

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

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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:

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?

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

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 then 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.

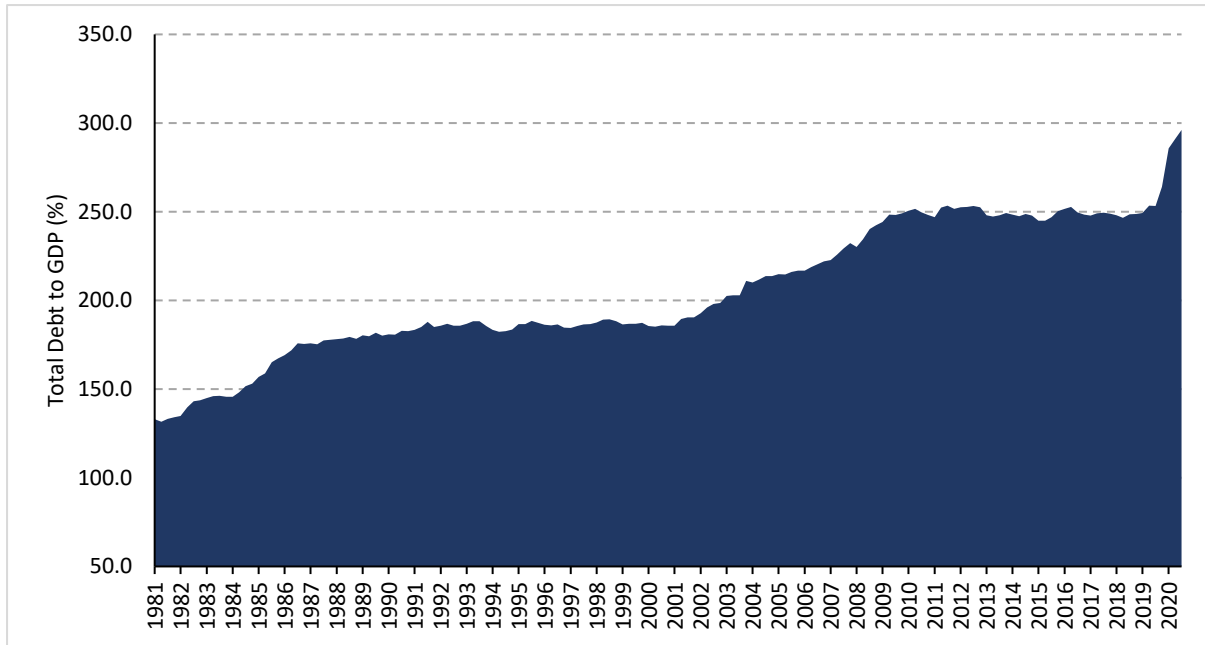
China's strong economic growth rates started to significantly influence both commodity prices and overall global economic growth in the early 2000s. The positive influence of China on commodity prices and global economic growth increased further around the time of the GFC, when large debt funded spending 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%.

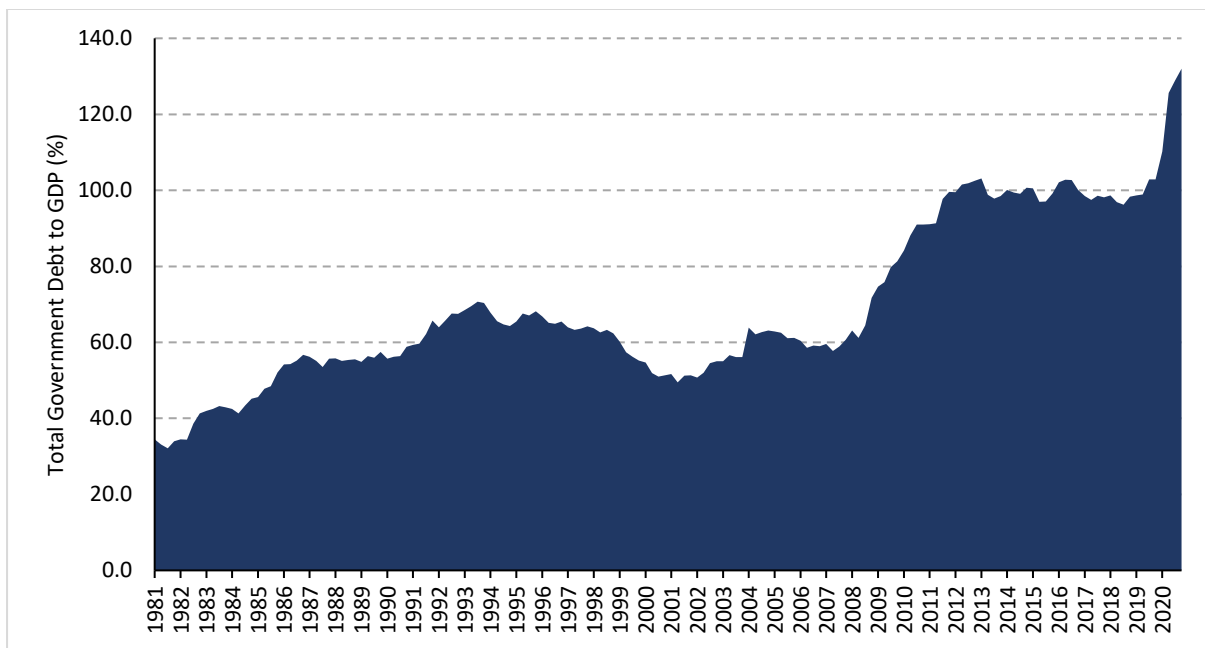
High debt levels impede future economic growth rates. The law of diminishing returns applies regarding the use of excessive levels of debt. Initially borrowing stimulates economic activity and the new debt is put to productive use, but as more debt is borrowed the productivity of that debt tends to decline. 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 1: Total debt to GDP - U.S. (%)



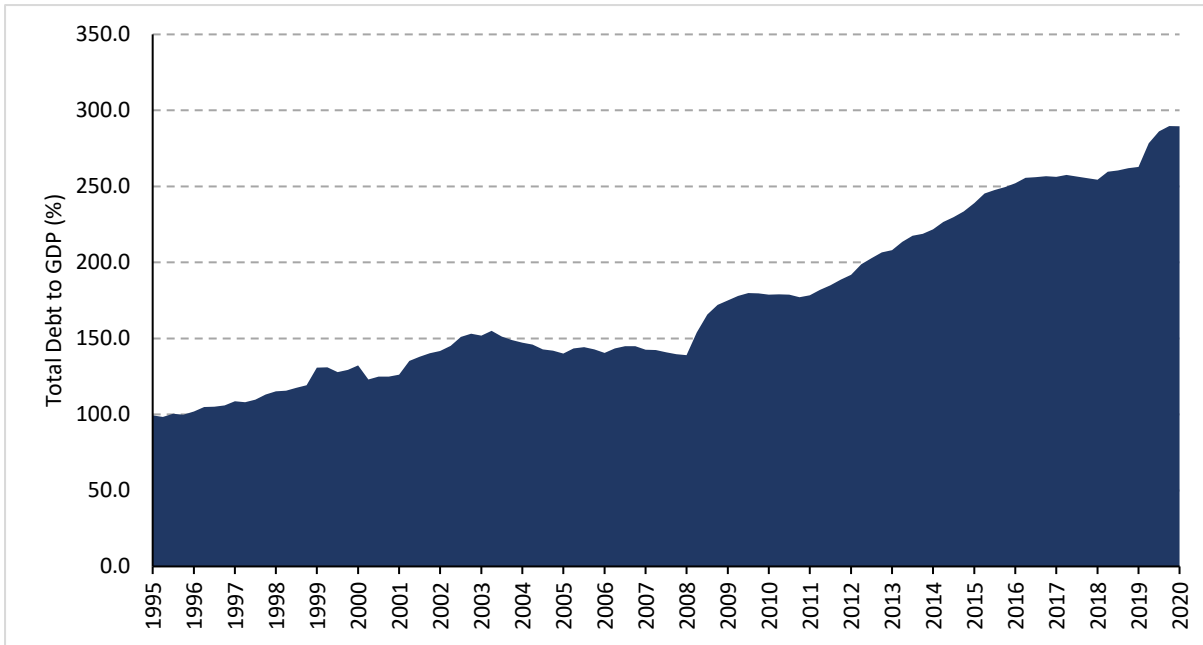
Source: BIS (2020) United States Credit as percentage of GDP (Adjusted for breaks)

Figure 2: Government debt to GDP - U.S. (%)



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

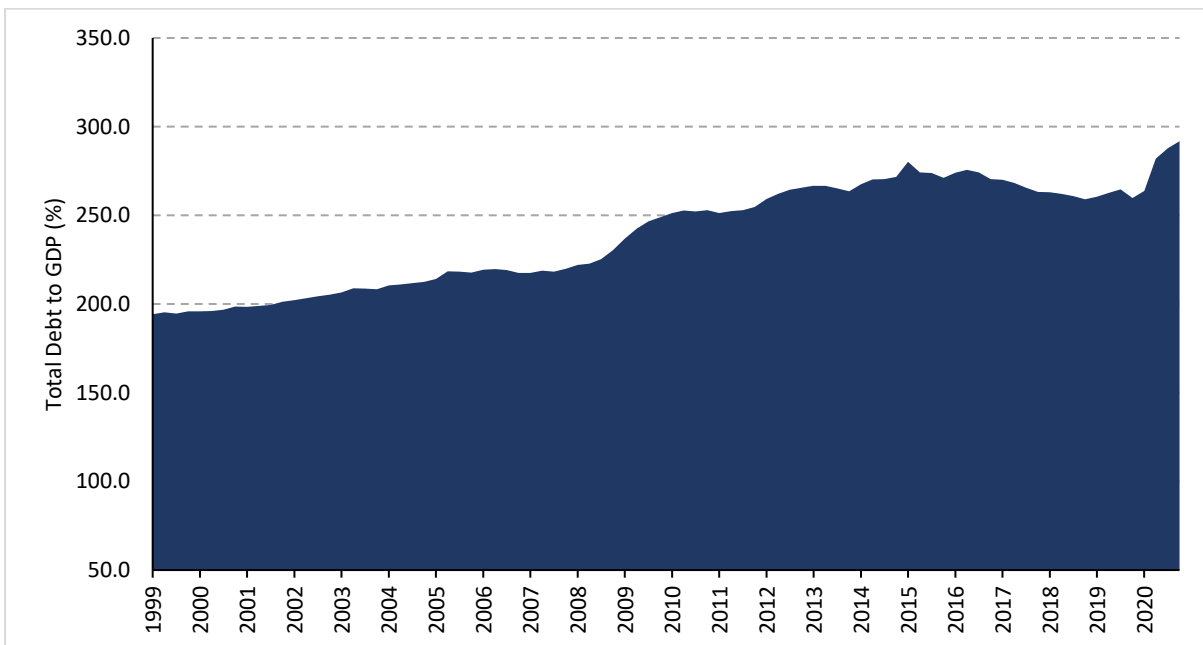
Figure 3: Total debt to GDP – China (%)



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.

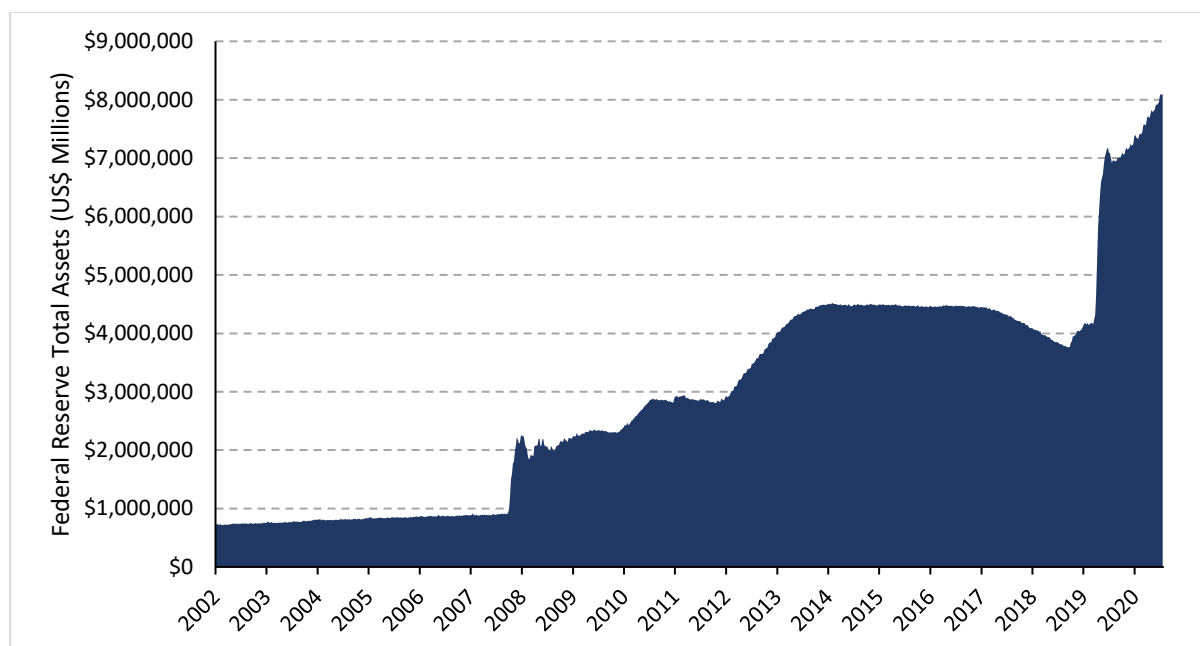
Figure 4: Total debt to GDP – Euro Zone (%)



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 5: U.S. Federal Reserve balance sheet (US\$ millions)



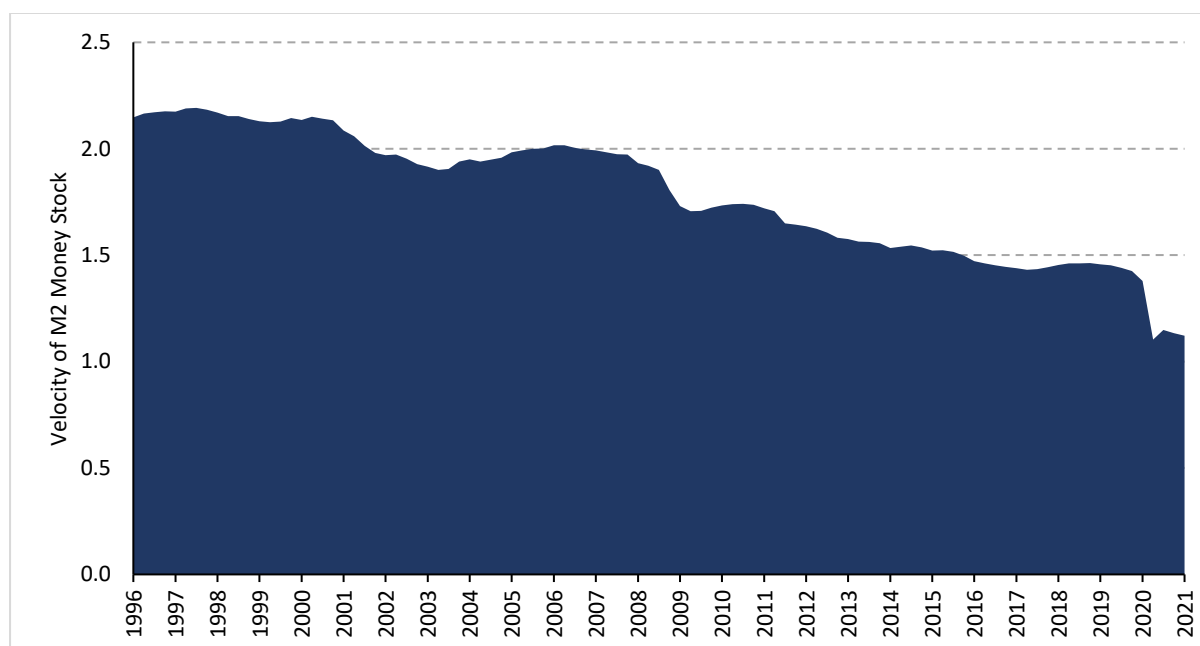
Source: Federal Reserve Bank of St Louis (2021) Total Assets (Less Eliminations from Consolidation). Data in Millions of U.S. Dollars.

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 6: 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.

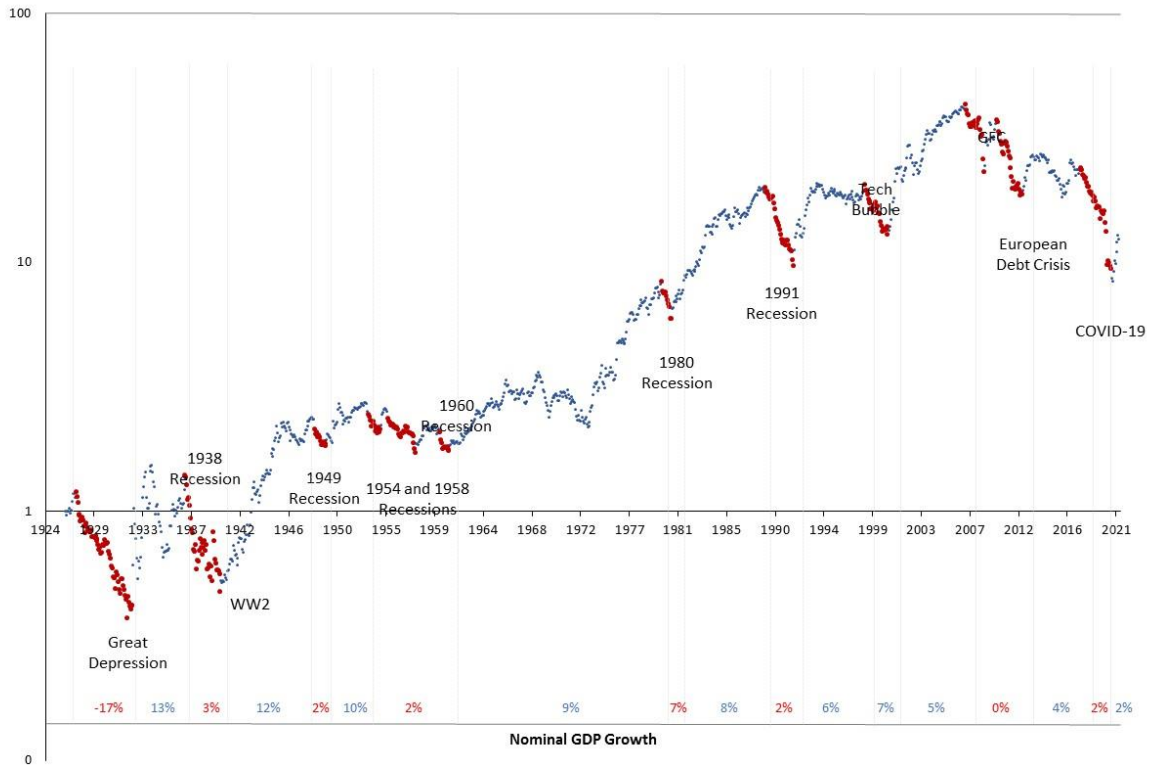
As discussed in depth in previous white papers, demographics dictate that global economic growth rates are likely to remain low over the next decade. Debt levels across the major economies are too high for a rerun of the “Roaring Twenties”. High debt levels will provide an ongoing drag on future rates 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 7: 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

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July 2021

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