Revisiting a Key Secular Theme: The Debt Super Cycle

Great works are performed, not by strength, but by perseverance; yonder palace was raised by single stones, yet you see its height and spaciousness. He that shall walk with vigor three hours a day will pass in seven years a space equal to the circumference of the globe.
– Samuel Johnson

Executive Summary

Part I: Human nature is responsible for the less important short, and more important long cycles that permeate existence.

Part II: Debt, like a bullet, is neither intrinsically good nor ill, but a tool subject to the morality of human intent.

Part III: In developed economies, persistent low interest rates incentivized the accumulation of debt and lowered the discount rate for risky assets.

Part IV: In developing economies, the accumulation of debt is still in a secular uptrend.

Part V: Past recoveries from secular debt peaks have been long and painful.

Part VI: The optimal solution—real growth—is quite unlikely.

Part VII: More likely is a mix of inflation, default, and financial repression. The last is likely to dominate.

Part VIII: Along with high asset valuations, this mix makes for a bitter stew of developed market investments. In the long-run, the highest return should come from emerging market equities. Ultimately, the best characteristics of sound investing remain unchanged: logic, evidence, discipline, and fortitude.

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PART I

Human nature is responsible for the less important short, and more important, long cycles that permeate existence.

Cycles are familiar to humans. The weather has cycles, sports teams have cycles, and politics have cycles. Some are short. Winter lasts a few months before melting into spring, the Tampa Rays make the playoffs for a few years before ceding first place to the Blue Jays, and Bill Clinton gives way to George W. Bush who gives way to Barack Obama who gives way to Donald Trump. Other cycles are long. The earth warms and cools over centuries and millennia. The Yankees and the Lakers have dynasties for decades. The Democratic Party controlled the House for fifty-eight of the sixty-two years starting with the 72nd Congress in 1931. It then ceded control to a Republican Party for eighteen of the past twenty-two years.

The shorter cycles oscillate along the drawn-out trend lines of the long cycles. This has its root in human nature. It is the creation of humanity's tendency to overreact in one direction, and then snap towards the other. Think of your sorrow when Cleveland won Game 4 of the World Series, and your joy while watching Kris Bryant's easy grin as he tossed to Anthony Rizzo for the final out of the Cubbies' Game 7 triumph. Each game was a cycle within the Series, which itself was cycle within the season.

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In the grand scheme of things, the long cycle of the full season is much more important than any single game. Imagine if no season was played, and there were no playoffs, and Major League Baseball simply decreed that the Cubs and the Indians would play one game with the winner to be granted the flagged trophy. Much less fulfilling, no? Fighting through the long cycle of the season is what matters most.

It's imperative to realize when the long cycles are at an inflection point. Think of the Cubs fans back in 1909, when Honus Wagner and Ty Cobb were dominating the game. The Boys in Blue were coming off back-to-back World Series championships and won 104 games in 1909, but fell six victories short of winning the pennant. (Wagner's Pirates beat Cobb's Tigers in the World Series). Those Cubs fans said to themselves, "No big deal, we'll win next year." They did indeed win another 104 games the next year, and won the pennant, but lost the World Series. They then repeated, "No big deal, we'll probably win next year." And this was said again, and again. You get the point. It's misguided, but relatively harmless, to be despondent after a losing streak or feel invincible after a winning streak. But be on the wrong side of that long-term cycle, and you may be in for a 100+ years of disappointment. This is as true of investors as it is of baseball fans. ❧

PART II

Debt, like a bullet, is neither intrinsically good nor ill, but a tool subject to the morality of human intent.

A key economic cycle is the change in the stock and flow of debt. There are shorter credit cycles which play out over the course of several years, such as when domestic credit to the private sector in the US increased from 120% of GDP to 170% from 1995 to 1999 and then stagnated around that level until 2002, when it resumed its climb to over 200%. There are also supercycles; decades-long accumulations of public and private borrowing where debt rises to unsustainable levels before the system is righted either by a purge or an elongated stagnation.

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In and of itself, debt is not problematic. For example, if a business borrows $1mm at 5% in order to equip its salesforce with new CRM software, and consequently is able to grow profits by 10%, then borrowing was a prudent decision. Alternatively, imagine that you go to the bank and borrow $200, promising to pay them back $250 next week. You then use the $200 to purchase a bike at a local garage sale, and then resell the bike on Amazon for $300. You pay the bank their $250 and you pocket the remaining $50. This is the positive side of debt; it allowed you to create value that otherwise would have lain dormant.

Government borrowing may also be profitable. Imagine the United States before the construction of the interstate highway system. Shipping heavy cream from a dairy farm in Green Bay to a wholesale baker in Chicago is time-consuming and costly, and so the farm only ships $10mm worth of cream each year. The government then raises $1mm in debt, paying 5% interest, and uses the proceeds to build a highway between the two cities. The farm, which pays 10% income tax, triples revenue to $30mm, and therefore pays an extra $2mm in taxes. By financing the building of the road, the government makes a profitable decision. The G-men are able to pay back the $1mm of principal and 5% interest with the extra tax revenue, and the private sector is able to generate more wealth because of the improved infrastructure. ❧

[1] This assumes that the garage sale seller and the Amazon buyer would not be able to connect on their own, and the bike would therefore go unpurchased and end up at the garbage dump.

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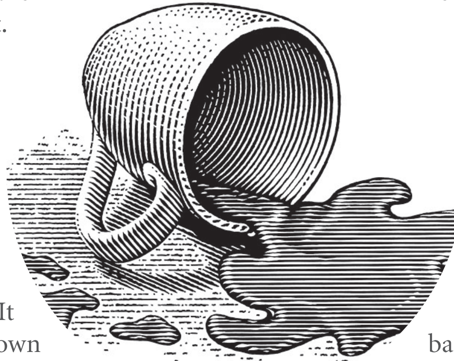
PART III

In developed economies, persistent low interest rates incentivized the accumulation of debt and lowered the discount rate for risky assets.

Since the second half of the 20th century, and especially since the accession of Fed Chief Alan Greenspan in 1994, central banks developed economies have often countered periods of economic and financial stress, such as the tech bubble crash, with monetary policy that encouraged credit. The authorities lowered interest rates, which reduced the cost of borrowing. An effect of this policy was less-pronounced economic slowdowns, but another was an increase in the amount (and a decrease in the quality) of debt.



For example, imagine that there is a company, named Wired, that borrows $100mm at a floating rate of 10% in order to build coffee shops to compete with Starbucks. The company is not well-managed, so it earns only $7.5mm of pre-interest profit in its first year. With interest rates at 10%, Wired cannot make its full interest payment of $10mm. It declares bankruptcy and its debt is marked down to zero. Meanwhile, the wildly profitable Starbucks, which is able to repay its debt, survives and prospers. The less profitable business is purged from the system to the benefit of the profitable, and the accumulation of bad debt (the loan to Wire) is disposed of via a write-off. This is a key feature of capitalism. The most competent business operators prosper while the inefficient fall and those who make ill-advised loans lose their money.

Now imagine instead that in order to avoid economic distress – there are already enough former baristas in line at the unemployment benefits office - the central bank lowers interest rates to 5%. Wired survives as a going concern because its $7.5mm pre-interest profit is able to cover its now lower $5mm interest payment. The coffee shop market stumbles forward with one very efficient firm (Starbucks) and one less-efficient competitor (Wired). Because Wired is concerned about meeting its debt obligations, it sets aside most of its cash in order to ensure that it can continue to pay interest. This is at the expense of investing in productivity-enhancing initiatives, such as job training for employees or new espresso machines. The "coffee store economy" might still grow, but the quality is less than if Starbucks were the only operator, and the debt level in the economy is higher than if Wired were to enter bankruptcy. By keeping rates low, the central bank avoids the economic distress of a Wired bankruptcy, but it also lowers the quality of growth. The coffee shop market becomes bloated and stagnant because the central bank, by keeping rates low, allows Wired to survive.

This process cannot continue ad infinitum. Eventually, the private sector in aggregate will stop borrowing as the usefulness of credit

[2] "Floating rate" means that the interest rate moves up and down as market interest rates fluctuate.

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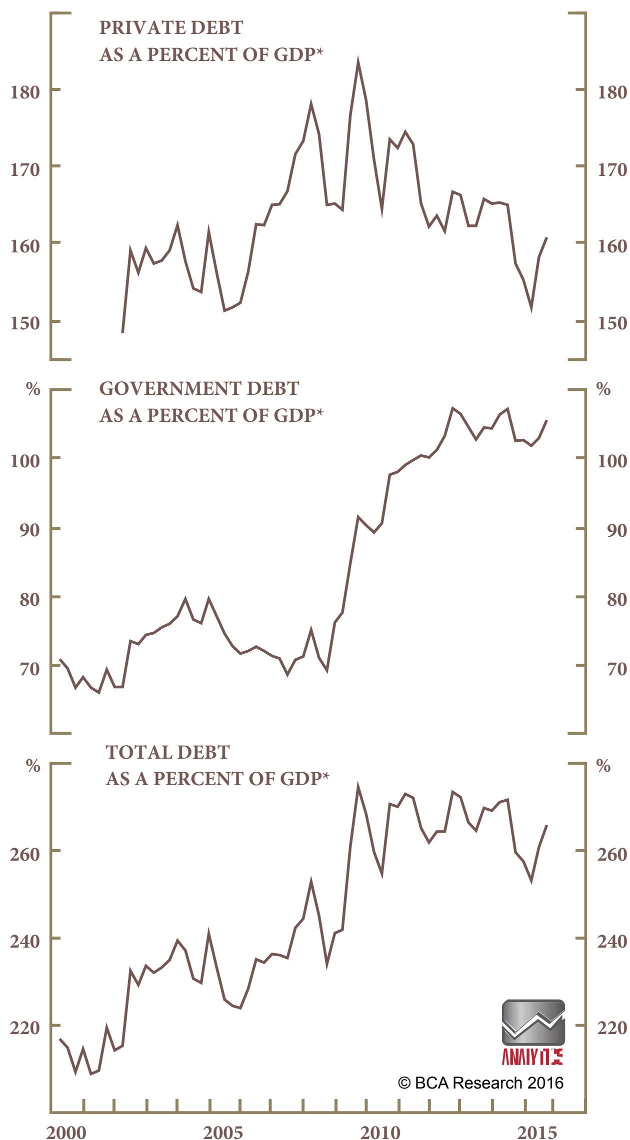

diminishes in a stagnant economy where growth opportunities evaporate. Around the onset of the Great Financial Crisis, many of the world's developed economies entered a new reality, faced with the inability of ultra-easy monetary policy to stimulate overall (government plus private) credit growth. Instead, in markets like the US, low interest rates have, more than anything else, elevated asset prices by lowering the discount rate. By ensuring that a saver will earn nothing for holding cash, these low rates have pushed investors into bonds, raising the price of bonds and reducing their prospective return. This, in turn, prompts investors to seek higher returns from income-oriented stocks, and then riskier fare such as growth stocks or REITs or any other asset that still promises positive prospective returns. Hence, we find ourselves in a "rock and a hard place" environment where both US bonds and stocks are overvalued. Many influential foreign central banks have resorted to unprecedented tactics, such as directly purchasing longer-dated fixed income securities. The Bank of Japan has gone so far as to buy shares of REITs, corporate bonds, and Japanese equities, owning at times about 7% of Japanese corporate bonds and nearly 3% of the Topix (the index of shares traded on the Tokyo Stock Exchange).

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In advanced economies, private debt peaked at 180% of GDP prior to the Great Financial Crisis and has since fallen to 160%. Consequently, despite a rise in government debt from 70% to 100%, total debt has flattened off at about 260%. In our opinion, this is a secular peak. ❧

PART IV

In developing economies, the accumulation of debt is still in a secular uptrend.

Investors should be mindful of the difference between this secular inflection point and cyclical transitions. For example, the build-up of debt in China has received much negative press among sophisticated and legitimately respected publications, such as The Economist and The Bank Credit Analyst. To be sure, we expect that a number of prominent developing economies, including China, will soon enter a cyclical credit crunch after a decade of unsustainable credit growth. In the emerging markets, private debt as a percentage of GDP, which was about 80% at the onset of the Great Financial Crisis, is now 130%. China is a major contributor, with private debt rising from just above 100% of GDP at the turn of the century to just above 200% in 2016. Predictably, the amount of growth generated by each additional dollar of debt has been declining. Respected economists anticipate that in order to grow nominal GDP at 6.5%, China will need to add debt of about 15%.

Private sector debt is preferable to public sector debt because profit-motivated corporations are better able to earn returns in excess of their cost of borrowing.

Meanwhile, broad measures of debt-to-income are close to cyclical peaks in other emerging economies, such as Korea (now almost 200%) and Singapore, Malaysia and Thailand (all around 130%). Across the emerging economies, total debt has grown from about 115% in 2008 to about 170%.

Whereas governments have been the largest borrowers in developed economies, corporations have played a larger relative role in developing economies. In 2015, total credit extended to non-financial corporations was around 165% of GDP in China and over 100% of GDP in Korea, amounts more similar to debt-laden Japan (100%) than the US (71%) and Germany (54%). However, private sector debt is preferable to public sector debt because profit-motivated corporations are better able to earn returns in excess of their cost of borrowing and excessive leverage is more easily reduced (via corporate bankruptcy) than in the public sector (via sovereign default or high inflation). On a secular basis, the corporate debt in the emerging economies concerns us much less than the government debt in developed economies.

On a cyclical basis, the large amount of debt held by corporations in emerging economies could lead to unusually pronounced difficulties during a typical credit contraction because the emerging market corporate bond universe is heavily skewed toward financial and commodity-related firms. Financials account for 24%, energy for 25% and materials for 12% of total outstanding corporate bonds. So, an economic shock such as a meaningful decline in commodity and energy prices, or trouble within the banks, may have a disproportionate effect on growth in the emerging markets. However, while investors should not expect a smooth ride in developing economies, any credit crunch is cyclical, and debt growth will recover. On the other hand, in most developed economies, the downturn in credit growth is secular, and one may prudently expect that it will be decades before the next upleg. ❧

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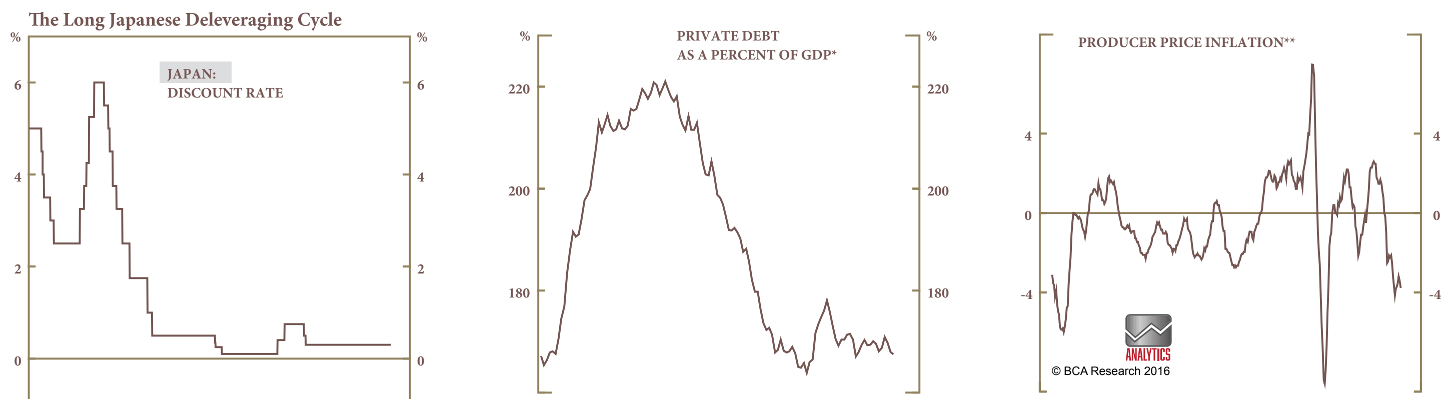
PART V

Past recoveries from secular debt peaks have been long and painful.

Now, more wisdom from baseball; Yogi Berra supposedly warned, “forecasting is difficult, especially about the future.” He experienced both the secular, winning ten World Series with the Yankee dynasty, and the cyclical, getting fired halfway through his fourth season as the Mets manager and sixteen games into his second season as manager of the Yankees (by the none other than the King of Cylicality himself, George M. Steinbrenner III). Yet, forecasting is necessary, both in investing and life generally. (This morning, you predicted that you would not succumb to a fatal car accident on the way to the office. Otherwise, why leave the house?) Therefore, let us ask, “Given this supercycle peak, how may one forecast future trends in developed market debt and growth?”

Interestingly, a decrease in the level of nominal debt would not be new to the United States. We have in our past experienced a debt supercycle peak and the aftermath. The nominal growth rate of US private debt turned negative in 1931 and did not stabilize for a decade, while not moving sustainably into positive territory until 1947. Real private debt did not breach its pre-Depression peak until the mid-1950’s, more than twenty years after the Depression.

In Japan, private debt peaked at about 220% of GDP in the early 1990’s, fell over the course of a decade to about 170%, and has remained around that level ever since. Initially, Japanese policymakers were slow to react to the bubble-burst, but the central bank eventually reduced the discount rate from 6% in the early 1990’s to near zero by the mid-90’s, and still persistent low interest rates were unable to reverse the stagnation in debt growth and, to this day, they have been unable to counteract almost two decades of frequent deflation in producer prices. Private sector debt as a percent of GDP remains no higher now than it was in the mid-1980’s. If the post-Great Depression US and post-bubble Japan are any guides, the developed economies could experience a decades-long stagnation in private sector credit growth. ❧



PART VI

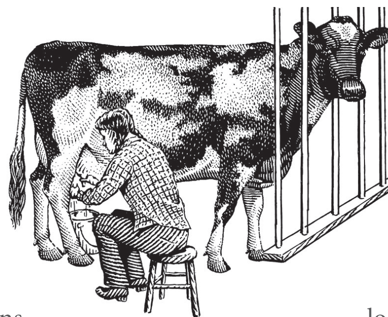
The optimal solution –real growth– is quite unlikely.

He that shall walk with vigor three hours a day will pass in seven years a space equal to the circumference of the globe. Like the traveler, the peak in this debt supercycle has been many years in the making, and has traversed the globe, from North America (the US), to Europe (France), to Asia (Japan). It was built incrementally over time (yonder palace was raised by single stones). So, what is to be done? How should, and how will, policymakers and investors respond.

Fostering a fast-growing economy that can simultaneously pay down its debt and improve the standard of living is the ideal answer. Unfortunately, relative stagnation is our reality. Potential growth rates in developed economies have slowed due, in large part, to demographic trends. In 2010, the dependency ratio – the number of people aged 65+ as a percent of those aged 15-64 in the labor force – was 35% in Japan and around 30% in many European countries. There were three workers for every one retiree. By 2050, that ratio is forecasted to rise to 75% in Japan and between 40% and 50% in the European nations. Those same three Japanese workers will now be required to support almost three retirees.

Slowing labor productivity also contributes to stagnation. In the US, productivity averaged almost 3% from the mid-90's until the Great Financial Crisis, but has now slowed to 1%. Over that same time frame, it has held steady in the Euro Area, but at an unimpressive 1%. This is in contrast to the emerging economies, where the rate in China has fallen, but only from 6% to 5%, and the rate in emerging economies as a whole has fallen, but only from about 4.5% to 3.5%.

What the economy lost by having one fewer farmhand was more than made up for by having one more chemical engineer.



In the developed world, the educational tailwind is lightening, and slowing productivity. For example, in the 1800's, a Kansas farmboy, regardless of his aptitude for chemistry, would stay a farmboy until becoming a farmhand, and then maybe a farm owner. Farmgirls had even less economic opportunity. Then, as the universities flourished and transportation infrastructure proliferated, those farmhands who had a special skill for chemistry could study chemical engineering at the University of Kansas. Then, instead of plowing fields for a living, they were able to find work at Dow Chemical and could help formulate new insecticides which doubled crop yields. What the economy lost by having one fewer farmhand was more than made up for by having one more chemical engineer. This progress led to strong productivity growth and stoked both real and potential GDP, but such a benefit may be dissipating. Today, the developed world's weak growth will make it difficult to outgrow debt burdens.❧

[3] Could an education tailwind in the emerging economies save the developed world? Unlikely. There is a tight correlation between domestic human capital and domestic per capita income, independent of cross-border knowledge spillovers. In other words, the educational tailwind that should indeed blow in the developing economies is likely to leave most of its benefits there. Developed economies should not expect to benefit in a significant way from the Kenyan chemical engineer the way they did from the Kansas chemical engineer.

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PART VII

The three other possibilities in the post-peak world are inflation, default, and financial repression. The latter is likely to dominate.

This leaves three other possibilities: inflate the debt away, write it off, or make it easier to live with the burden. In the short run, the last option in this Sophie's Choice is the least painful and most politically popular. It requires minimizing debt-servicing costs by depressing nominal interests. If the Federal Reserve targets a low rate, allowing you to refinance your mortgage from 5.5% to 3.5%, your mortgage debt is less of an immediate burden. This is, in fact, happening now. For example, we believe the Taylor rule is a robust guide for the optimal level for short-term, low-risk interest rates. It factors in core personal consumption expenditures and the output gap in determining the interest rate. For much of the past eighteen months, it has recommended a short-term interest rate of about 3%. Meanwhile, the actual short-term rate in the US spent most of 2016 close to zero, and hasn't yet breached 1%. Over the past five years, the Federal Open Market Committee has continued to cut its forecast for the terminal (equilibrium) Fed Funds rate, signaling its belief that the current rate cycle will peak at a lower level than in the past. At the start of 2012, the median forecasted terminal rate was 4.25%, but by 2016 it had fallen to 3.25%. These low rates are not particular to the US; they pervade the developed world. About two-thirds of Japan's $7T in government bonds has negative nominal yields, while $820B of German debt, $750B of French debt, and $1.22T of other European debt also sport below-zero nominal yields. In 2016, almost $12T of bonds in the Barclays Global Aggregate Index had negative yields, up from $4T at the end of 2015. Healthy economies with healthy credit systems do not display such extremes. ❧

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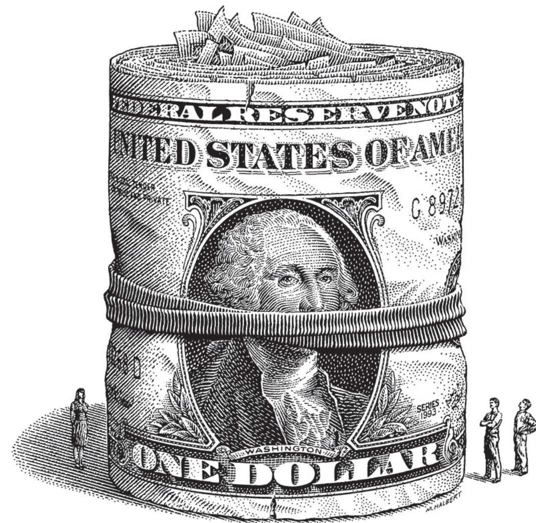

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PART VIII

Along with high asset valuations, this mix makes for a bitter stew of developed market investments. In the long-run, the highest return should come from emerging market equities. Ultimately, the best characteristics of sound investing remain unchanged: logic, evidence, discipline, and fortitude.

The stagnation that results from a peak in a debt supercycle invites low investment, which then brings weak productivity and slow growth to the party. Unfortunately for investors, this peak is coincident with unusually elevated valuations on domestic equities across market capitalizations. Even ignoring the peak, merely on a valuation basis, an evidenced-based investor should expect low-single-digit rates of return on most US risk assets as prices make their inevitable journey to (and probably below) fair value. Beyond this cyclical peak in US equity prices, the debt peak prompts us to expect a lower than average secular rate of return on risk assets in almost all developed economies. For the most part, less risky assets, such as government bonds and investment-grade credits, also promise low single-digit returns. Barring some painful cleansing event, such as a pronounced bear market and numerous credit defaults, there will be no quick solution to this state of liminality into which investors have stumbled.

Yet, all is not gloom. To reference Samuel Johnson, there are some palaces that are largely unconstructed (economies where debt is not a secular burden). Emerging economies on continental Europe, such as the Czech Republic and Poland, as well as a number of Latin American nations, including Brazil, have private debt of only 70%-80% of GDP. In India, Mexico and Argentina, corporate debt (excluding financial firms) is less than 50%. Particular emerging economies do have their own potential issues. For instance, about two-thirds of Mexican non-financial corporate debt is denominated in foreign currencies and a third of total peso-denominated debt is owned by foreigners. This could present problems if the peso declines markedly. Demographics are poor in Russia, and the current account deficit is inordinately high in Turkey. However, on the whole, developing nations are better-positioned to achieve credit-enhanced secular growth.

Ultimately, the most relevant question is, "what is to be done?" Given our position in the debt supercycle, may a prudent investor with a traditionally diversified portfolio reasonably expect to earn a real return of 5% over a ten-plus year time horizon? Fortunately, the answer is yes, but an unusual level of successful maneuvering will be required. It won't be as easy as making money in 1980, when the Shiller P/E and ten-year treasury yield both were around ten. Now, one is 25 and the other is 2.5. Even in 2000, when the equity market entered nose-bleed Shiller P/E territory, one could still earn over 6.5% on a ten-year treasury. Opportunities to earn similar rates of return are few and far between these days. Still, even in a highly repressed financial system, there is volatility, and this portends opportunity. For example, despite Japanese interest rates hovering near zero for two decades, the Nikkei stock index has experienced multiple ups and downs, including a decline of 60% following the 1990 peak, and then two subsequent bear markets with losses in excess of 60%. An investor who bought and held through that entire time period did not profit well, but investors who ably adjusted to the cycles could have earned decent returns.

In the developed world, we've raised many single stones, and walked vigorously for innumerable days. The palace is built, and the hike complete. Unfortunately, our current residence and resting place fosters neither glory nor respite, and yet we must play the hand we are dealt. There are still attractive long-term investment opportunities, such as owning businesses leveraged to developing economies and holding the sovereign debt of these nations. The stones of the debt peak have been laid for many decades. Thankfully, at Gryphon we have a jackhammer (or at least a very large chisel). We have uncompromising logic, evidenced-based analysis, and the internal discipline and fortitude to appear wrong in the short-term in order to be right in the long-term. The supercycle started small, and then proliferated. An investor can successfully counter it in a similar manner, one small profitable decision, followed by another, and then another, until over time you *see its height and spaciousness.* ❧

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