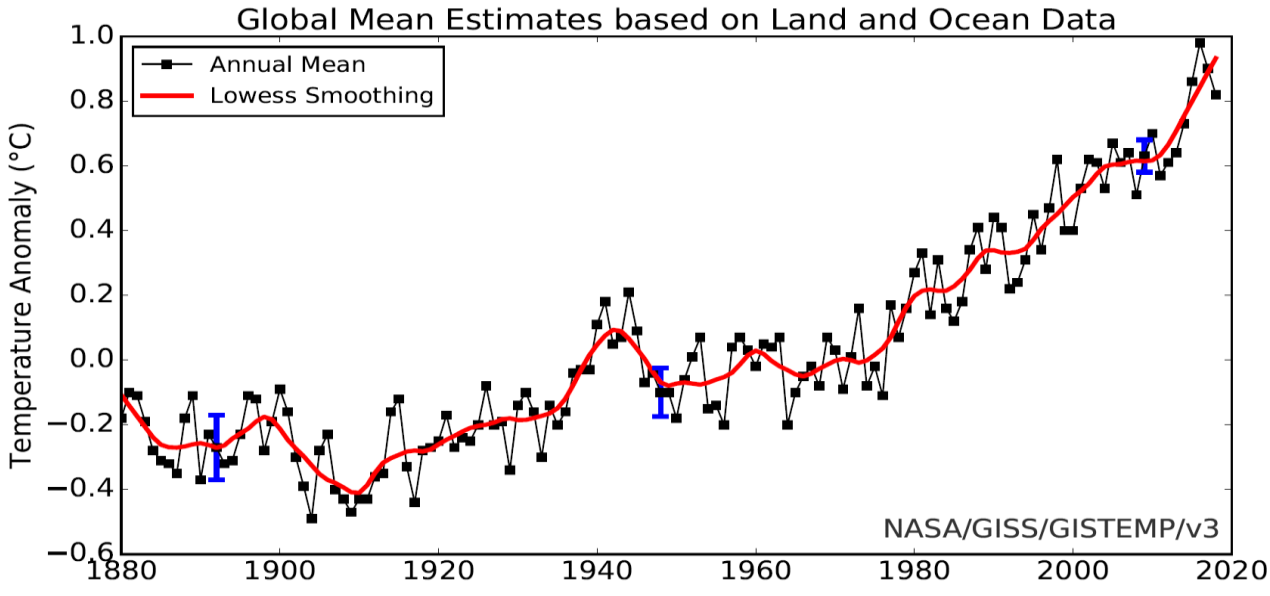


Source: NASA; New Maddison Project Database and World Bank; Hyperion

Climate Change and the potential for future compounding returns

The scientific evidence is overwhelming that burning fossil fuels causes climate change. Despite the doubts spread in mainstream media, there is little scientific uncertainty that this large amount of atmospheric CO_2 is a key cause of the climate crisis the world is facing. Figure 7 shows mean estimates of the change in global temperatures since 1880. Over this period average temperatures have increased by approximately 1%.

Figure 7: Change in global temperatures since 1880



Source: NASA

"Observations collected around the world provide significant, clear, and compelling evidence that the global average temperature is much higher, and is rising more rapidly, than anything modern civilisation has experienced, with widespread and growing impacts. The warming trend observed over the past century can only be explained by the effects that human activities, especially emissions of greenhouse gases, have had on the climate."[47]

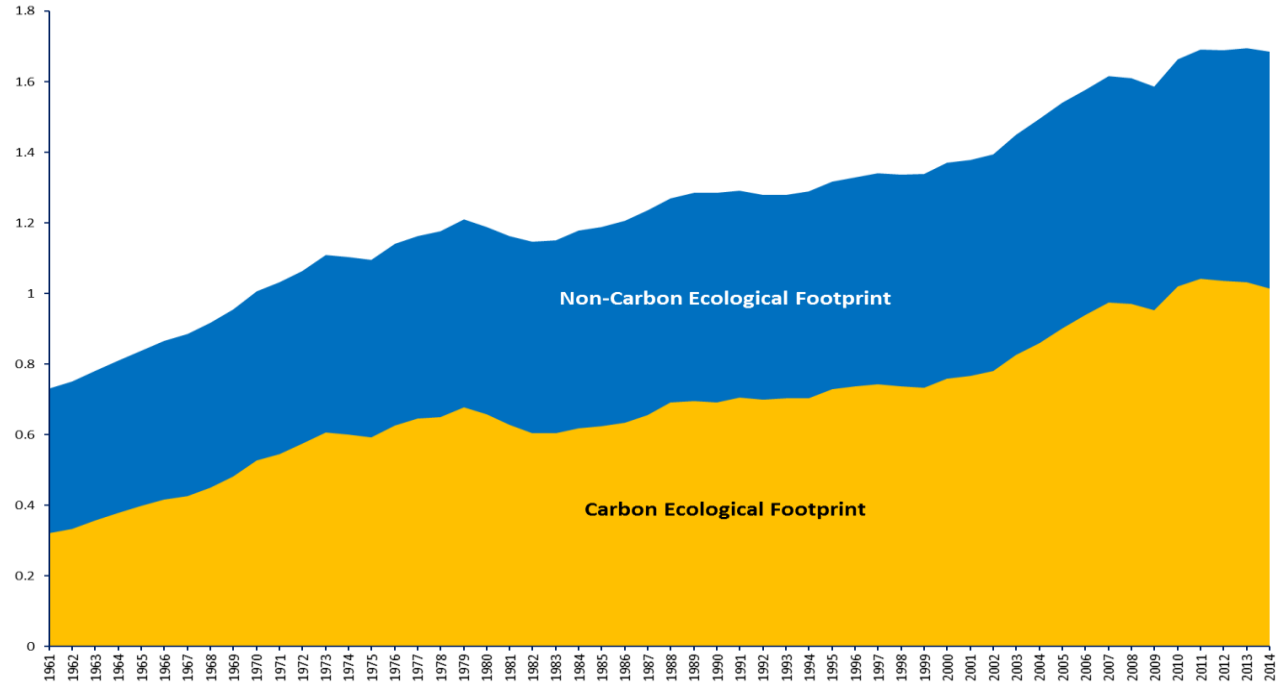
The potential disruption from climate change both to the economy and to the ecological systems humans rely on, is a real and significant risk. More extreme weather, floods, droughts, heat waves, super storms and changing weather patterns are likely to adversely affect agricultural production and reduce productivity levels over time. The ocean is absorbing a significant proportion of the CO_2 that is being released into the atmosphere. This process results in ocean acidification and has the potential to disrupt the food chain in the ocean destroying coral reefs and adversely affecting shell forming organisms. This, in turn, has the potential to adversely impact the fishing industry and tourism. Warming of the ocean also impacts plankton growth, which besides being a marine food source, produces 50% of the ocean's oxygen.[48]

We believe the economic impacts of climate change are likely to be significant and affect every human on the planet. It is estimated that climate change will result in significant changes to the geographic distribution of the supply and demand of goods and services, redefining global trade. It is also likely to fundamentally affect migration flows and result in the loss of land and capital infrastructure due to higher sea levels. According to the Stern Review on the Economics of Climate Change (2006), economic models estimate that the overall costs and risks of climate change will be the equivalent to losing at least 5% of global GDP each year, now and forever. Published over more than 10 years ago by economist Nicholas Stern for the British Government, this estimate is now considered to be conservative. More recent estimates suggest that limiting global warming to 1.5 degrees Celsius will result in trillions of dollars in savings (through economic cost avoidance) compared with allowing temperatures to rise 2.0 degrees or higher.[49]

If the world accelerates the switch to renewable energy, then the long-term cost to the overall economy and ecological systems will be minimised but the disruption to the traditional fossil fuel industry and related industries will be massive. The move to renewable energy and actions to halt global warming will have serious consequences for the financial markets as the values of coal, oil and gas assets (worth an estimated $US25 trillion) evaporate.[50] The aggregate demand by humans on natural capital resources is outpacing the rate at which natural resources can be renewed. Figure 8 illustrates that the world has been in a natural resource deficit for an extended period and this deficit has been growing. The biocapacity equivalent of 1.69 Earths was needed to provide the natural resources and services humanity consumed in 2014 with CO_2 production from burning fossil fuels representing 60% of humanity's ecological footprint.[51]

[47] The Fourth National Climate Assessment produced by the U.S. Global Change Research Program. November 2018
[48] G. C. Hays, A.J. Richardson and C. Robinson, (2005) "Climate change and marine plankton", Trends in Ecology and Evolution, Vol.20 No. 6 p.337-344
[49] Burke, M., Davis, W. M. & Diffenbaugh, N. S. *Nature* 557, 549–553 (2018)
[50] 2020 Vision: why you should see the fossil fuel peak coming. 10 September 2018
[51] Global Footprint Network

Figure 8: Global economy's ecological footprint (number of earths) since 1961



Source: Global Footprint Network

A recent report by Carbon Tracker estimates that demand for fossil fuels should peak between 2020 and 2027 with 2023 representing the most likely year of peak demand.[52] This switch to renewable energy should have a positive impact on the level of CO_2 emissions associated with future economic growth.

Climate change and the growing resource requirements of the global economy are pushing up against the finite ecological resources of the natural world. We believe that stocks in our portfolios are well positioned for the coming disruption to the economy as society shifts from fossil fuel-based energy to renewables. Traditional assets, networks and utilities based on fossil fuels will be eventually disrupted and replaced by distributed energy systems. For example, households will have the ability to capture, store and share cheap renewable energy using solar panels and batteries.

Hyperion's investment style is focused on creating portfolios that have low CO_2 footprints and which are predominantly capital light. Figures 9 and 10 show the level of CO_2 intensity of the Hyperion Global Growth Companies Fund (Managed Fund)[53]and the Hyperion Australian Growth Companies Fund relative to their applicable benchmarks. We expect our portfolios to be able to outperform their benchmarks over the next decade as more traditional businesses are forced to deal with the problems and costs associated of moving closer to the limits of the finite natural resources on earth.

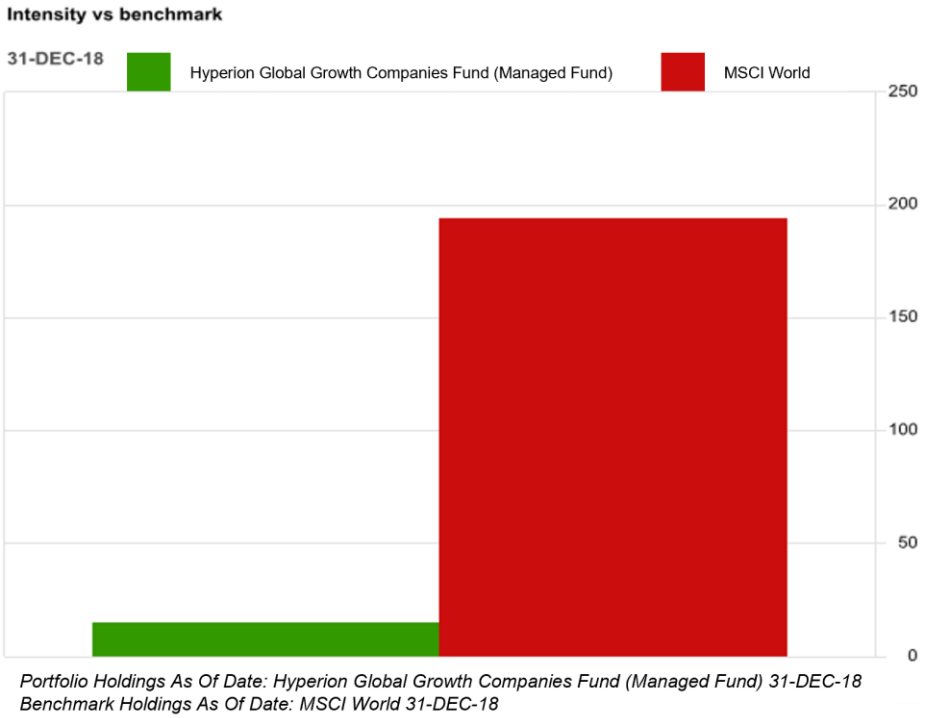
The cost of renewable energy has declined dramatically in recent years making large-scale energy production from wind, solar and hydro feasible. We are heading to a phase of decentralisation of energy production and storage. Hyperion considers the potential for structural disruption due to renewable energy to be far-reaching, initially impacting resource, utility, transport and infrastructure sectors. Further, the finite nature of our

[52] 2020 Vision: why you should see the fossil fuel peak coming. 10 September 2018

[53] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

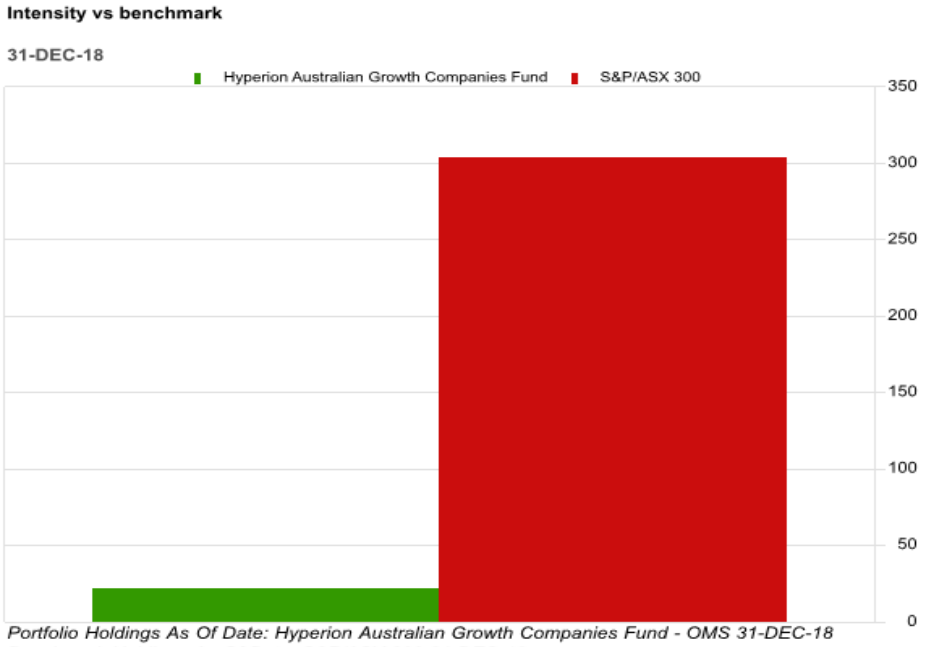
natural resources makes unbridled consumerism unsustainable. We expect the benefits of compounding returns across the board will be dampened going forward. Growth will not be as widely spread across the economy but rather limited to the disruptors in certain sectors of the economy or individual businesses. It is Hyperion's objective to seek out these disruptors that have the potential to experience strong growth in a weakened economy. Further, it is also Hyperion's objective to limit our investment exposure to CO_2 intensive, capital-heavy industries.

Figure 9: CO_2 intensity of the Hyperion Global Growth Companies Fund (Managed Fund)[52] vs. MSCI World



Source: MSCI ESG Research LLC

Figure 10: CO_2 intensity of the Hyperion Australian Growth Companies Fund vs. S&P/ASX 300



Source: MSCI ESG Research LLC

"Climate change is transforming where and how we live and presents growing challenges to human health and quality of life, the economy, and the natural systems that support us."[54]

"Climate change threatens to exacerbate existing social and economic inequalities that result in higher exposure and sensitivity to extreme weather and climate-related events and other changes".[55]

Conclusion

The rate of growth in the global economy is expected to decline due to several structural headwinds, the most challenging being the limitation of our natural resources and the environmental impact of using fossil fuels as our main source of energy. Hyperion's portfolios have no direct exposure to fossil fuel-based energy businesses, utilities or the resources sector in general. This means the CO_2 footprint of all our portfolios is extremely low. Further, we largely invest in capital light industries that tend to have a lower CO_2 footprint. Hence, **Hyperion's portfolios are both capital and CO_2 light.** Our portfolios comprise high quality businesses that can organically grow their revenues and profits at rates well above that of the overall benchmark during periods of subdued economic growth.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

[54] The Fourth National Climate Assessment produced by the U.S. Global Change Research Program. November 2018
[55] The Fourth National Climate Assessment produced by the U.S. Global Change Research Program. November 2018

Reflections on structural macro headwinds...and what they mean for long-term equity market returns

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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We face a low growth, low inflation and low interest rate world over the next decade and beyond due to multiple structural headwinds that are expected to dampen economic growth and inflation. Structural headwinds include:

1) high debt levels,
2) rising wealth inequality,
3) increasing computerisation and automation,
4) an ageing population, and
5) environmental factors.

Businesses that achieve superior long-term growth will need structural tailwinds supported by strong value propositions, under-penetrated markets and creative organisational cultures that use technology well.

In the past few years, there has been a cyclical improvement in global economic growth that has provided a temporary tailwind for average businesses and speculative stocks. The recent outperformance of average businesses and speculative stocks is unlikely to be sustained long term in a low growth economy. Hyperion's investment style of buying high quality businesses with structural tailwinds is well suited to a low growth world. In this thought piece, we outline the key structural headwinds the world is facing.

High debt levels

Over the past few decades consumer and government financial gearing levels in most major economies have increased substantially. The increase in financial leverage has boosted historical economic growth rates by bringing forward consumption and investment. Gross government debt to GDP in the U.S. has increased from less than 40% in the 1980's to approximately 105% in 2017.[56] Over the same period, household debt to GDP in the U.S. has increased from under 50% to approximately 80%.[57] Gross government debt to GDP in China has increased from less than 25% in the 1990's to approximately 48% in 2017.[58] Over the last decade, household debt to GDP in China has increased from under 20% to 48%.[59] Gross government debt to GDP in Japan has increased from 50% in 1980 to 253% in 2017.[60] Over the same time period, household debt to GDP in Japan has increased from 45% to 57%.[61]

The trend towards higher financial gearing has time shifted economic activity levels by giving a one-off boost to historical economic growth. These higher levels of financial gearing have increased financial risk levels generally, reduced the global economy's ability to respond to economic shocks and increased society's sensitivity to future increases in interest rates. High consumer debt levels, a hollowing out of the middle class, low productivity levels and an ever expanding "gig" economy of "subsistence" workers means that future rate increases are likely to be modest because most consumers will have limited capacity to handle higher rates.

[56] https://tradingeconomics.com/united-states/government-debt-to-gdp Historical Chart of U.S. Gross Federal Debt to GDP
[57] https://tradingeconomics.com/united-states/households-debt-to-gdp Data from Historical Chart of U.S. Households debt to GDP
[58] https://tradingeconomics.com/china/government-debt-to-gdp Historical Chart of China Gross Federal Debt to GDP
[59] https://tradingeconomics.com/china/households-debt-to-gdp Data from Historical Chart of China Households debt to GDP
[60] https://tradingeconomics.com/japan/government-debt-to-gdp Historical Chart of Japan Gross Federal Debt to GDP
[61] https://tradingeconomics.com/japan/households-debt-to-gdp Data from Historical Chart of Japan Households debt to GDP

This increased level of financial risk and associated sensitivity to higher interest rates is expected to have a dampening effect on the economy and increases the probability of future policy mistakes by central banks and governments. Higher financial leverage increases the fragility of consumers and the flexibility of government to respond in the case of an economic downturn.

Rising income and wealth inequality

As the world has become more interconnected, materials and workforces can be more effectively sourced from countries with the lowest cost. This has led to greater equalisation in the distribution of wealth globally. Access to foreign capital has improved the lot of workers in less developed countries, while globalisation has placed downward pressure on the income of workers in developed countries. Further, migration rates and the declining influence of unions in developed countries, such as the U.S., have also had the effect of reducing labour costs (Gordon, 2016). The benefits of globalisation have become particularly evident by the increasing growth rate of high net worth individuals in countries such as China and India. Development of emerging markets and strengthening of currencies in these markets are also factors that have contributed to this growth. From 2012 to 2017, the growth in individuals with US$50 million or more in the Asia Pacific grew by 37% and it is predicted that the number of ultra-wealthy individuals in China will double in the next five years.

In conjunction with the shift in the distribution of wealth globally, we are also seeing the wealth of high net worth individuals growing at an increasing rate relative to individuals in the middle and lower economic brackets. A hollowing out of the middle class is occurring due to downward pressure on wages and increases in automation at the middle-income level. Further, a general trend toward lower corporate tax rates and lower effective marginal tax rates for high-income earners over the past few decades has also accelerated the trend towards inequality.[62] This has led to mounting concern about an intensifying wealth inequality. According to the World Inequality Database, in 2014 the wealthiest 1% in the U.S. owned 39% of total wealth, up from 22% in 1978. Similar long-term inequality trends have developed in many countries since the 1970's.

The capitalist system has an inherent long-term bias towards inequity because income is derived from two primary sources: (1) personal exertion; and (2) capital. Criticism about the extreme level of remuneration paid to the highest-level executives of corporations has been prominent in the media and has been an area of increasing focus by regulators over the past decade. In addition to personal exertion income, the wealthy have more capital, so their income earnings potential is superior to the rest of society and this advantage compounds and becomes more extreme through time. "When the rate of return on capital exceeds the rate of growth of output and income, as it did in the nineteenth century and seems quite likely to do again in the 21st, capitalism automatically generates arbitrary and unsustainable inequities that radically undermine the meritocratic values on which democratic societies are based".[63] Concern exists that increasing inequality has the potential to lead to a future of disruptive social conflict.

Increasing automation and technological innovation

Throughout the ages humans have innovated to develop technologies that attempt to improve production output and reduce human labour hours for economic gain. At certain points in time technological advancement has caused huge leaps in both productivity and the average standard of living, such as the development of the steam engine in the eighteenth century and the advent of electricity, indoor plumbing, motor vehicles and air travel in the late 19th and early 20th centuries. Since the late twentieth century,

[62] Lower corporate tax rates primarily benefit the wealthy because they are the biggest owners of businesses.
[63] Picketty, Thomas "Capital in the Twenty-First Century" (2014)

technological changes have seen the advancement of computers, communication devices and networks, robotics and artificial intelligence. However, over this same period productivity levels and average wage levels have remained depressed in most developed countries. It appears that the significant leaps in productivity and higher standards of living associated with new technology break throughs over a century ago have not been repeated with the information technology innovations of the past couple of decades.[64]

We have reached a point where some predict that most of the jobs currently undertaken by humans will be replaced by machines and artificial intelligence and the nature of jobs will change fundamentally. The number of human labour hours associated with productivity and economic growth could be minimal.[65] At the present point in time, we are seeing the emergence of some fundamental changes that are already impacting the workforce: increasing use of robotics and 3D printing in warehouses, manufacturing and medicine; the use of artificial intelligence in algorithms used in professions such as law and finance; and the invention of autonomous vehicles that will impact the transportation industry. Businesses generally benefit from automation through lower costs, whereas workers only benefit if they can be redeployed into better quality, higher paying jobs.

In addition, it can be argued that much of this technology is replacing human effort with marginal increase in overall economic productivity.[66] Technology has also resulted in a shift between goods and services and a shift from an ownership to a rental model. As such automation is a dampener on economic growth, first with its impact on employment with automation replacing more skilled mid-tier employees permanently and pushing them into less skilled, more poorly paid activities. Second, as goods shift to services and ownership shifts to rental, fewer 'physical things' are needed resulting in a reduction in consumer spending and an associated decline in manufacturing activity. Consequently, we expect that over the next decade automation will create headwinds that will dampen economic growth and place downward pressure on wage inflation.

Ageing population

Since the 1960's, the population growth rate worldwide has, on average, been declining while the number of people 65 years and older has been steadily increasing.[67] Japan has the oldest population in the world (its population started declining in 2011) followed by European countries such as Italy, Germany and Greece. In China, it is forecast that about a quarter of the population will be 60 and over by 2030.[68]

An ageing population has implications for labour force growth, number of work hours per person, and consumer spending. As a population ages, fewer people will be engaged in full time employment or be able to generate an income from human labour activities due to physical and mental constraints. The retirement of the baby boomers is predicted to negatively impact the growth in labour hours per person from 2008 to 2034 and this has implications for real economic growth (Gordon, 2016). At the same time, living longer means that individuals will have extended economic requirements that will need to be funded in some manner. This may be through government pensions, pension funds or working longer but perhaps for shorter hours. However, lower income means fewer income taxes collected by governments and increasing numbers of retirees placing strains on pension systems. Headwinds arising from an ageing population are expected to have a dampening

[64] Gordon (2016) provides detailed discussion of this.
[65] Refer to Diamandis and Kotler (2012).
[66] Refer Gordon (2016)
[67] The World Bank https://data.worldbank.org/indicator/SP.POP.65UP.TO
[68] https://www.straitstimes.com/asia/east-asia/chinas-next-debt-bomb-is-an-ageing-population

effect on economic growth in the next decade. The economic impacts of an ageing population can be seen in Japan.

Consumer spending patterns change with an ageing population with greater spending on services particularly in the areas of healthcare and aged care. As people age and live longer there will be increased expenditure on healthcare associated with ageing. Currently, medical researchers are investigating ways to eliminate many of the diseases associated with ageing and in the process; humans will likely live even more extended lives.

Environmental related growth constraints including climate change

There are approximately 7.6 billion people in the world currently. The aggregate demand by humans on natural capital resources is outpacing the rate at which resources can be renewed. Since 1987 the world has been in a natural resource deficit and this deficit has been trending up over the past 3 decades. The WWF in their Living Planet Report (2016) stated "By 2012, the biocapacity equivalent of 1.6 Earths was needed to provide the natural resources and services humanity consumed in that year". The Living Planet Report also states that Carbon dioxide (CO_2) production from the burning of fossil fuels represented 60% of humanity's ecological footprint in 2012.

There is likely to be increasing levels of economic disruption due to the adverse effects of climate change over the next decade. More extreme weather, floods, droughts, heat waves, super storms and changing weather patterns are likely to adversely affect agricultural production and reduce productivity levels over time. The ocean is absorbing a significant proportion of the CO_2 that is being released into the atmosphere. This process results in ocean acidification and has the potential to disrupt the food chain in the ocean destroying coral reefs and adversely affecting shell forming organisms. Which, in turn, has the potential to adversely impact the fishing industry and tourism.

We believe the economic impacts of climate change are likely to be significant and far-reaching and ultimately affect every household and business in the world. The ramifications are varied and complex, with the most salient consequences likely to manifest in changes to agricultural and fishery yields, the consumption and demand profile of energy resources, healthcare and aid expenditures as well as the flow of tourism. Not least, it is estimated that climate change will result in significant changes to the geographic distribution of the supply and demand of goods and services, redefining global trade. It is also likely to fundamentally affect migration flows and result in the loss of land and capital infrastructure due to higher sea levels. According to the Stern Review on the Economics of Climate Change (2006), economic models estimate that the overall costs and risks of climate change will be the equivalent to losing at least 5% of global GDP each year, now and forever. Published over more than 10 years ago by economist Nicholas Stern for the British Government, this estimate is now considered to be conservative.

Inexpensive renewable energy

We are only beginning to see the potential disruptive effect of rapid declines in the cost of renewable energy, primarily solar and wind, on the traditional electricity and energy sectors. Inexpensive renewable energy has long-term negative implications for the traditional utilities, coal and oil and gas industries. Increasing access to inexpensive solar power and energy storage as well as the development of electricity trading platforms should see the decentralisation of the energy sector over the long term. Cheaper, cleaner electricity will reduce the cost of manufacturing, transport and the general cost of living. This is another factor that is likely to exert downward pressure on inflation and interest rates over the long term.

Conclusion

There has been a cyclical increase in global economic activity over the past couple of years, but we believe the longer-term outlook for economic growth remains subdued with risks to the downside because of the structural headwinds outlined in this article.

In a low growth world, most asset classes will produce relatively low total returns. Our base case is for Global equites to produce total real returns that average around 1.5% to 2.5% pa (3% to 4% nominal) driven by very low single digit profit growth. Many sectors of the market will find it difficult to even maintain their current levels of earnings in real terms over the next ten years. For example, it's likely that oil and thermal coal businesses will face declining demand over the next decade and beyond as the cost of renewable energy, electric vehicles and batteries continue to decline.

A low growth world is a good environment for our investment style. Our portfolios tend to perform best in low growth and/or decelerating economic environments. The most difficult economic environment is the one we experienced in the decades leading up to the GFC. In the pre-GFC economic world of high economic growth levels it was possible for average and below average businesses to grow their sales and earnings at reasonable rates and to use increasing levels of financial leverage to boost their returns. In this type of robust environment, the economic performance gap between high quality structural growth businesses and average businesses reduced because of the improved performance of the average businesses.

Conversely, in a low growth economic environment it is much more difficult for average businesses to grow their sales and profits. This low growth economic environment makes the gap between the sustained growth in EPS between our portfolios and the average business that dominate the stock market much wider. We expect our portfolios to produce double digit organic sales and EPS growth over the next ten years compared with the key stock markets that are dominated by old world businesses that will likely be stuck in a very low single digit growth range.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

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Beware the index! (part 1)

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Most broad-based equity indices predominately comprise mature, old-world industrial businesses, highly geared companies including banks, low quality commodity-based businesses, capital intensive businesses and speculative stocks.[69] For many of these companies the long-term return on capital and organic revenue growth outlook is modest at best. This low-quality equity market index problem is particularly obvious in Australia.

Many traditional large-scale businesses that have significant index weights in broad equity market indices around the world face a difficult economic future from a combination of technology-based disruption and a structurally low growth economic environment. Large old-world businesses that traditionally have had substantial scale and brand competitive advantages are finding they are being disrupted by new technologies including internet and digital-based products and platforms. At the same time, these legacy businesses are facing a low growth demand environment where highly geared consumers are realising their middle-income jobs and career paths may not be as secure as they once believed. The ability of governments and central banks to stimulate economic activity through fiscal and monetary policies is restricted because of high government debt levels, pre-existing aggressive quantitative easing programs and low official interest rates.

As a result of ongoing technology-based disruption, many traditional large-scale businesses are facing a future where their long-term intrinsic value could approximate zero. The cadence of this structural decline varies by industry with some old-world industries in slow decline and others experiencing rapid declines in value.

At Hyperion, we see ourselves as long-term business owners and thus, sustained growth of the business is key to our investment philosophy. We have never based our portfolio construction on index stock weights. Our investment decisions are based on long-term business fundamentals only. We look for modern businesses, with strong value propositions, that can grow revenues and profits organically at double-digit rates for at least the next decade. To us it makes long-term economic sense to be selective and manage a concentrated portfolio of stocks and not be exposed to a wide number of average to below average pre-internet businesses that comprise most indices and benchmarks. Diversifying into structurally challenged old-world stocks with declining intrinsic values, even if they represent large weights in key indices, is likely to be value destructive in the long term.

Factors influencing Index returns

An equity index is a collection of listed businesses typically weighted by their market value and adjusted for liquidity. Over the long term, the investment returns achieved by the index tend to be primarily a function of the growth in earnings and dividends per share for the largest and most liquid companies in the index. [70] The largest companies within an index have an outsized influence on the earnings growth and income of that index. Most large companies in the key broad-based indices find it difficult to increase their market share because

[69] Key broad-based global indices include the MSCI World Index (23 Developed country markets) or the MSCI ACWI Index (23 developed markets and 24 emerging markets countries).
[70] In addition, changes in discount rates can also have an influence on index returns. However, the influence of changes in discount rates declines as the investment period expands because discount rates are range bound and mean reverting.

their industry penetration is already high. As a result, they tend to be more reliant on acquisitions, cost reductions and the underlying level of economic activity for growth in their earnings.

If an index is dominated by high quality businesses that can sustain attractive total returns over the long term through a combination of earnings growth and income, then the index may be attractive for investors. However, this has not been our observation in terms of current broad-based index composition.

Total index returns are also influenced by changes in discount rates, which the market uses to value the future income streams of the underlying businesses in the indices. Discount rates are a function of risk perceptions and interest rates. Risk perceptions relate to the uncertainty associated with future free cash flows. Interest rates influence the rate at which future cash flows are discounted back to current dollars. Figure 1 shows how interest rates have varied over the past sixty years, with global index returns benefitting from almost four decades of declining U.S. treasury yields.

Figure 1: 10 Year U.S. Treasury Rate

Source: Macrotrends

Figure 1 shows that interest rates climbed dramatically in the decades prior to the 1980s in response to higher inflation and then reversed direction and trended lower. The increase in interest rates and the flow-on effect in terms of higher risk perceptions that occurred in the 1970s resulted in poor equity index returns during that period. The decline in interest rates following the 1980-1982 U.S. recession provided a significant multi-decade tailwind for global stock markets.

The risk perception component of discount rates can be volatile with wide swings based on the crowd's perception of the outlook for the economy, inflation and future equity returns. Risk perceptions are heavily influenced by behavioural factors including fear, recency biases, linear thinking, short-termism and feedback loops. Risk perceptions tend to result in higher discount rates during times of economic uncertainty. All other things being equal, as long-term government bond yields decline the discount rate used to value stocks tends to also decline and equity valuations tend to increase.

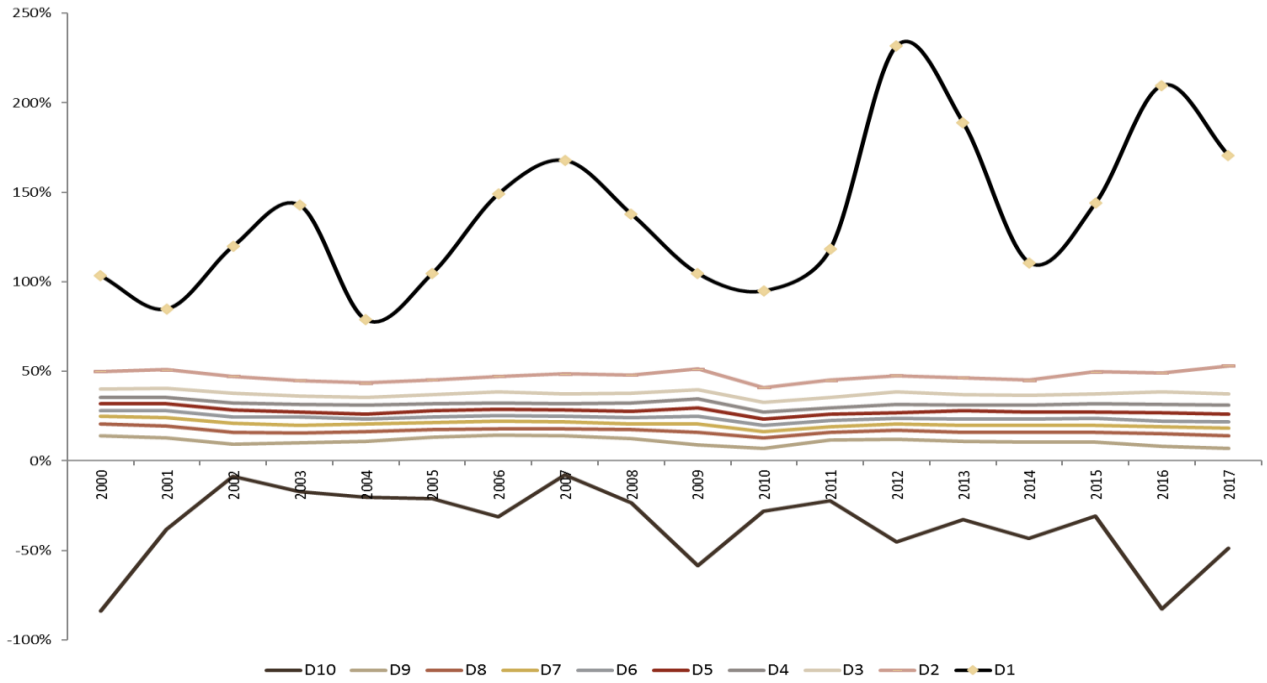
Going forward, we believe that interest rates and inflation are likely to remain low, but the multi-decade tailwind of material declines in interest rates will not be present. Therefore, future equity market index returns will have to rely more heavily on earnings growth and dividends to produce future total real returns.

In recent years, the key global equity indices have performed strongly due to: a cyclical improvement in economic growth; U.S. tax cuts; large infrastructure spending and supply side commodity restrictions by China that have boosted commodity prices; low official interest rates; and continuing high levels of liquidity from the massive quantitative easing undertaken by major central banks post the Global Financial Crisis (GFC). Most of these stimulatory mechanisms cannot continue indefinitely.

The world continues to migrate to a winner-takes-all model where average and below average companies continue to suffer from low industry demand growth and a structural decline in the relative strength of their value proposition to customers. However, in a difficult macro-economic environment, we believe the return and performance profile of a select group of quality companies will persist. Post the GFC, mean reversion in return on capital and rate of sales growth have declined as large global disruptors with strong value propositions have taken market share from traditional businesses. These new-world disruptor businesses generally still have relatively small index weights or no index weights in key equity indices. This effectively means the future returns of most indices will suffer more from the failure of the old-world business models than they will benefit from the structural success of disruptive modern businesses.

The shift from mean reversion to a winner-takes-all economic reality is illustrated in Figure 2 below. The profitability of the top decile performers in the MSCI World index has continued to increase while the profitability of the bottom decile performers has continued to decrease. In a structurally lower growth world post 2009, companies have been driven to innovate and invest at a faster rate. The most disruptive companies have accrued significant economic value from this environment. In contrast, there are many traditional average and below average quality businesses that have been sustained by low interest rates, tax reductions, restructuring and mergers. These lower return businesses are unlikely to mean revert to higher returns on capital in the future.

Figure 2: Profitability persistence over time by decile (MSCI World Index)



Sources: UBS; Hyperion. Note: Operating profitability (OP) equals operating profits (sales minus cost of goods sold minus selling general and administrative expenses minus interest expense) divided by book equity at the last fiscal year end of the prior calendar year.

Manufacturing growth through acquisitions and mergers

In a low growth world, characterised by multiple structural macro headwinds, many businesses will attempt to create the illusion of growth through acquisitions and the associated targeted "financial synergies". However, the conversion of revenue and cost synergies, as proposed by theoretical merger models into actual reported earnings tends to be illusionary. We are sceptical of management teams willing to "empire build" with the underlying motivation often being related to the receipt of larger remuneration resulting from managing a larger economic entity. In our view, real economic value is created by investing in innovative products or services that solve real world problems, not through undertaking acquisitions. Our observation, based on analysing many acquisitions and mergers over the past two decades, is that most large acquisitions do not achieve their expected synergies. In fact, they tend to destroy value through cultural conflict and distracted management teams.

The quality of the Australian stock market is poor

The Australian stock market has the advantages of a relatively large economy, a stable democratic political system with a rule of law, independent judiciary, a high standard of living for most of the population, a relatively large middle class and below average levels of corruption. However, we argue the main constituents of the key Australian equity indices are low growth and low quality. The main indices are dominated by materials and energy businesses which are inherently low quality and financials (mainly banks) which are highly geared and heavily reliant for growth on an already highly geared household sector and a structurally challenged old-world business sector. The larger stocks in the index are mature with low forecast earnings growth rates and low levels of technological innovation and research and development.

It was once enough to buy and hold duopolies such as Woolworths (WOW-AU) and Coles (WES-AU) in the domestic market. However, globalisation and growing competition has reduced growth rates and returns on capital. For example, in the grocery market, Woolworths now faces intense competition from both Aldi and Costco (COST-US) with more global operators likely to enter the domestic market over time. The Australian market also lacks meaningful exposure to secular trends such as the shift to e-commerce, cloud computing and electronic payments.

Table 1 below illustrates significant sector weight differences in the S&P/ASX 300 relative to the MSCI World Index. Prima facie, the Australian index appears to be relatively over exposed to highly leveraged and low growth banks, low quality materials businesses and low growth, capital intensive real estate sectors. In addition, the Australian index is extremely underweight to the information technology sector relative to the MSCI. In a nutshell, the Australian index is low quality, low growth and highly leveraged relative to the MSCI World Index.

Table 1: Industry Sector Index Weights – Australia vs World

	S&P/ASX 300	MSCI WORLD	OVER / (UNDER)
Financials	31.0%	16.2%	14.8%
Materials and Energy	24.3%	10.7%	13.6%
Health Care	8.8%	13.0%	(4.2%)
Industrials	8.0%	11.1%	(3.1%)
Real Estate	7.8%	3.3%	4.5%
Consumer Discretionary	6.4%	10.6%	(4.2%)
Consumer Staples	5.7%	8.4%	(2.7%)
Communication Services	3.7%	8.4%	(4.7%)
Information Technology	2.3%	14.9%	(12.6%)
Utilities	2.0%	3.4%	(1.4%)

Sources: MSCI; Standard and Poor's

The top 10 stocks in the S&P/ASX 300 index account for approximately 43% of the index market value, and are predominately old-world businesses, highly-geared banks and commodity-like businesses. Within the top 10 stocks, the 4 major banks represent 22% of the S&P/ASX 300 index by weight, which is just over half of the top 10 stocks by index weight. The business quality of the next 10 stocks, by index weight, is also generally poor.

We estimate over 65% of the top 20 (by market cap) is within financials, resources and REITs. Many of these companies look to be in structural decline in the long-term.

Conclusion

The investment returns achieved by key global indices since the early 1980s have been boosted by strong global economic growth rates and a significant reduction in interest rates. The increase in leverage in the decades prior to the GFC across consumers, corporates and governments brought forward consumption and investment and boosted economic growth during this period. Lower interest rates and inflation levels lowered

discount rates and allowed price earnings ratios for businesses to expand. This trend to lower discount rates and higher price earnings ratios provided a step change to index returns over the past few decades. Going forward, the returns on most major indices are likely to be much lower than has been the case over the past few decades. The structural headwinds expected to impede future economic growth rates include ageing populations, high debt levels, the disappearing middle class and increasing environmental constraints. These headwinds will impact many of the key companies that comprise the major equity indices.

Hyperion's investment philosophy is not based on benchmark stock weights but instead is focused on the long-term business economics. We invest exclusively in the highest quality, structural growth businesses available within the relevant investable universe. These businesses are modern, innovative and disruptive with strong and sustainable value propositions to customers and other stakeholders. We avoid mature, low growth, legacy businesses that are likely to be disrupted by new technologies. We believe a low growth world suits Hyperion's high quality, structural growth investment style and presents a favourable environment for long-term alpha generation.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

Beware the index! A deeper look (part 2)

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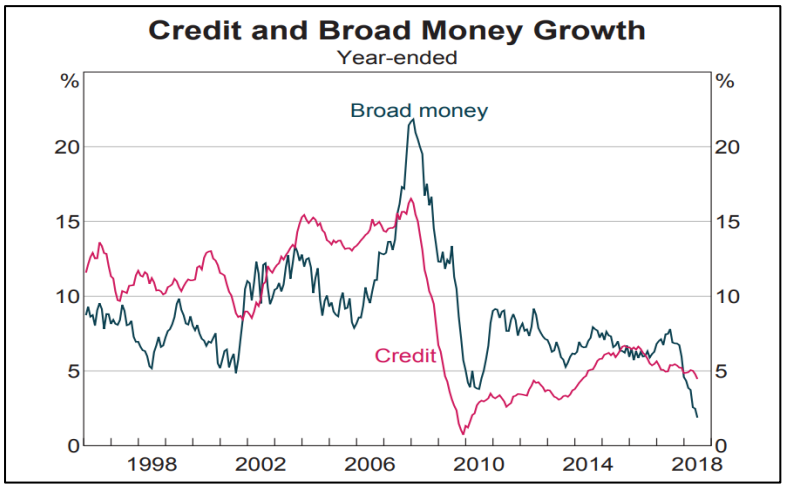
Part 1 of our article "Beware the index!" took a general look at the composition of market indices. We concluded that most broad-based indices contain many low-quality businesses that have benefited historically from economic tailwinds, including the trend to lower interest rates and quantitative easing. Many businesses within the key benchmarks are heavily dependent on old-world products and technologies with capital intensive business models and significant debt levels. Part 2 of "Beware the index!" takes a deeper look at the key sectors that make up the S&P/ASX 300 and their outlook. We have identified a number of reasons to be cautious on banks and commodity-based businesses over the long term.

Australian banks need credit growth

Financials represent the largest sector of the Australian stock market by value, with the sector dominated by the banks. In turn, the banking sector itself is dominated by the four major banks (CBA-AU, WBC-AU, ANZ-AU, NAB-AU). The banks enjoyed strong credit demand for several decades leading up to the Global Financial Crisis (GFC), mostly funded by foreign debt. Australia's external debt as a percentage of GDP has grown over the past few decades from 43% in 1988 to 117% in 2017. [71]

Over the past few decades, the level of household debt in Australia has increased substantially. Household debt to GDP has increased from approximately 40% in the 1980s to 122% in December 2017.[72] The rise in household debt was a key driver of the robust double-digit system credit growth that was experienced in the decades prior to the GFC. A material amount of this debt was used to buy residential real estate. Decades of easy credit availability, loose lending standards, declining interest rates, robust foreign investor demand and strong population growth in the major cities has pushed residential house prices significantly higher.

Figure 1: Credit and Broad Money Growth

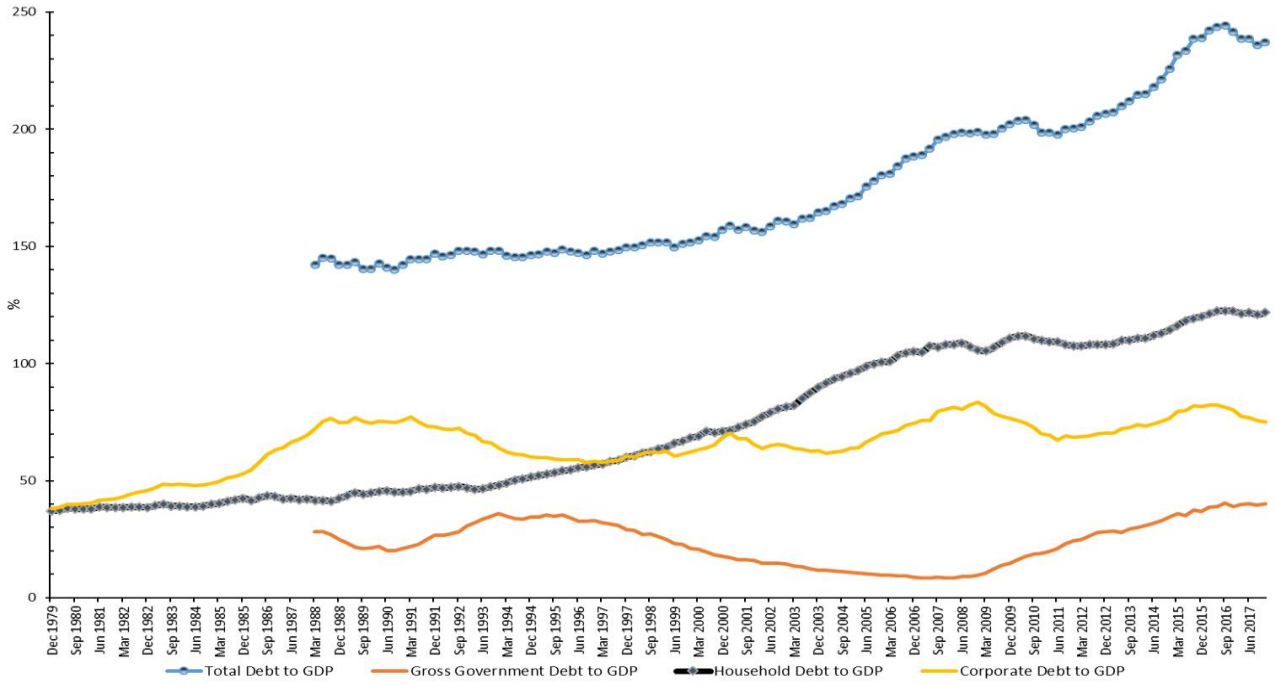


Sources: ABS; APRA; RBA

[71] CEIC
[72] Trading Economics

Residential prices appear to have been heavily influenced by simplistic and optimistic borrower income and expenditure (affordability) assumptions, employed by the banks over the past few decades, rather than more sophisticated valuation mechanisms. This means the residential property market exhibits at least some characteristics of speculation. A strong belief in rising property values, easy credit, strong population growth and globalisation has resulted in a very resilient residential property market over a long period of time. Going forward, the banking Royal Commission is likely to have a negative impact on the availability of credit as lending standards are tightened. We believe the household expenditure benchmarks that domestic banks have historically used to assess applicants debt servicing ability were unrealistic and optimistic. They are likely to have resulted in many households taking on too much debt given their likely future income.

Figure 2: Debt to GDP (%) – Australia



Source: Bank for International Settlements; Hyperion

In our view, the longer-term outlook for credit demand in Australia is poor. The key headwinds for future credit growth include:

1) elevated household debt levels;
2) likely modest future wage growth;
3) an ageing population;
4) tight lending standards;
5) an ongoing hollowing-out of the middle class;
6) expensive residential property prices; and
7) low levels of housing affordability.

The weak outlook for credit demand will severely restrict the major banks' ability to grow their revenues and profits going forward. Bad debts are currently at very low levels and are likely to rise over time, particularly with sustained pressure on wage growth and the displacement of middle-income jobs. Potential future declines in residential real estate prices may place additional pressure on highly-geared households and result

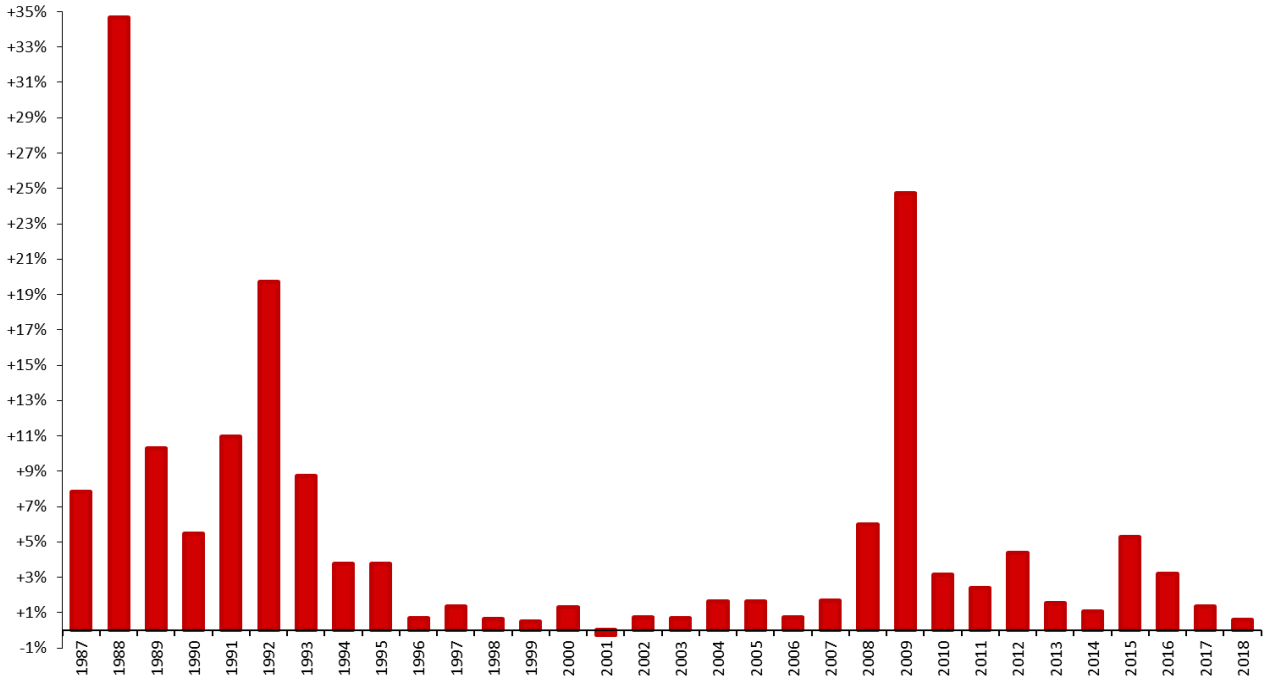
in higher loan defaults. Australia has not experienced a recession since 1991. This is unlikely to continue indefinitely given the high levels of financial gearing across households, businesses and government (much of which is owed to foreigners) and a heavy reliance on commodity prices for national income. The high inherent financial leverage of the banks and their broad exposure to households and small businesses will result in significant losses as bad debts increase.

Share count dilution during the next economic downturn will be large

Banks have high levels of inherent financial gearing and thus their profitability is severely affected during economic downturns because it only takes a small percentage of the loan book to default to cause significant losses. During difficult economic times, banks are likely to be forced to raise substantial equity capital at

depressed prices in response to increasing bad debts. Highly dilutive equity raisings will result in material declines in the banks' earnings per share. During the late 1980s, early 1990s and the GFC, Australian banks raised significant equity and increased their share counts substantially. The large level of dilution from additional shares for the bank sector is shown in Figure 3 (below).

Figure 3: Change in the number of shares on issue for the banks



Sources: Macquarie; Hyperion

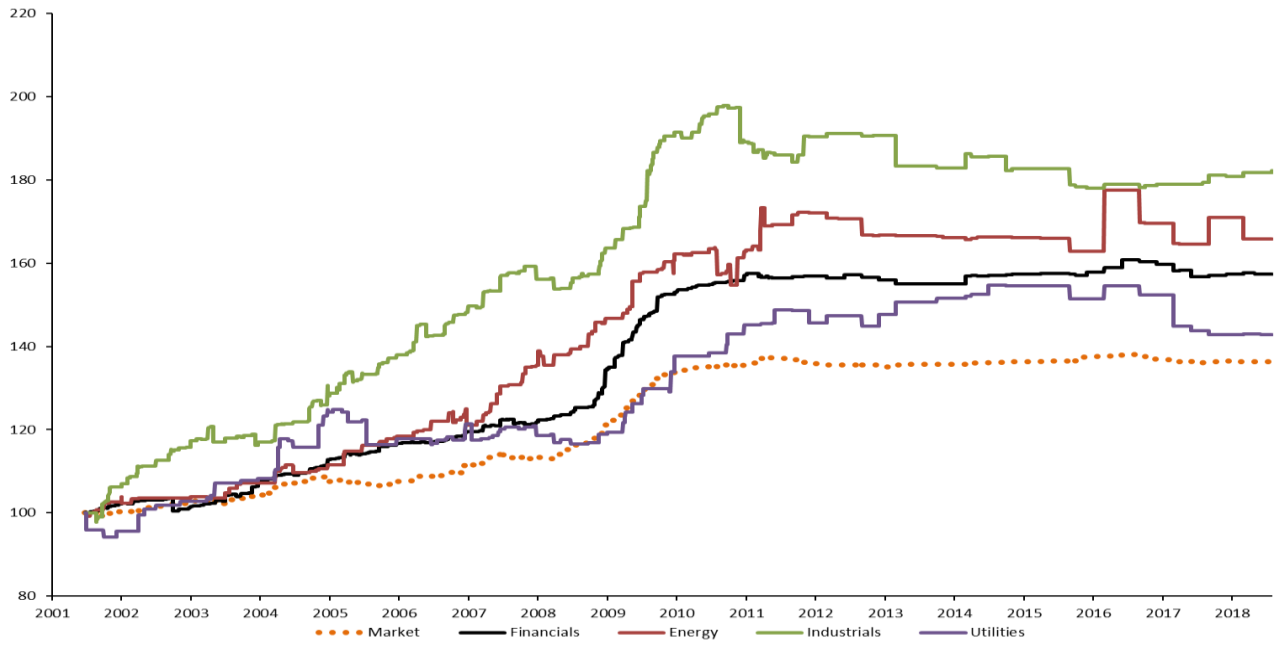
In summary, the long-term return profile for the domestic commercial banks is modest given the weak long-term outlook for credit growth. Furthermore, if there is a material economic downturn, the return profile deteriorates as expensive equity raisings permanently dilute long-term earnings per share.

Capital intensive companies will need to issue shares in a downturn

Similarly, the dilution caused by substantial share issues at depressed prices during economic downturns is also a key long-term return headwind for the non-banking sector. This dilution was evident during the GFC, as shown in figure 4 below. Dilutive share issues are typically undertaken by capital-intensive businesses with low returns on invested capital, cyclical businesses and highly acquisitive companies that have high levels of

debt. Nervous creditors normally force these highly geared companies to raise equity at low prices during economic downturns.

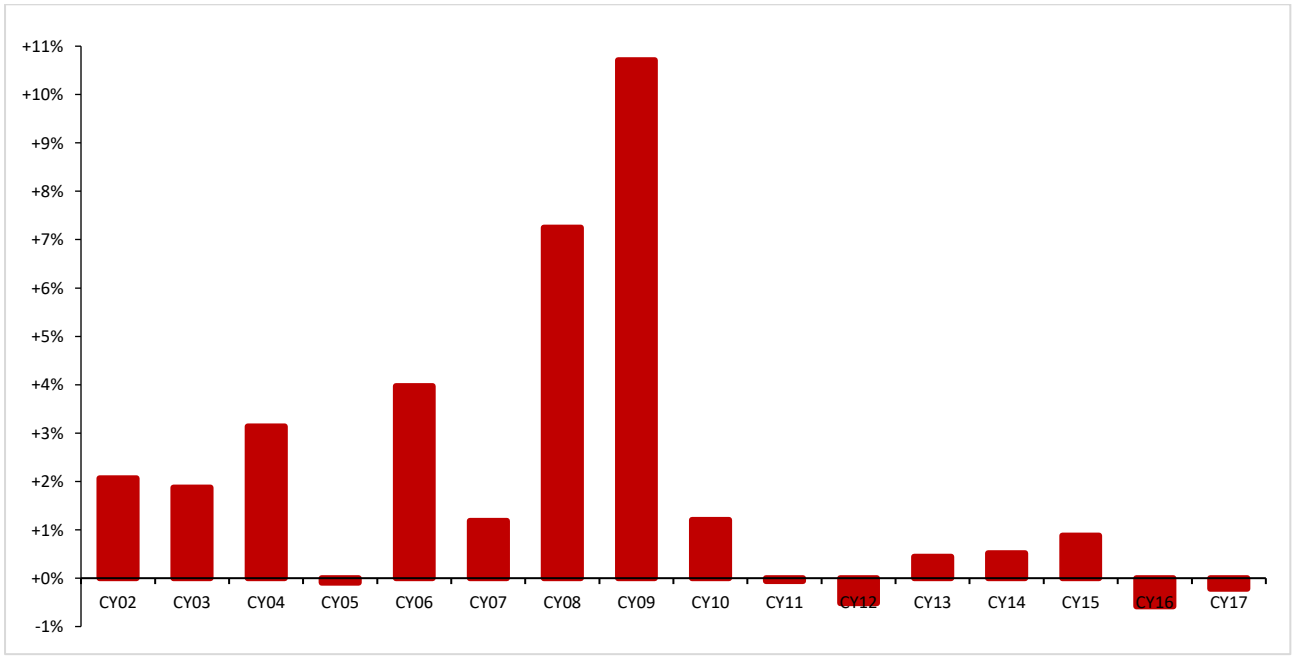
Figure 4: Growth in the number of shares for All Ordinaries (indexed) and key market sectors



Sources: UBS; Hyperion

Figure 5 below, shows the highly dilutive impact of equity raisings on highly geared businesses that were forced to raise expensive new equity during the GFC. The overall market share count rose by 7.2% and 10.7% in calendar years 2008 and 2009, respectively (Refer figure 5, below).

Figure 5: Annual change in the number of issued shares for the All Ordinaries Index



Sources: UBS; Hyperion

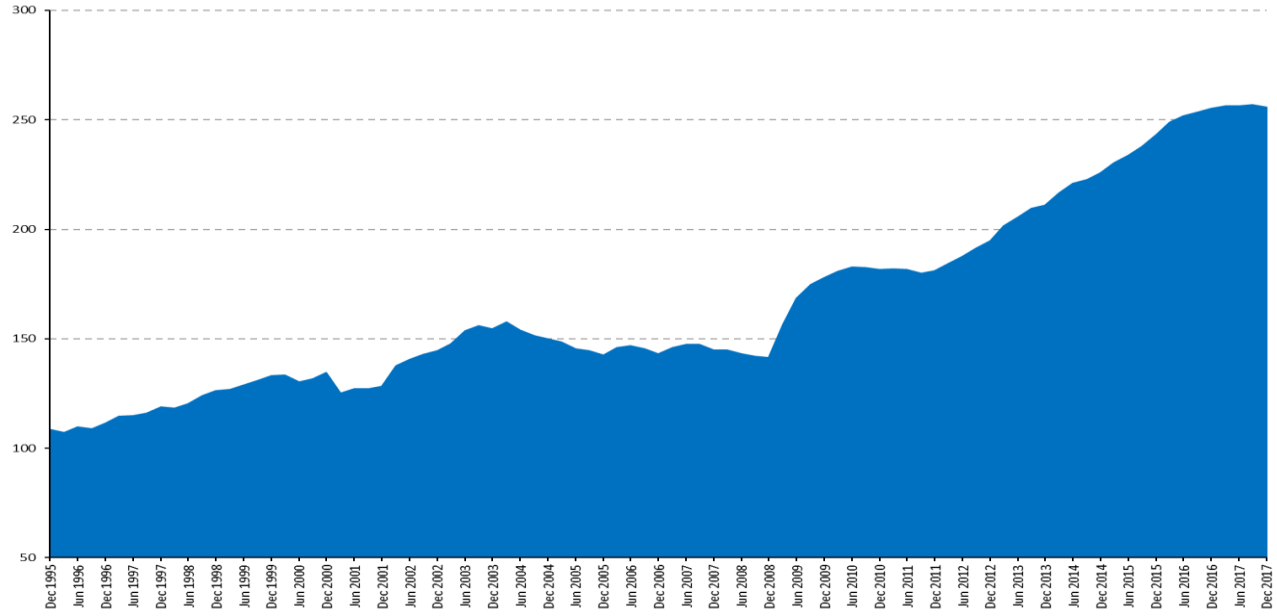
Australian materials and energy sectors

The materials industry sector is the second largest component of the index and currently represents approximately 18% of the S&P/ASX 300 index. The energy industry sector comprises an additional 6% of the index. Combined these two sectors represent 24% of the total index and, in our opinion, are generally businesses of low predictability and quality. They have low levels of predictability because of the volatility of the price of the commodities they sell, the inability to consistently increase their volume of production, the finite nature of their resources, the uncertainty of finding new deposits and the variable nature of their operating costs.

In addition, many of the businesses within these sectors could face declining demand over the very long-term from the technology enabled trend towards the dematerialisation of society and the increasing awareness of the economic cost of climate change and the environmental damage from carbon emissions.

A large component of increased global demand for key commodities has been the emergence of several very large fixed investment stimulus programs by the Chinese government since the GFC. Chinese economic growth over the past decade has benefited from a series of large infrastructure spending programs. The Chinese economy historically has been heavily reliant on fixed investment with gross fixed capital formation representing a large percentage of GDP. In 2017, gross fixed capital formation was 44% of GDP, approximately double the average for most major countries globally.[73] This large level of fixed investment has been partly debt funded. Government gross debt was 48% of China's GDP in 2017, up from less than 30% ten years ago.[74] Household debt in China increased to approximately 48% of GDP in 2017, up from less than 20% in 2008.[75] Corporate debt in China has grown significantly over the past decade and is now approximately 156% of GDP, compared with the U.S. where it is approximately 71%.[76]

Figure 6: Total credit to the non-financial sector as a % of GDP – China



Sources: Bank for International Settlements; Hyperion

[73] The World Bank
[74] Trading Economics
[75] Trading Economics
[76] Bank for International Settlements

Growth in debt and fixed investment are heavily linked. High debt levels are normally associated with lower future economic growth. The trend towards higher gearing levels continues with credit growth in China continuing to expand at rates above overall economic growth. Higher gearing levels bring forward consumption and investment but in the long term normally mean lower levels of future growth, particularly if the investment is misallocated. Given the massive size of capital investment programs that China has undertaken it is likely there has been significant misallocated capital investment. High and increasing debt levels tend to have a declining influence on economic growth because excess use of a factor of production, such as economic capital, tends to be associated with diminishing returns to GDP. In addition, China is likely to move towards a more consumer and service-based economy that is less reliant on gross fixed capital formation over the long term. Therefore, it is likely that the rate of demand growth for commodities from China will decline over the next decade and the support for commodity prices should be adversely affected.

There has been a cyclical increase in global economic activity over the past few years because of continuing debt-funded fixed capital investment by China and some improvement in general economic activity in the U.S. and Europe from years of stimulatory monetary and fiscal policy. However, in more recent times there have been increasing signs of a global economic slowdown and we believe the demand environment for commodities is likely to become more difficult over the next few years.

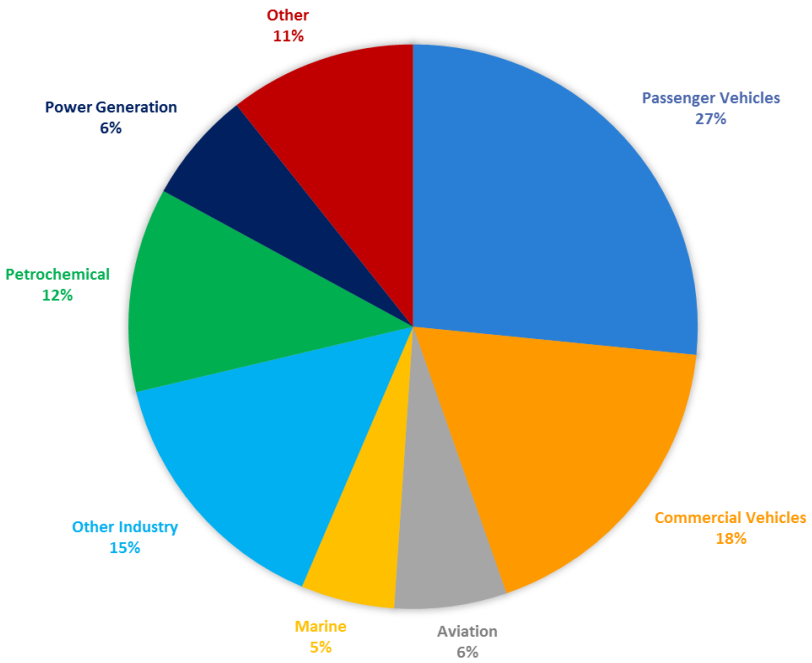
Impact of renewable energy

Given the ongoing declines in the cost of renewable energy generation and storage there is likely to be a significant and structural decline in demand for thermal coal and oil over the very long term (the next decade and beyond).

Thermal coal producing companies are facing major disruption in terms of their traditional role in producing electricity. One key problem is that solar and wind energy has close to a zero-marginal cost, whereas, thermal coal has a significant marginal cost that is unavoidable. Going forward it will be difficult to compete with renewables given the capital cost of solar and wind continues to decline at double-digit rates. Thermal coal demand will be adversely affected by the combination of distributed energy arising from the improving economics of rooftop solar and home batteries and large commercial solar and wind farms and commercial battery storage. Traditional peaking power generation will eventually be displaced by large scale battery storage and the combination of rooftop solar and home batteries. In addition, it is likely that future governments will act to impose costs for carbon emissions. Much of the current reserves of thermal coal will never be extracted from the ground because of reducing demand over the next decade.

Oil producers are likely to experience long-term declines in the demand for oil as electric vehicles displace traditional internal combustion engine motor vehicles. Transport accounts for over half of global oil demand (refer to figure 7). The cost of electric vehicles has been declining in recent years as battery technology has improved and the overall cost of production has declined. Over the next few years, it is likely that affordable, long-range electric cars will start to enter the major car markets.

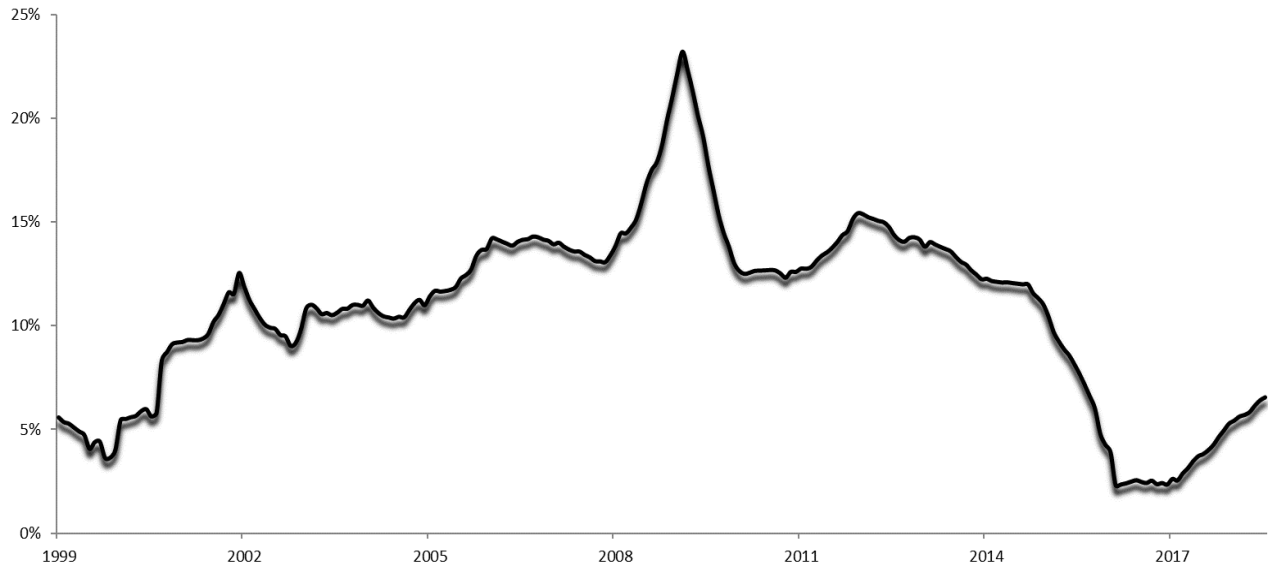
Figure 7: Segmental breakdown of current oil demand



Sources: International Energy Agency; Oil price.com; Hyperion

At times, earnings from oil and gas has been over 20% of global benchmarks. As discussed, there is inherent risk in this source of earnings in the benchmark particularly given the recent recovery in oil and thermal coal prices.

Figure 8: Percentage of MSCI AC World earnings – Energy (oil, gas and coal)



Sources: UBS; Hyperion Asset Management

Conclusion

The key Australian equity indices are dominated by the banks and commodity stocks. The banks face a poor growth outlook with weak demand for credit, increasing government regulatory risk and the risk of significant earnings per share dilution when a recession finally occurs in Australia. The Australian indices' large exposure to low quality materials and energy stocks is likely to be an earnings detractor over the long term as China's economy slows due to its increasing debt burden and as its economy changes from one dominated by fixed investment to a less commodity intensive service and consumer-based economy. In addition, the Australian market indices have a large exposure to legacy non-bank industrial companies that are mature, capital intensive, heavily reliant on economic growth and are likely to be disrupted over the next decade by new entrants with better products. Outside Australia, the major stock market indices, although higher quality than the Australian market because of a higher weighting in innovative technology-based companies, are also likely to produce lower returns than achieved over the past few decades because of multiple structural headwinds.

Hyperion's investment philosophy is not based on benchmark stock weights but instead is focused on the long-term business economics. We invest exclusively in the highest quality, structural growth businesses available within the relevant investable universe. These businesses are modern, innovative and disruptive with strong and sustainable value propositions to customers and other stakeholders. We avoid mature, low growth, legacy businesses that are likely to be disrupted by new technologies. We believe a low growth world suits Hyperion's high quality, structural growth investment style and presents a favourable environment for long-term alpha generation.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

The difficult quest for long-term alpha after fees

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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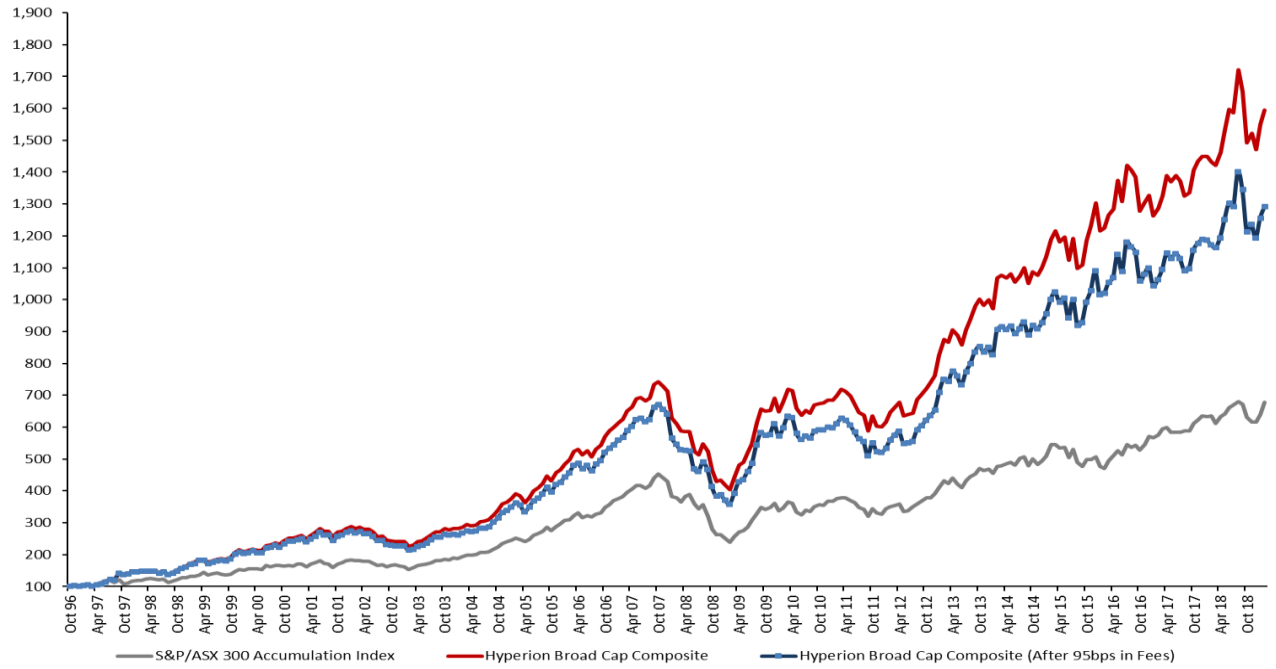
Experience and academic research indicate that it is difficult for even the most skilful fund managers to produce net (after fees) alpha over the long term. Hyperion has produced net alpha since inception across its three key products. This is rare and valuable. We believe we are well placed to continue to extract long-term alpha after fees across all our products including the Hyperion Global Growth Companies Fund (Managed Fund)[77].

Many active fund managers fail to outperform the relevant benchmark over the long term, particularly after fees. In addition, many active managers have high average rates of portfolio turnover that can result in higher trading related costs, higher income tax expenses and higher short-term capital gains tax expense than would be incurred using more long-term or passive investment styles. High portfolio turnover levels and negative long-term alpha generation are the key reasons for the secular trend towards passive or index-based equity investing. However, by indexing, investors' risk forgoing the extraordinary benefits of compounding above benchmark returns over the long term.

The magic of compounding superior after fees returns over long time periods is illustrated in the chart below. Since October 1996, the Hyperion Broad-Cap Equities Composite has returned approximately 13 times the original investment (after assumed fees of 95 bps per annum). This return from Hyperion compares with the S&P/ASX 300 Accumulation Index return over the same time of less than 7 times. As at 31 January 2019, this strong long-term investment performance of the Hyperion Broad-Cap Equities Composite equates to average excess returns above the benchmark of 4.4% pa (pre-fees) over almost 22 years.

[77] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

Figure 1: Hyperion Broad Cap Composite vs S&P/ASX 300 Accumulation Index



Source: Hyperion

Since October 2002, the Hyperion Small Growth Companies Fund has produced average alpha of 10.1% pa (pre-fees) and 7.9% pa (after fees).

Since inception in May 2014, the Hyperion Global Growth Companies Fund (Managed Fund)[78] has produced 9.4% pa alpha (pre-fees) and 6.9% pa (after fees).

The wisdom of crowds makes the market a difficult competitor over long time periods, as history suggests the 'average view' is better than that of an individual. Hyperion has historically identified multiple market inefficiencies and we strive to continue to exploit these going forward, including in the Hyperion Global Growth Companies Fund (Managed Fund)[78].

As at 31st January 2019	**$AUD** Gross Performance (%)
From Oct 1996	
Hyperion Broad-Cap Equities Composite	13.10
Excess Performance	**4.41**
From May 2003	
Hyperion ASX 300 Equities Composite	12.66
Excess Performance	**3.75**
From Oct 2002	
Hyperion Small Growth Companies Fund	17.02
Excess Performance	**10.09**

[78] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

From Oct 2002	
Hyperion Australian Growth Companies Fund	12.02
Excess Performance	**3.22**
From June 2014	
Hyperion Global Growth Companies Fund (Managed Fund)*	21.26
Excess Performance	**9.38**
From June 2014	
Hyperion Global Growth Composite	21.29
Excess Performance	**9.40**

Annual performance, pre-fees, as at 30 June 2018. Past performance is not a reliable indicator of future performance.
* The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

Research suggests some managers have the skill to produce long-term alpha before fees but the cost of producing this alpha is too high, resulting in net alpha that is typically negative. The 'paradox of skill' is that as the skill and quality of the analysis of investment professionals has risen, the ability to produce strong excess returns of yesteryear is much more difficult. Put simply, competition has intensified. In fact, the world is moving towards a winner takes all competitive dynamic, whether it's in investing, business, music or sport. Winnings accrue to a few whilst the clear majority comprising average products and services are in various stages of economic failure.

Fees and low trading costs reduce this alpha hurdle and improve the probability of translating gross alpha into net alpha. Mauboussin suggests that costs are a key factor in separating the best from the worst performing investment funds. The Hyperion Global Growth Companies Fund (Managed Fund)[79] has a base management fee of 70bps pa. We believe this fee is lower than most of our peers. A performance fee in the Hyperion Global Growth Companies Fund (Managed Fund)[79] of 20% of outperformance against its benchmark ensures Hyperion does well when the unit holders do well. The performance fee is subject to high water marks and is only payable on positive absolute returns.

Hyperion's stock portfolio turnover is typically in the 20% to 40% pa range, which is well below the market and the typical fund manager. Low portfolio turnover helps improve our clients' after-tax and after transaction cost returns. This is in stark contrast to many active fund managers that have extremely high turnover because they are trying to chase short-term alpha. Chasing short-term alpha is extremely difficult to achieve successfully over long time periods and can be expensive in terms of after-tax and after-cost returns. The avoidance of over-trading is another way to lower the cost hurdles needed to produce net alpha. We believe we do some simple, logical things that increase our odds of out-performing.

Alpha is a zero-sum game where the winners (out-performers) are accruing returns at the expense of the losers (the under-performers). In order to out-perform, the mistakes of others need to be exploited. Historically the 'victims' were individuals or some poor performing institutional funds. However, investors that tend to perform poorly eventually give up. According to Larry Swedroe and Andrew Berkin in their book "The Incredible Shrinking Alpha", U.S. households held more than 90% of U.S. corporate equity at the end of WWII. This declined to 48% by 1980 and 20% by 2008. Similarly, institutional funds struggle to survive, and dollars

[79] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

flow to passive managers. Swedroe and Berkin also cite research from John Bogle who found that about 7% of mutual funds 'died' each year between 2001 and 2012.

Evidence suggests the proportion of professional investors accruing alpha after fees is shrinking. Larry Swedroe and Andrew Berkin, referenced academic studies by Mike Sebastian and Eugene Fama that suggest that only the top 1% to 2% of funds showed statistically significant skill (alpha). Charlie Munger, the Vice Chairman of Berkshire Hathaway, has been widely quoted over the years, including in Tren Griffin's book, as saying "the top three or four percent of the investment management world will do fine". The proportion of participants achieving net alpha has declined over time. However, we believe the number of winners will be higher in certain markets. For example, small cap funds can exploit the under-research of small or illiquid stocks as well as avoiding those stocks that eventually 'blow up' from speculative or ill-defined business models. However, it is extremely difficult to achieve sustained, meaningful alpha in the small cap space because of this lack of liquidity. With limited opportunities, the absolute dollar size of the alpha is highly constrained in the small cap space.

Global funds should be able to exploit specific factors, sectors and stocks in a huge universe of tens of thousands of listed securities. However, it takes skill and insight to filter and analyse such a large universe effectively. You also need to be clear on what inefficiencies your investment process and team can exploit.

Hyperion exploits multiple market inefficiencies and behavioural biases including short-termism, time arbitrage, recency bias, loss aversion, impatience (driven by a combination of the fund managers themselves and their direct intermediary/institutional and/or retail clients), over diversification, specialisation biases, herding (including fear of being wrong or being perceived to be wrong by third parties), and the 'quality anomaly'.

Achieving alpha has become difficult, but there are some reasons to be optimistic as to why accruing alpha could become easier over time. The ever-increasing focus on short-term results, catalysts and share price movements ensures those that take a longer-term view tend to be competing in a much less crowded space. Growing data availability, accountability, measurement, transparency and specialisation are perversely increasing short-termism in the market. The trend towards indexing and passive investments means the proportion of 'dumb' money is rising. Eventually the level of analysis and insight on individual stocks is likely to decline and lead to increased mispricing of stocks. It is likely that a new source of 'victims' will eventually emerge.

In conclusion, Hyperion has a long track record of producing consistent long-term alpha after fees when league tables (after adjusting for fees and survivorship biases) and academic studies suggest most funds are unable to produce similar outcomes. Long-term alpha generating track records are valuable and meaningful. We believe the Global Growth Companies Fund (Managed Fund)[80] is worthy of consideration by investors.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

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[80] The name of the fund was changed from Hyperion Global Growth Companies Fund – Class B to Hyperion Global Growth Companies Fund (Managed Fund) on 5 February 2021 to facilitate quotation of the fund on the ASX.

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The Importance of Portfolio Construction in Generating Long-term Alpha

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Since 1996, Hyperion has achieved average annual alpha of approximately 4.4% pa (pre-fees, Broad-Cap composite as at 31st January 2019) from investing in a portfolio of quality, structural growth companies. Additionally, since inception in 2014, average alpha of approximately 9.4% pa has been achieved on the Global Growth Companies Composite (pre-fees as at 31st January 2019). A significant proportion of this alpha has been generated from our proprietary portfolio construction process. This process exploits non-fundamental short-term share price volatility.

Hyperion's investment process systematically compares current share prices that are heavily influenced by non-fundamental short-term volatility to relatively stable but structurally growing long-term intrinsic value estimates. This system is designed to generate long-term alpha for Hyperion's clients.

The mindset difference between exploiting short-term alpha opportunities versus exploiting long-term alpha opportunities is substantial, profound and lost on many people. Most market participants are obsessed with short-term alpha and share price-based returns. To maximise short-term alpha, these market participants try to predict short-term share price movements by buying those stocks that they think will outperform in the short-term and selling stocks that they think will underperform near-term. These traders are trying to predict the short-term direction of share prices and are constantly reassessing their short-term directional thesis. This is very difficult to do on a consistent basis because share prices are highly unpredictable in the short-term. The market comprises many market participants each trying to forecast which shares are likely to outperform in the short-term. This short-term mindset effectively means that the long-term fundamentals of the businesses underlying these stocks becomes less important and news flow and meeting or beating short-term consensus expectations becomes the dominant reason for going long or short a stock.

Trying to predict and take advantage of short-term share price movements is very difficult because most market participants are trying to do the same thing at the same time. Most short-term alpha generating processes are well known and implemented by many participants. This is a very competitive space to try and generate alpha. Short-termism is a very crowded trade and becoming more so over time.

In addition, if your mindset and investment process is centred around short-term investment performance, then it is much more unlikely that you will have conviction regarding each individual stock position. Conviction based on fundamentals is important because if market participants do not have a good understanding of the underlying economics and intrinsic value of the company, they are more likely to be forced out of the stock at an inopportune time.

The market is directionally efficient in terms of news flow in the short-term. That is, if stock specific news is negative (positive) then the share price normally goes down (up) relative to the market. The problem is that the news flow tends to be unpredictable in most situations at the individual company level, the industry level and macro level. Financial markets and economies are inherently random and unpredictable in the short-term due to the influence of crowd-based behavioural factors and the general complexity of these systems. Markets and economies are complex adaptive systems, heavily influenced by human sentiment and behavioural factors and thus, difficult to consistently predict in the short-term.

Hyperion's approach is different and focuses purely on maximising long-term returns, long-term capital preservation and long-term alpha. We believe Hyperion is different from most market participants in that we do not attempt to generate short-term alpha through trading strategies such as momentum, near term news flow, feedback loops, shorting or short-term macro trends. Our focus is on long-term business fundamentals and long-term valuation.

Even though our investment process incorporates short-term share price volatility, it is important to note that we do not attempt to predict the direction and/or quantum of future short-term share price movements to generate alpha. In other words, our investment process is not predicated on accurately forecasting short-term share price movements. Instead, we use our proprietary investment process to take advantage of non-fundamental short-term price volatility to maximise long-term alpha for our clients. Predicting short-term share price direction and quantum is not key to our ability to generate long-term alpha. The investment process can add long-term alpha regardless of the direction and quantum of relevant short-term share price movements. Again, this is in stark contrast to how most market participants try to generate alpha by implementing investment processes that are reliant on correctly predicting the direction and duration of short-term share price movements.

To take advantage of short-term share price volatility the portfolio construction process shifts stock weights up and down as appropriate, typically from less than 1% to a maximum of 13%.

Hyperion's portfolio construction system tends to be contrarian in nature and provides liquidity to the market. We tend to be buying (selling) when individual share prices are weak (strong). This is the opposite to most short-term alpha seeking investors who are sucking liquidity out of the market because they are trying to buy positive momentum stocks and sell negative momentum stocks.

Our proprietary portfolio construction system utilises both long-term valuations and a collection of quantitative and qualitative fundamental risk adjustments. There are numerous risk adjustment factors that have been tested and shown to add significant value over the long-term. These fundamental risk adjustments utilise the collective experience and skill of the investment team. The investment team has 80 years collective experience at Hyperion and 130 years in the industry. The quality and accuracy of the inputs largely determine the success of the risk adjustments.

External parties sometimes believe that they can copy processes and investment returns by simply investing in some of the names that are held in the portfolio, this is a mistake. It underestimates the importance of right sizing positions and their contribution to risk adjusted returns. In addition, an essential foundation of our process is to have the knowledge-based conviction and beliefs to retain positions against the crowd. This has become even more important with rising short-termism and aggression of short sellers in the market.

Short sellers have become very effective at influencing the financial media and short-term sentiment regardless of the long-term fundamentals of a stock. It can be very difficult to retain and grow positions in the face of short seller and media driven negative feedback loops and price momentum if you don't understand why you own the stock and don't have a strong knowledge-based conviction.

Investors tend to overweight the importance and meaning of recent share price movements, which are largely random and driven by non-fundamental noise over short time periods. Hyperion has multiple risk adjustments built into the process to limit behavioural biases. In addition, we use the investment team's knowledge, understanding and collective experience to assess the long-term fundamental relevance of the negative price momentum and associated negative news flow.

In summary, Hyperion is a client centric business that seeks to add long-term alpha to clients' portfolios. We have a different mindset to many market participants that have investment processes that attempt to generate alpha immediately through trying to predict short-term share price movements. Our investment process benefits from share price volatility. Our proprietary portfolio construction system is designed to generate long-term alpha from short-term share price volatility without needing to predict the direction of that short-term price volatility. We believe this is a significant competitive advantage.

Hyperion's investment process, including its proprietary portfolio construction process, has been successfully implemented by the investment team for over two decades. Even with decades of experience, it is a challenge to hold and shift weights to appropriate levels because this quite often involves going against short-term news flow and short-term share price movements. Our in-built proprietary system and experienced team provides the necessary structure to consistently benefit from portfolio construction.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

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How Hyperion Aims to Protect and Grow Your Investment

Mark Arnold, Chief Investment Officer, Hyperion Asset Management
Jason Orthman, Deputy Chief Investment Officer, Hyperion Asset Management

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Hyperion Asset Management (Hyperion) is a client-centric, alpha seeking business; our primary objective is to protect and grow your capital investment over the long-term through our philosophy of investing in the highest quality businesses. Our approach has resulted in above benchmark returns for our clients over the long-term. Hyperion has been successfully managing listed equity portfolios for clients since 1996 and currently manages approximately $6 billion on behalf of our clients, including $0.5 billion in internationally listed equities.

Economic outlook and portfolio construction

When economic conditions are favourable most businesses are able to do well and in the short-term, portfolios containing average and low-quality firms may well have strong performance. However, over the longer-term there are both upturns and downturns in economic cycles, sometimes for prolonged periods of time and in the longer-run, returns of portfolios containing average and low-quality businesses suffer. Prior to the GFC, many below average businesses steadily grew their earnings, often assisted by financial leverage. In reality, the earnings and the associated share price appreciation produced in these buoyant economic conditions were illusionary and not sustainable in more modest economic conditions.

Hyperion aims to maintain a portfolio of stocks that are robust and resilient even in downturns and difficult economic environments in-order to maximise long-term returns to clients. The investment processes of Hyperion are designed to weed out average and low-quality businesses allowing the investment team to focus their research efforts on only high-quality businesses that are positioned to sustain and grow even in harsh economic climates. For example, Hyperion's portfolios have been stress tested and significantly outperformed through difficult economic conditions such as the GFC and European debt crisis.

Over the past decade, since the GFC, economic conditions have been subdued. In recent years, global growth rates have been improving after a long period of expansive monetary and fiscal policy has inflated asset prices and reduced unemployment levels. More importantly however, the long-term macro-economic outlook is for continued low levels of economic growth globally. Compared with the strong economic conditions the global economy enjoyed in the six decades between the end of WWII and the GFC, the long-term growth outlook is modest at best. We believe the world is likely to continue to experience low inflation, low growth and low interest rate conditions for decades to come.

The key structural headwinds impeding the economic growth outlook include; ageing populations, high consumer and government debt levels, rising levels of inequality in most developed countries, the increasingly disruptive impacts of climate change, artificial intelligence (AI) and robotics. Under these low growth economic conditions, it will be difficult for average businesses to thrive or even survive; whereas high quality businesses are the last to be affected by difficult economic conditions and are ultimately positioned to take market share. Businesses with structural tailwinds, innovative cultures that can adapt to and drive change and sustainable capital structures (i.e. strong balance sheets) have a significant advantage over average and low-quality businesses.

What characteristics do high quality businesses have that gives them an advantage even in economic downturns?

Three key characteristics that the investment team seeks when identifying high quality businesses are:

9. Proven structural growth (tailwinds);
10. Innovative cultures; and
11. Low debt levels.

Proven structural growth (tailwinds)

Businesses that have structural growth tailwinds, include those businesses that can grow by utilising disruptive technologies that are the cause of fundamental change in industries. Lower quality businesses tend to be those that are enmeshed in old technology, are unable to recognise and/or respond to disruption and are beholden to economic cycles. These businesses are either unwilling to accept change or not in a position to quickly or efficiently transfer to the disruptive technology. As such, these companies lose market share: an outcome that is likely to be detrimental to longer-term survival and a problem that increases in magnitude in a low growth economy. In contrast to these lower quality businesses, the Hyperion investment team looks for firms that have created products with strong value propositions that have the potential to expand addressable markets and take revenues away from traditional competitors. Examples of portfolio firms that have successfully disrupted industries and have structural growth tailwinds are Amazon in the retail sector; Alphabet in media and advertising; and Paypal in the payments sector.

Innovative Culture

In order to position a business to recognise and benefit from disruption and structural change it needs to have an organisational culture that embraces innovation. The Hyperion investment team views high quality firms as having a culture of innovation. This culture needs to be observed through the whole of the business from top management down. Examples of things associated with an innovative culture would be: (i) senior management's understanding and insight regarding the influences of change on their product and market; (ii) appropriate investment in research and development; and (iii) creation of environments structured to encourage an innovative workforce (e.g. Google's campuses built to facilitate "smart creatives"). These are just some of the characteristics the Hyperion investment team seeks when identifying high quality businesses. Furthermore, senior management needs to be able to convert this culture into a successful commercial reality.

A strong balance sheet

The Hyperion investment team view high quality firms as having low debt levels. The reason for this is that shareholders in firms that have low debt levels are less likely to experience binomial outcomes during difficult economic times. Having low debt levels affords businesses the ability to make decisions without the threat of liquidation if the business goes through periods of adverse change or low growth.

These are just three attributes the investment team at Hyperion considers when researching companies. We look for structural growth, innovative cultures and a strong balance sheets when identifying potential new investments but we also focus on ensuring the companies in the portfolio maintain these attributes over time. We believe that in a low growth, low inflation and low interest rate environment these three attributes

are critical characteristics of high-quality businesses. By investing only in the highest quality businesses, we aim to protect and grow your capital investment over the long term.

Mark Arnold (Chief Investment Officer) and Jason Orthman (Deputy Chief Investment Officer)

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