

Approaches to Investing in a Desynchronized World

A Morgan Creek White Paper

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During the period of rapid economic growth following World War II, global economies were incredibly synchronized. Whether you lived in New York or New Delhi, if you experienced growth, you could reasonably assume that the rest of the world was also experiencing growth more or less to the same extent. Because of this, the investable themes through the second half of the twentieth century were simple: economic growth and declining risk.

The world today, however, reflects a marked departure from synchronization and simplicity. The economies of the developed world face uncertainty on nearly all fronts (rates, inflation/deflation, length of cycle), and capital markets in the G7 are still struggling to recover to pre-2008 financial crisis levels. Emerging economies, on the other hand, are experiencing rapid growth and myriad opportunities for innovation. As a result, the global balance is shifting: while, for the past 30 years, G7 countries (15% of the world's population) have experienced increasing wealth through trade, industrialization, education, and productivity growth, emerging economies (50-55% of the world's population) are now on that trajectory. Although the 15% are readjusting to deflationary and deleveraging pressures, half of the world's population is benefiting from very strong growth trends. These conflicting crosscurrents have created a world in profound disequilibrium, which means that this is a much more complex environment with many more variables.

In this paper, we will address the impact of the G7 slowdown, the role of credit expansion in postponing that slowdown at the expense of leverage, and the leverage unwind that has resulted in declining demand and, as we are seeing today, deflation. We will argue that, in contrast to the historically accepted approach of more diffuse exposure to growth or risk, investing in today's environment requires a focused exposure only to desired factors. It is our belief that alternatives are more adept at achieving this than blunt, long-only tools.

UNDERSTANDING THE DEBT SUPERCYCLE

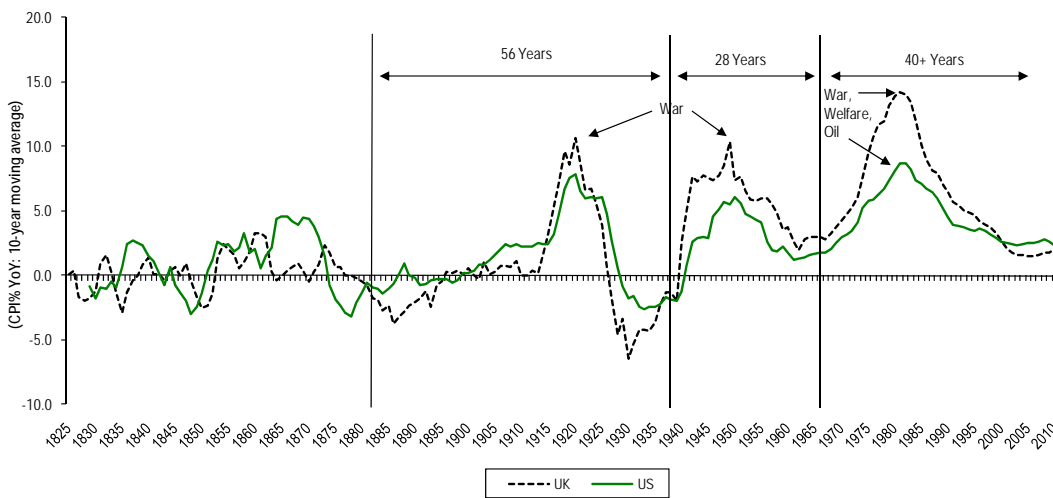
We are currently in the midst of both **secular** and **cyclical** trends. Secular trends are long-term (they normally have a duration of 30-70 years) and include demographic shifts and industrial or information revolutions. Cyclical trends, on the other hand, are shorter (they normally last anywhere from a number of months to a few years) and include economic, liquidity, and technology cycles. Understandably, markets and market participants tend to grasp cyclical trends better than secular trends; in fact, during our lifetimes we have experienced a number of short-term cycles and have been able to study and understand them with the benefit of hindsight (see Figure 1 for an example). Because secular trends, while well-documented, typically exceed the horizon of our life experiences, they tend to be talked about but not as well-understood.

Figure 1: Cyclical Cycle: Yield to Worst for the Credit Suisse High-Yield Index



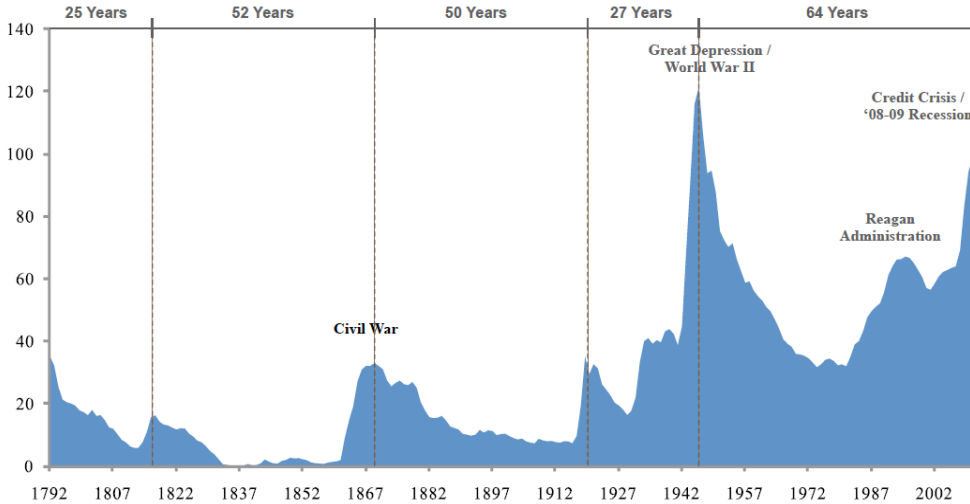
Source: Credit Suisse, Bloomberg

Figure 2: Secular Cycle: U.K. and U.S. Consumer Price Inflation 1825-2009



Source: Credit Suisse

Figure 3: Secular Cycle: U.S. Federal Debt as a Percentage of GDP Since 1792



Source: USGovernmentSpending.com

The so-called “Debt Supercycle” is a secular trend that we must investigate if we are to understand the causes of the current G7 slowdown and the substantial debt burden much of the developed world now faces. The Debt Supercycle began in the 1950s and has primarily been driven by demographics. Beginning approximately 60 years ago, population growth in the G3 began to slow, and a shift in the demographic mix occurred— the younger demographic declined in number, while elderly populations grew (see Figure 4). Because aging populations cause a shift in buying patterns (they spend less and save more), economic growth rates slowed (see Figure 5). In order to meet expected returns (or hurdle rates) that matched previous equity returns, companies were forced to increase leverage. In the 1970s, inflation and high interest rates reduced growth rates; however, once the downward trend in inflation and rates resumed, economic growth accelerated. Today, hurdle rates have been set even higher because the decline in rates has increased discount rates, which, in turn, has increased the demand for leverage. As debt must eventually be repaid, this trend will either reverse when demographic drivers reverse, or will end with defaults and restructuring.

Figure 4: Demographic Trends

| Population Growth Trends | | | |
|--------------------------|-------|-------|-------|
| | 1960 | 1990 | 2010 |
| US | 1.67% | 1.06% | 0.99% |
| Europe | 1.00% | 0.40% | 0.08% |
| Japan | 1.19% | 0.53% | 0.02% |

| Age Group % Growth Trends (1960 – 2010) | | |
|---|--------|--------|
| 50+ | US | 34.8% |
| | Europe | 44.0% |
| | Japan | 152.9% |
| 0-19 | US | -28.9% |
| | Europe | -38.2% |
| | Japan | -55.0% |

Source: United Nations

Figure 5: Comparing GDP Growth & Debt as a % of Gross GDP

| GDP Growth (YoY) | | | |
|------------------|-------|-------|-------|
| | 1980s | 1990s | 2000s |
| US | 3.4% | 3.2% | 1.8% |
| Europe | 2.2% | 2.0% | 1.1% |
| Japan | 4.6% | 1.5% | 0.8% |

| Debt as a % of Gross GDP | | | |
|--------------------------|--------|--------|--------|
| | 1980s | 1990s | 2000s |
| US | 195.4% | 244.5% | 320.1% |
| Europe | 31.9% | 37.1% | 52.7% |
| Japan | 65.3% | 92.6% | 178.6% |

Sources: International Monetary Fund (“IMF”), Bloomberg

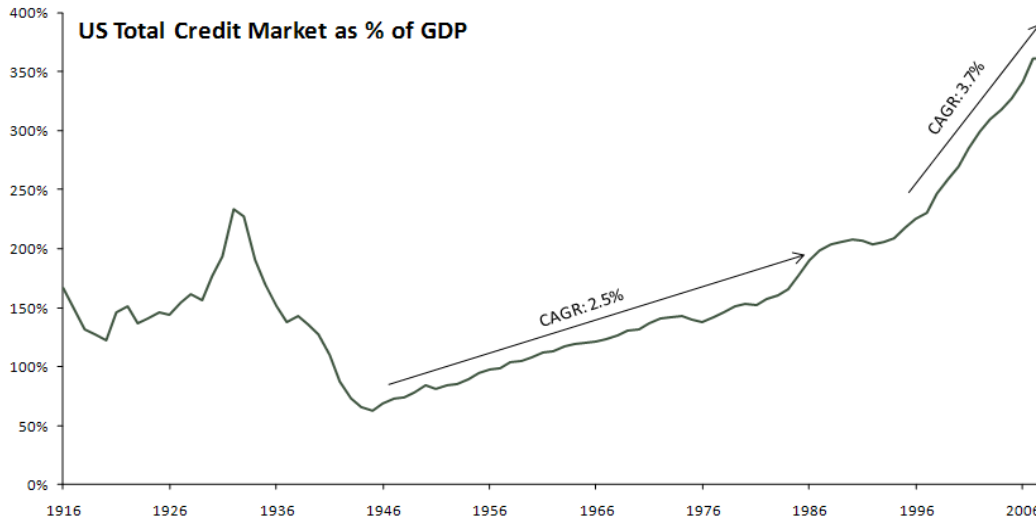
Note: Debt as a % of Gross GDP
 - US Total Debt
 - Europe Total External Debt
 - Japan Total Government Debt

So, in recent decades, as populations aged and consumption slowed, companies were forced to respond to this decline in consumption by increasing leverage (or borrowing). In other words, companies have been borrowing from *future* consumption to make up for the lack of *present* consumption in the marketplace.

EQUITY MARKETS UNDER DEFLATIONARY PRESSURE

Until the 2007 recession, there had been no shortage of credit to fuel the Debt Supercycle. Credit began to expand at a high velocity in the mid-1980s, soon rising above even the Post-War growth rate (see Figure 6). The development of the securitization market contributed to this, as the fractional banking system, controlled by the central banks, was growing at an annual 2.5% rate and controlled by the Federal Reserve. As the shadow banking system (or capital markets) expanded, thus providing a credit facility based on market demand rather than central bank policy, the securitization growth rate rose to 3.7%. Since 1990s to the present, the credit growth rate has increased by 50%. From the 1980s to the early 2000s, although intrinsic demand slowed because of aging populations in the G7, demand due to credit availability increased rapidly, resulting in above-average consumption patterns. We refer to the difference between these two kinds of demand as **excess consumption**— the credit-fueled consumption outpaced actual consumer demand.

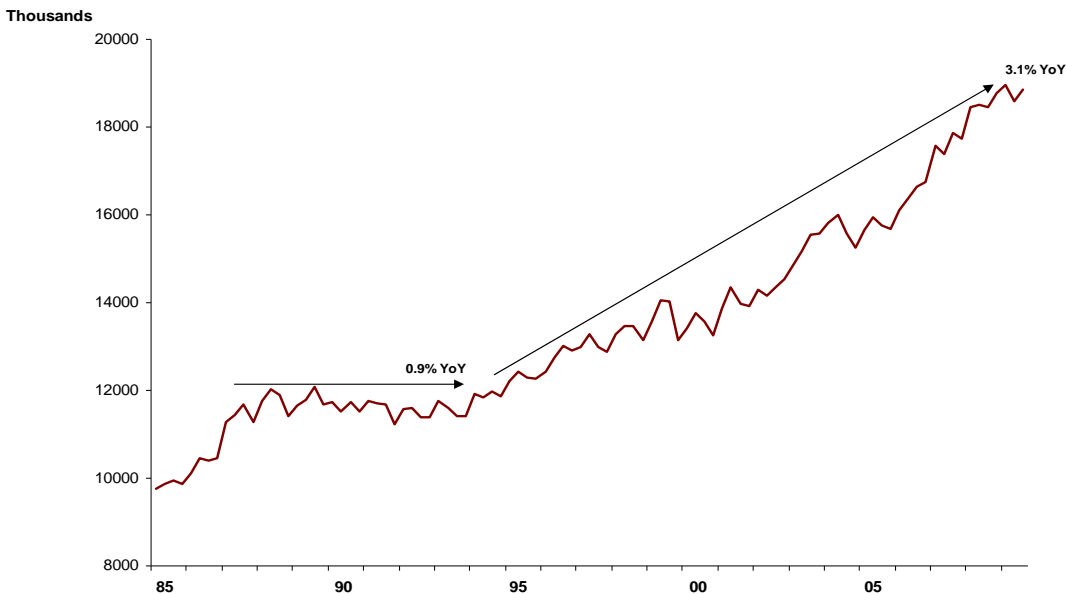
Figure 6: U.S. Total Liquidity



Source: Credit Suisse

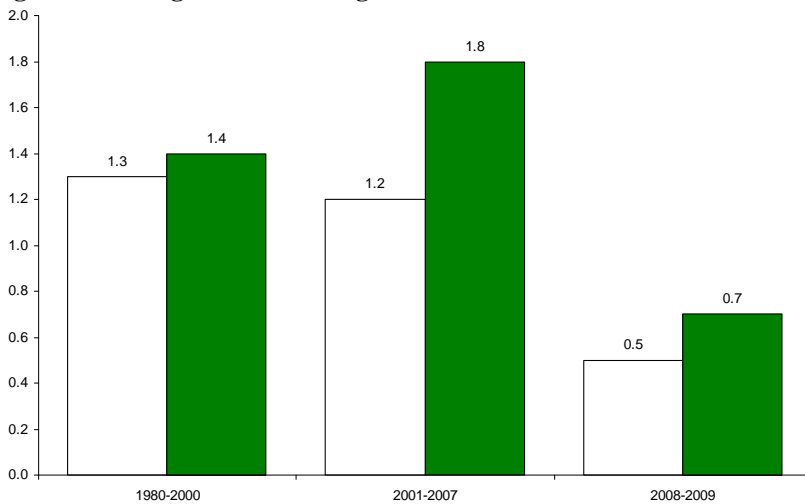
This excess consumption manifested itself at the respective “weakest links” of the financial systems in the U.S. and Europe: housing in the U.S., and sovereign borrowing in the European Economic Union. Because the U.S. is one of the few lending systems in the developed world where home mortgage loans are non-recourse, housing is the most lax form of credit, and lending capacity in that sector grew with leverage from 20% down to 0% down in less than 15 years. Housing is now experiencing significant overcapacity (see Figures 7 and 8). In Europe, risky peripheral countries (Greece, Portugal, Ireland, and Spain) eagerly took advantage of cheap loans from core European countries; however, as we know from the current sovereign debt crisis, the risk associated with these peripheral countries was mispriced, and core sovereign lenders ultimately lacked the reserves to support the weaker countries, resulting in excess demand.

Figure 7: U.S. Total Vacant Housing Units



Source: Strategas

Figure 8: Average Annual Change in Household Formation & Annual Average Level of Housing Starts

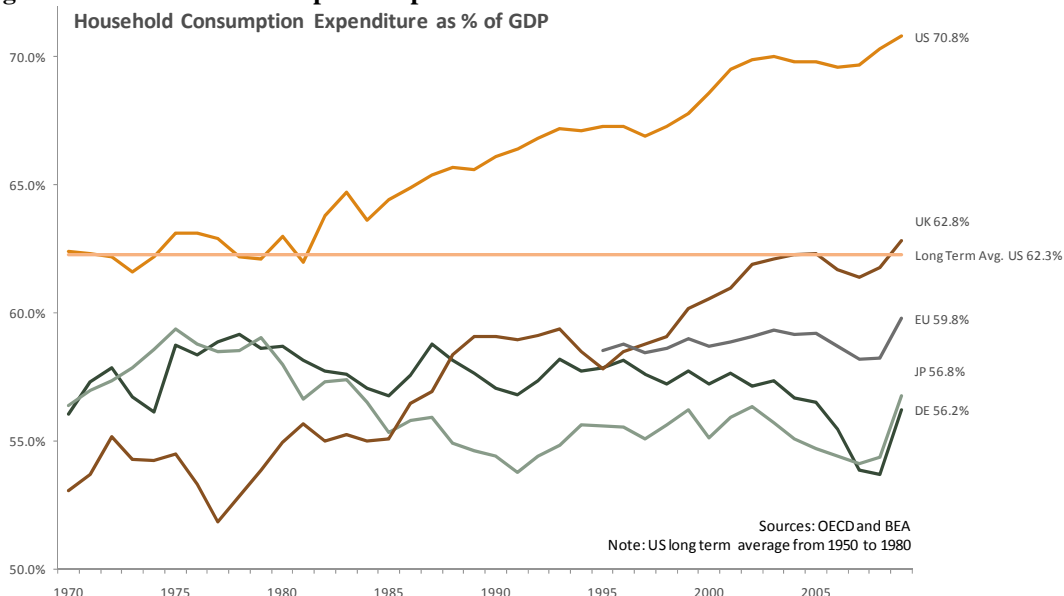


Sources: Haver Analytics and Gluskin Sheff

Now, we know that borrowed consumption, or debt, must eventually be paid back, and we also know that when debt cannot be paid down, it creates a slowdown in the market and leads to the withdrawal of credit. This is exactly what happened during the 2007 recession in the developed world: GDP was negative at the beginning of the recession, and as the recession progressed, GDP declined 4.6%. The low inflation rate could not overwhelm the decline to register total GDP growth, leading to the largest decline in GDP dollars since World War II, and, more significantly, the contraction of credit.

As a result of this, the G7 economies are now restoring their saving rates—the excess housing capacity in the U.S. has resulted in an approximately 30% (Case-Shiller index) adjustment in prices to reflect the supply/demand mismatch. For the total U.S. economy, excess growth is exemplified in consumer expenditure as a percent of GDP, which stands at 71% (much higher than the OECD average of 60-62%). See Figure 9). As we know, the European peripheral countries (Greece, Ireland, Italy, Portugal, and Spain) are struggling to meet their liabilities. While these countries were once able to borrow at a subsidized rate equivalent to what it costs for Germany to borrow (i.e., the best quality in the EC), their cost of borrowing has been repriced to reflect their actual risk.

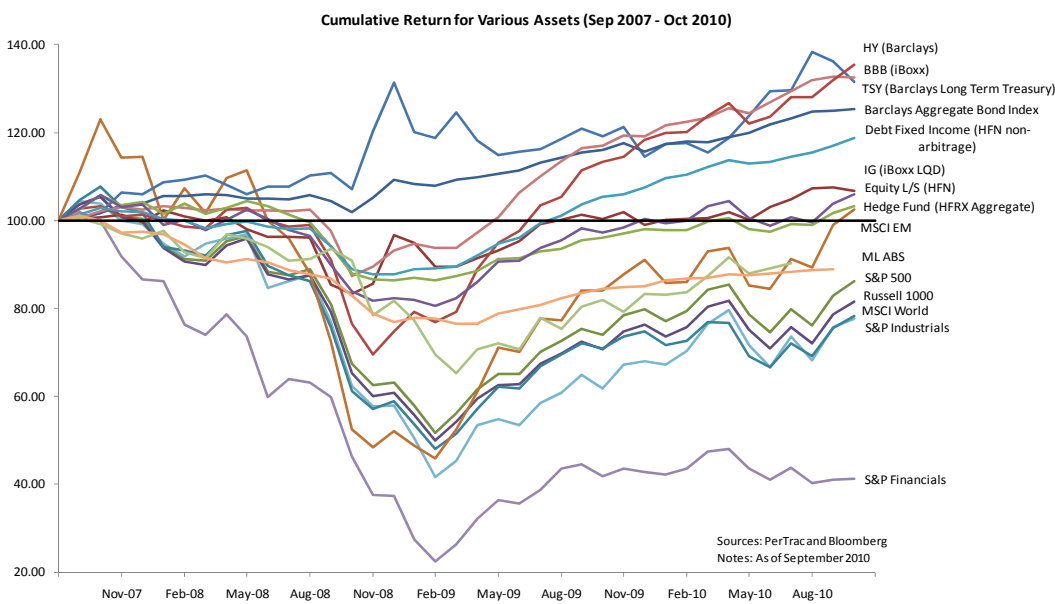
Figure 9: Household Consumption Expenditure as a Percent of GDP



Sources: Organisation for Economic Co-operation and Development (“OECD”) and Bureau of Economic Analysis (“BEA”)

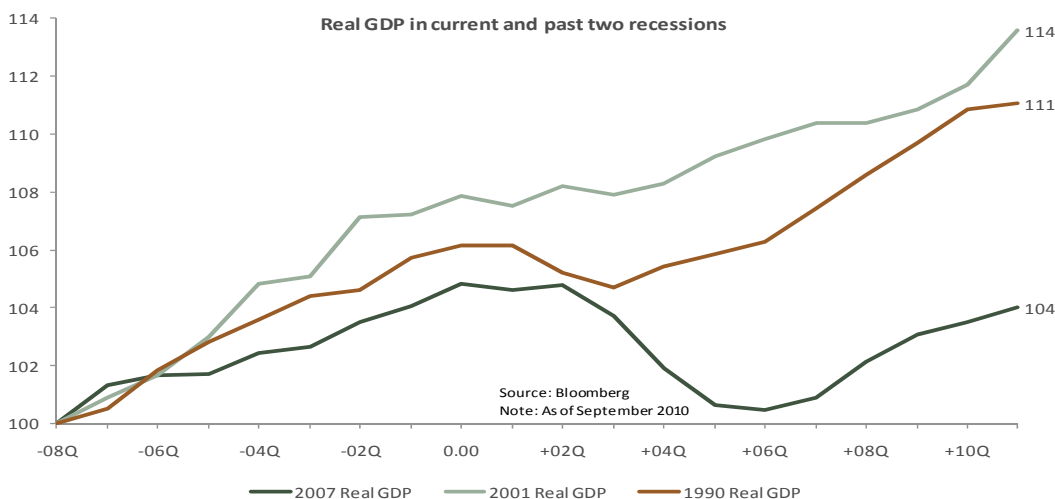
Today, because credit is being withdrawn and, as a result, consumption has decreased, certain assets are declining in value. We know that capital markets, particularly the equity markets, reflect the present value of the productive stock in the economy, not idle capacity. Because of the excessive leveraging, the economy now faces a certain capacity that is servicing nonexistent demand, and we will refer to this as **impaired capacity**— capacity that is on the books but really has no value. (Note that this definition of “no value” only extends to the foreseeable future of around 2-3 years, because demand and pricing are unclear beyond that horizon). Although asset deflation in overall valuations is declining, impaired capacity values vary from industry to industry (see Figure 10), as an industry’s impaired capacity is proportional to its excess capacity. For example, because of regulatory decisions (reduced leverage) and reduced activity in housing/consumer credit securitization, \$100 invested in the financial industry is currently worth 55% of its peak value in 2007 (see Figures 12 and 13). Industrials are valued at an 18% discount of 2007 peak valuation (see Figure 14). However, sectors such as energy (for which global demand is still expanding) have shown no overcapacity, and valuations are not impaired.

Figure 10: Cumulative Return for Various Assets



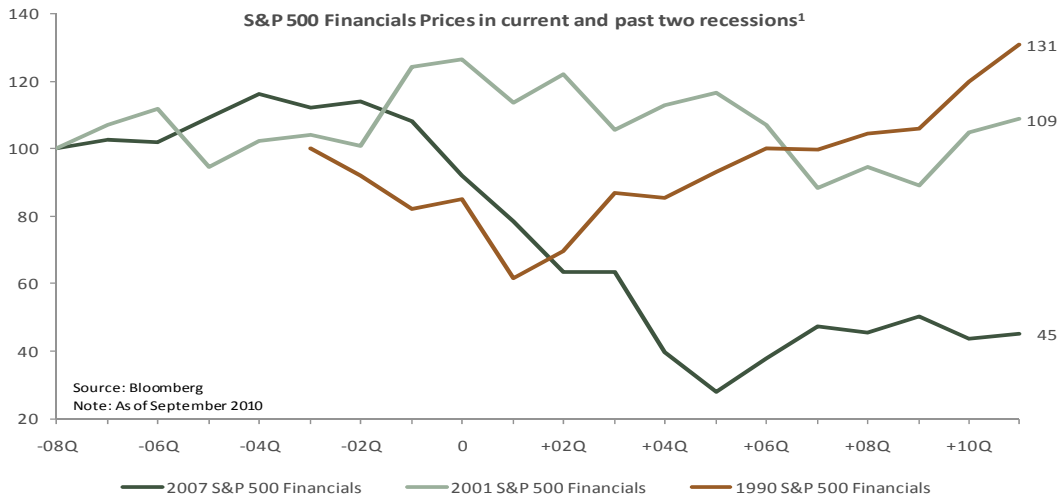
Source: PerTrac and Bloomberg

Figure 11: Real GDP in Current and Past Two Recessions



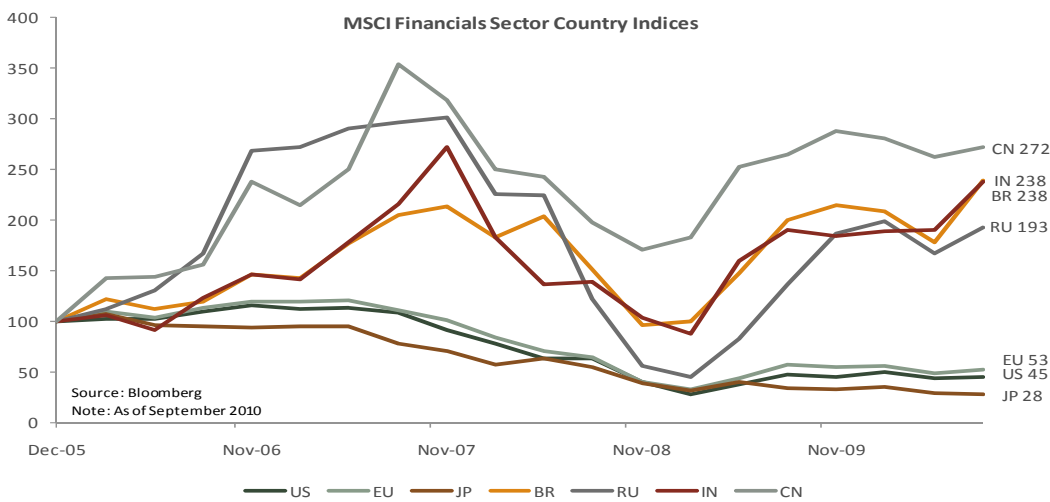
Source: Bloomberg

Figure 12: S&P Financials Prices in Current and Past Two Recessions



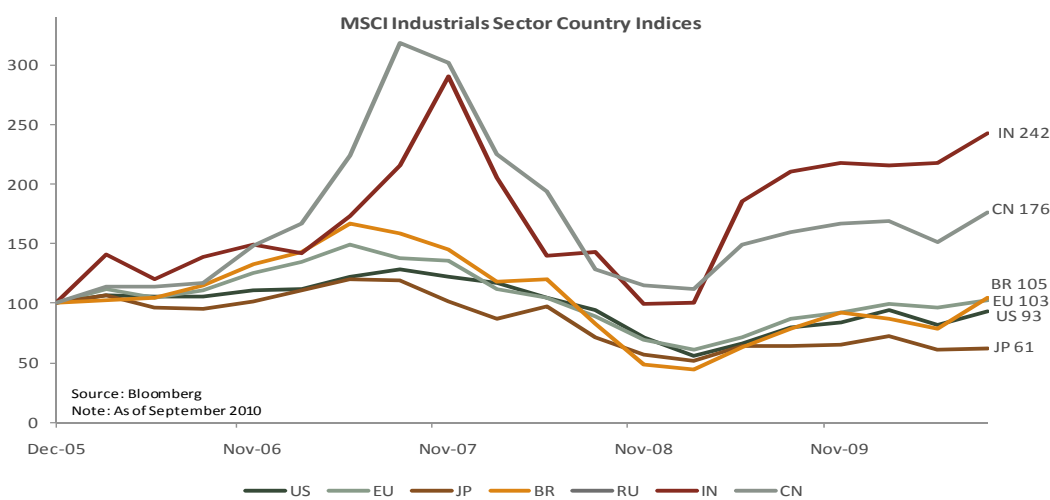
Source: Bloomberg

Figure 13: MSCI Financials Sector Country Indices



Source: Bloomberg

Figure 14: MSCI Industrials Sector Country Indices



Source: Bloomberg

WHAT WE CAN LEARN FROM JAPAN

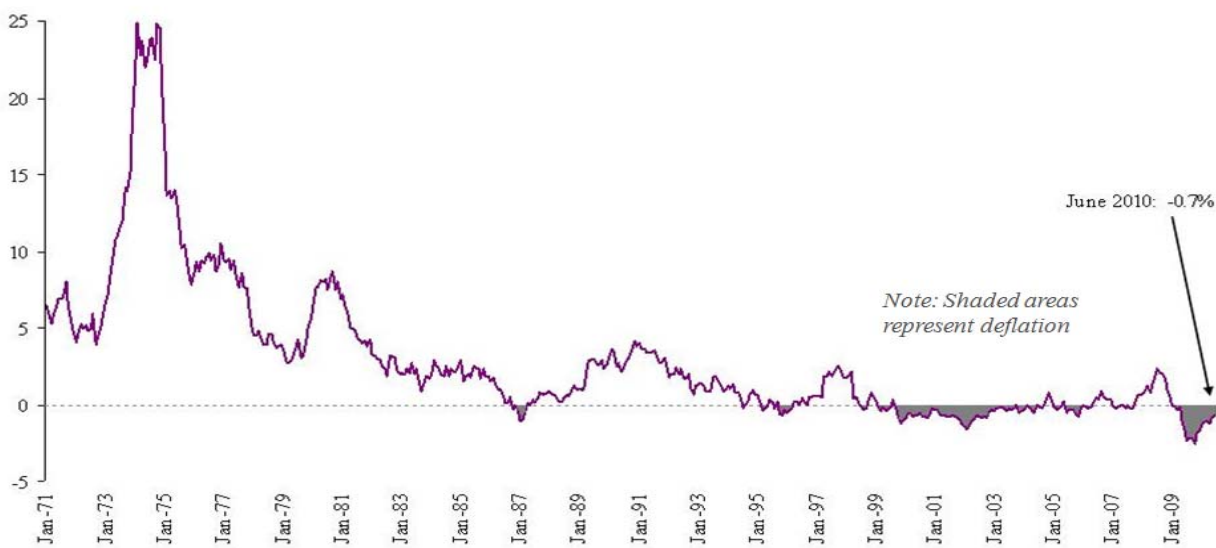
The Debt Supercycle in Japan

We believe that Japan, which has been ensconced in its own Debt Supercycle since 1990, can serve as a sort of harbinger for the U.S and Europe. In the 1970s, Japan began to experience a severe population growth slowdown, and this point of demographic inflection coincided with a rise in inflation. There was a remarkable expansion in credit and asset inflation as a result, and, in response, the Bank of Japan (“BOJ”) increased rates from less than 4.0% in mid-1986 to 8.0% in mid-1989 (in an attempt to control inflation).

The slowdown of the Japanese economy that followed was so significant that the BOJ was forced to aggressively reduce rates and begin quantitative easing. Because so many banks (the so-called “zombie banks”), were saddled with an overwhelming number of bad loans and therefore unable to make new loans, the banking system was effectively non-functioning, and the money multiplier (which measures the process by which money expands through the fractional lending system, explained in more detail below) collapsed (see Figure 18), proving the policies ineffective. In a modern G7 country, credit expands through the fractional lending system. To illustrate: assuming a 10% reserve requirement ratio, imagine that the central bank lends \$100 to Bank A. Bank A, as any rational and healthy bank would, keeps \$10 as reserves (10% x \$100) and lends the remaining \$90, which, at some point, is spent by the borrower and then deposited into Bank B. Again, assuming Bank B is rational and healthy, it repeats this process by keeping \$9 as reserves (10% x \$90) and lending out the remaining \$81. And so on and so forth until the original \$100 lent out by the central bank has been multiplied into much more. This process is what is referred to as the money multiplier and its effectiveness is dictated by velocity, or the extent to which lending institutions are able to participate in the money creation chain outlined above.

Without a functional banking system (such as was the case in Japan), quantitative easing stops at the banks and the money does not reach the economy. Repeated BOJ attempts to re-inflate have not been successful and economic activity in Japan remains stagnant 20 years later. With both monetary easing and fiscal stimulus yet to prove effective, deflation has consumed the Japanese economy, and asset prices have depreciated gradually in tandem for the past two decades (see Figure 15). The Nikkei 225, for example, declined in value by 75.9% from 1990 to Q2 2010 (see Figure 16), and the 10-Year JGB (the Japanese equivalent to the 10-Year treasury) declined in yield from 6.0% in 1990 to 0.9% (see Figure 17).

Figure 15: Japan CPI Nationwide % Change YOY



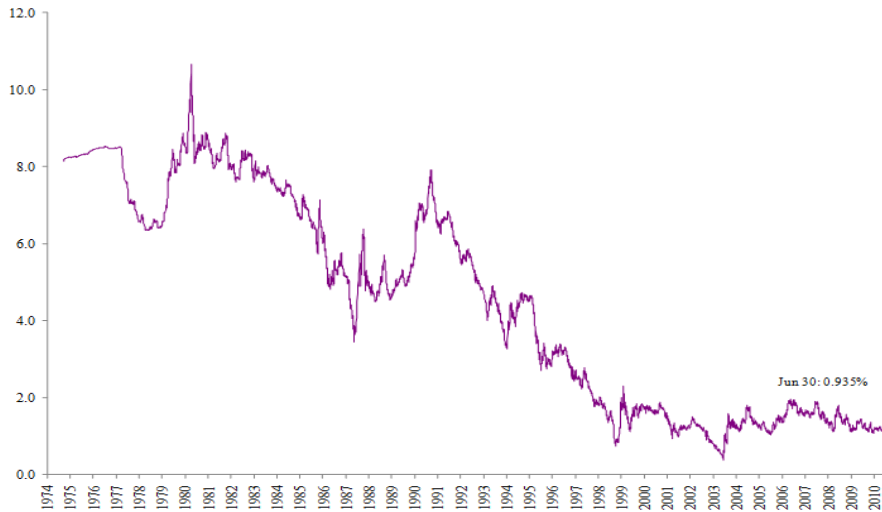
Source: Bloomberg

Figure 16: Nikkei 225 Index 1970-2010



Source: Bloomberg

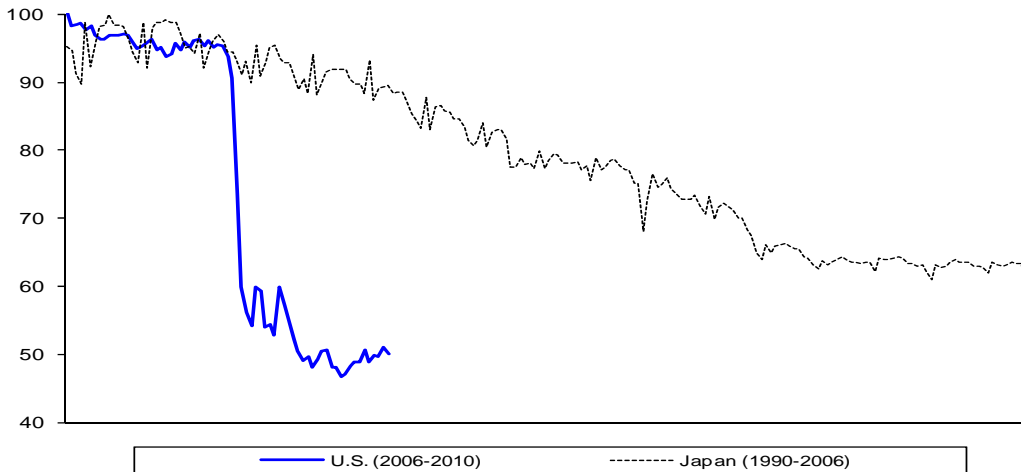
Figure 17: JGB 10-Year Yield 1974-2010



Source: Ministry of Finance Japan

Note: Japanese Government Bond ("JGB")

Figure 18: U.S. Money Multiplier vs. Japan

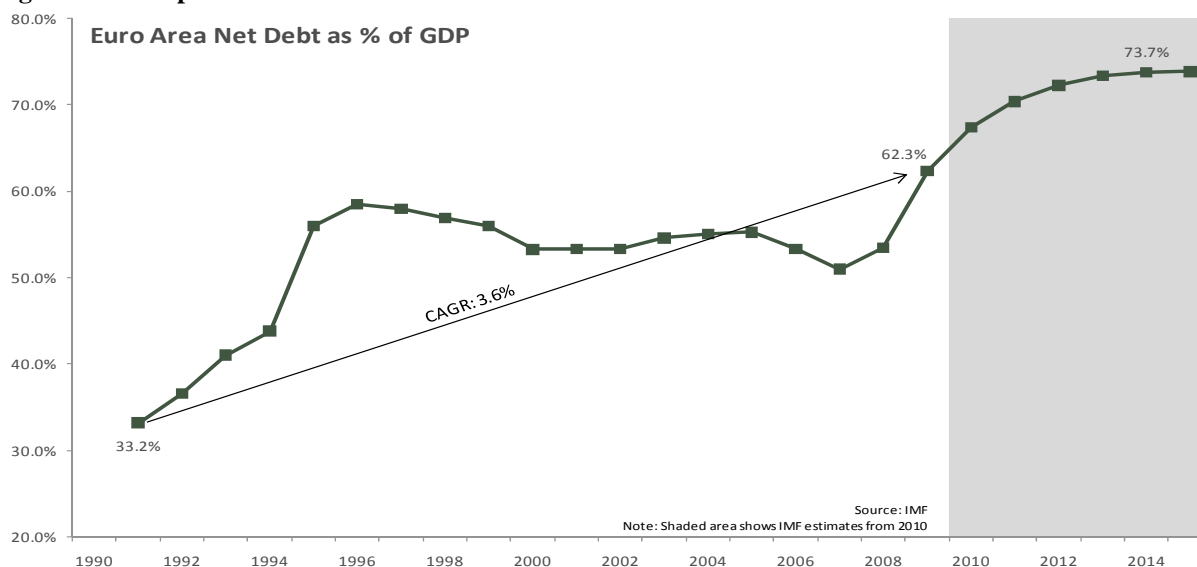


Source: Federal Reserve Bank of St. Louis, BOJ

In 2008, eighteen years after the debt crisis started in Japan, similar events began in the U.S. Most troubling is that the money multiplier has collapsed even more aggressively in the U.S., leading to an extremely unhealthy lending environment. Part of the reason why this has occurred is that U.S. capital markets, already approximately 2.5x the size of the banking system, act as a shadow banking system, and the combination of the banking system and the shadow banking system exaggerated the collapse of the U.S. money multiplier compared to Japan's (see Figure 18). Because capital markets prefer size and liquidity, today's environment has led to the creation of "haves" (large companies with access to financing) and "have-nots" (small and mid-size companies without access to financing) (see Figure 20). In other words, because of the decline in shadow banking due to the financial crisis, credit availability in the U.S. has been reduced dramatically. Although the more traditional banking institutions do have some room to lend, small and mid-size companies have been effectively crowded out; we know that without credit availability, economies cannot shift from the Recovery to Growth phase.

The same story has now commenced in Europe, although with slightly more complexity. Even though the European Central Bank ("ECB") has responded to the debt crisis in Europe in a similar fashion to the U.S. (with stress tests and by providing a liquidity facility), the European response has been different from the U.S. in two main respects. First, while Europe is a monetary union, it is not a fiscal union, so the expectation that Germans will be willing to subsidize Greek and Spanish retirees is proving problematic. In order to be financed externally, the countries of peripheral Europe (which don't have the luxury of high domestic savings like Japan or the luxury of being the largest economy [i.e., reserve currency] in the world like in the U.S.) should not have a Debt-to-GDP ratio higher than 100-120% (see Figure 19). However, the austerity programs (spending cuts and/or increased taxes) that are being implemented to reduce Debt-to-GDP levels are being met with much opposition and resistance.

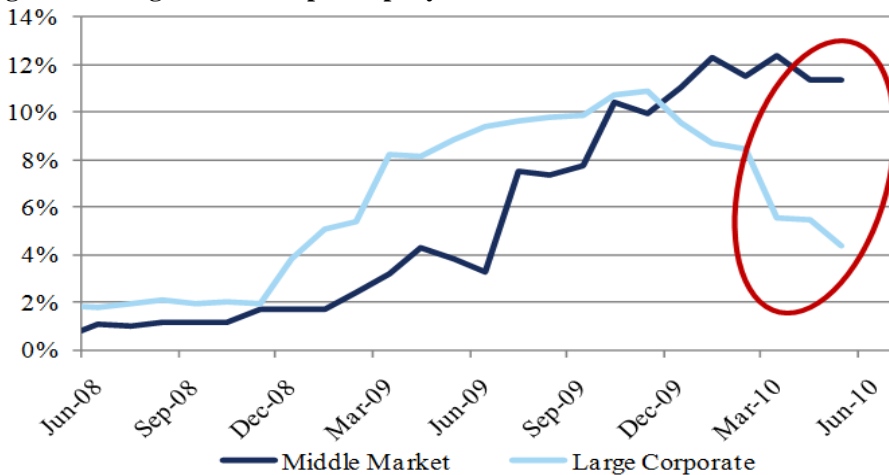
Figure 19: European Debt as a Percent of GDP



Source: IMF

Second, the European banking system, unlike in the U.S., has not recognized losses through market-to-market write-downs but continues to have an at-cost approach, which does not help to free up lending capacity. Given that the European shadow banking system is small compared to the U.S., there are even more companies without access to financing there. Another interesting difference is that Europe, although not shrinking in population like Japan (Japan's estimated growth rate is -0.2%), is just barely growing at 0.1%. In comparison, the U.S. is growing at 1.0%. As seen in Japan, a declining population can have devastating long-term effects on an economy.

Figure 20: Large vs. Mid-Cap Company Default Rates



Source: Standard & Poor's Leveraged Commentary & Data ("S&P/LCD")

We can conclude from Japan, then, that a fundamental shift in demand is a significant force that can result in asset deflation and the reduction in the cost of capital and asset returns for decades. It would also stand to reason that in environments like Japan's in which demand is declining, the optimal strategy is to avoid risk (in contrast to environments in which demand is high and risk is king). In the G3, the entire market is operating under the assumption that we will return to our historical equilibrium. But Japan has taught us that when there is a fundamental shift in demand, things don't go back to the old equilibrium, and we believe investors should not expect a reversion to the mean. We anticipate that the result of the debt crisis in the EU as well as the U.S. will follow a similar pattern to Japan's: both regions face a new era of long-term debt reduction accompanied by slow growth and a high rate of economic restructuring (barring the regional differences). In the current environment, either a shorter economic cycle or a double dip recession is probable. Risk will increase in either of those cases.

Pricing in Impaired Assets

It is important to note that the market in Japan did not immediately adjust to the flood of impaired assets—it took around 20 years to register Japanese impaired assets, and it is still unclear if that process is actually complete—and so we should not expect an immediate market adjustment in either the U.S. or Europe. Indeed, as evidenced by the equity market valuations in those regions, it will take some time for markets to register the full magnitude of asset write-downs. We must keep in mind, however, the significant differences between the U.S., Europe, and Japan. Because the U.S. has a more dynamic labor force and its population is growing, we would expect for the U.S. to experience a faster adaptation than Europe and Japan, which both have declining populations and are experiencing more dramatic overcapacity as a result. While American companies are more likely to accept market forces (and, when these forces dictate, implement layoffs), the American government has responded by employing different forms of easing (monetary, fiscal, and quantitative) to staunch the rising unemployment rate. Rather than allowing supply/demand to reset and resuming a productive economic trajectory at the cost of higher unemployment, these policies are contributing to prolong and exaggerate the imbalances between supply and demand. Indeed, the liquidity pouring into the market is exaggerating short-term asset inflation as a counter to long-term asset deflation, hence prolonging the time it will take to return to equilibrium. The equity market, it seems, is struggling to price these competing forces, resulting in higher overall volatility. In this deflationary environment, though, this is an act that defies gravity, and deflationary forces will ultimately win out, shy of an inflation shock to money supply.

DEBT MARKETS HEADED TOWARD BUBBLE

While equity markets are deflating and impaired assets are slowly being written down, debt markets are unimpaired and now stand as the *de facto* equity. The volatility and downside risk levels in debt markets reflect this new reality.

So, if equities are impaired and deflating and debt has recovered, does that mean that debt is the way to go? All else being equal, yes, debt is the way to go; however, all else is *not* equal. As we have already established in this paper, central banks around the world (EC with Ireland, U.S. with QE II) are introducing an overwhelming amount of liquidity into the global economy; as a result, a number of markets, including the U.S. mortgage market (one of the largest markets in the world), the consumer debt market, and the securitization market, are highly dislocated. The U.S. mortgage market, for example, is still agency-dominated by up to 90% of issuance. Liquidity is flowing into functional portions of the market, including corporate markets, and also to emerging markets in various forms. Sectors have gone from being marginally overvalued to significantly overvalued, and we are **in the midst of an asset bubble** in the debt markets. This asset bubble is manifesting itself in absolute spreads, but rates, currently at historic lows in the G7, are also another form of risk. We believe that this is only sustainable until equilibrium; there is significant inflation risk from that point on. Treasuries of sovereign G7s trading at 60% of face value would not be unreasonable under certain inflation assumptions, and, given the current asset liabilities gaps, most of the market would not be comfortable with this. After all, fixed income assets have been used to meet intermediate liabilities, as increasing rates can be a threat.

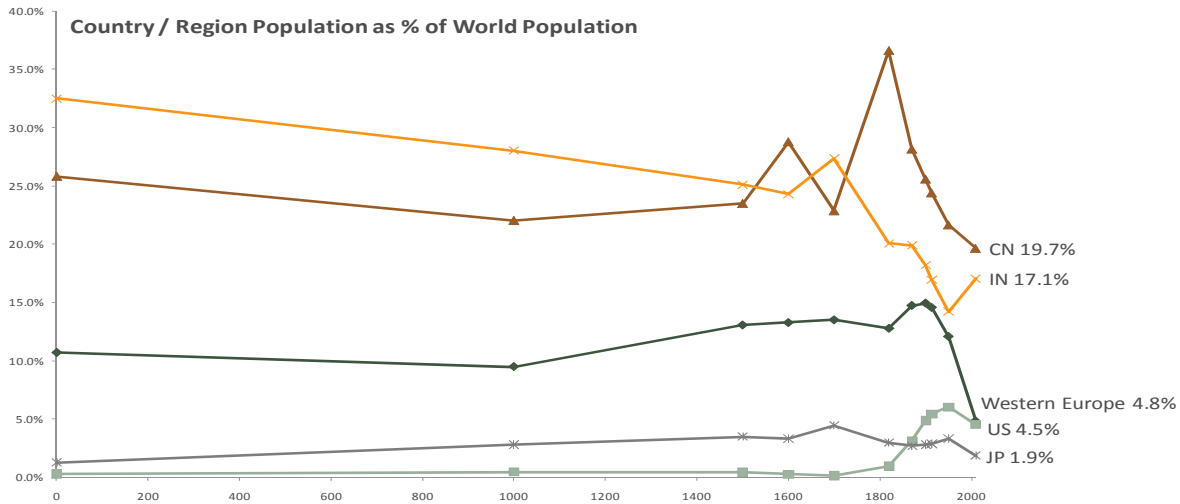
AFTER FIVE CENTURIES, A RETURN TO A STEADY STATE

In the developed economies, then, the headwinds presented by reduced credit, high unemployment, and significant overcapacity, on top of the high debt burden, are likely to prove overwhelming. While the historical expectation is that Recovery implies regaining old highs, given the extent of the impairments in the current environment, we do not expect this in developed economies. In fact, we believe that higher risk, lower valuations, and lower returns are likely over time in the developed world. In contrast, as has already been well-established in this paper, emerging economies are on the rise, and we believe this is due to a *very* long-term (i.e., two millennia in the making) global trend of reversion to the steady state.

From 0-1000 AD, the GDP of a civilization was more or less proportional to its share of the global population; thus, average per capita income was roughly the same across the globe (see Figures 21, 22, 23). However, with the emergence of trade in Europe, average per capita incomes there began to increase significantly relative to the rest of the world, beginning with Italy in the 1500s and the Netherlands in 1600-1700, with France, Portugal, and the United Kingdom following suit. This increase was further exaggerated by the industrial revolution in the Western World. The result was that, by 1900, 15% of the global population (the G7) controlled 50%-60% of the global GDP (see Figures 21, 22).

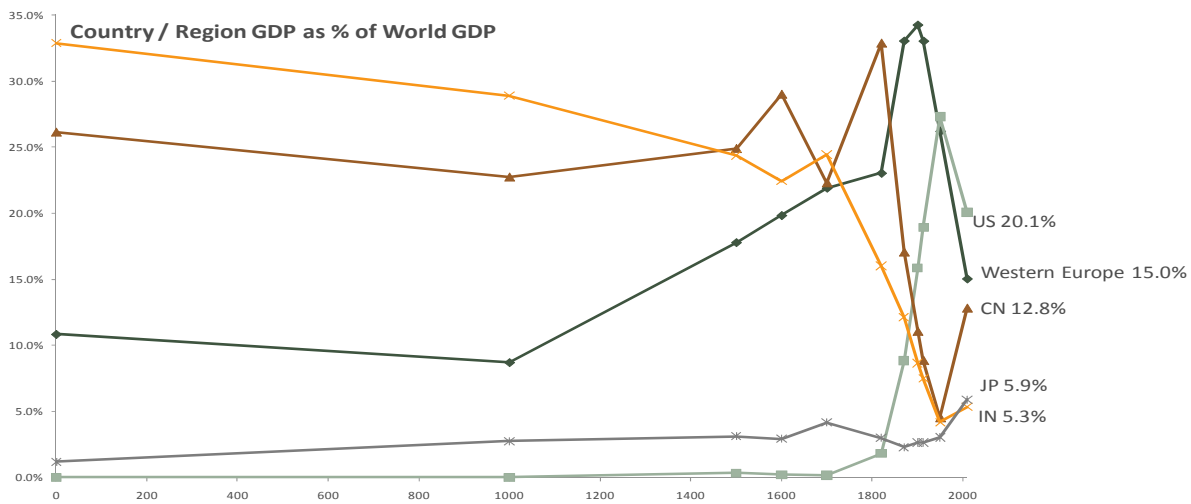
However, beginning in the 1970s, trade and expansion of industrialization in the developing economies began to normalize GDP per capita between the G7 (Europe, Japan, and the U.S.) and China, India, and the rest of the quickly-developing world. It seems, then, that the 1500-2000 anomaly of disproportionate GDP growth relative to population is slowly returning to the more proportional pre-1700 levels. We believe that this signifies a transfer of wealth back to a steady state. The American phenomenon of going from the lowest per capita income to the highest in less than 100 years (1850-1950) is repeating itself in the developing world, and with the same catalysts: significant increase in trade, productivity, and innovation, availability of capital, and strong educational systems.

Figure 21: Country/Region Population as a Percentage of World Population



Source: OECD, World Bank

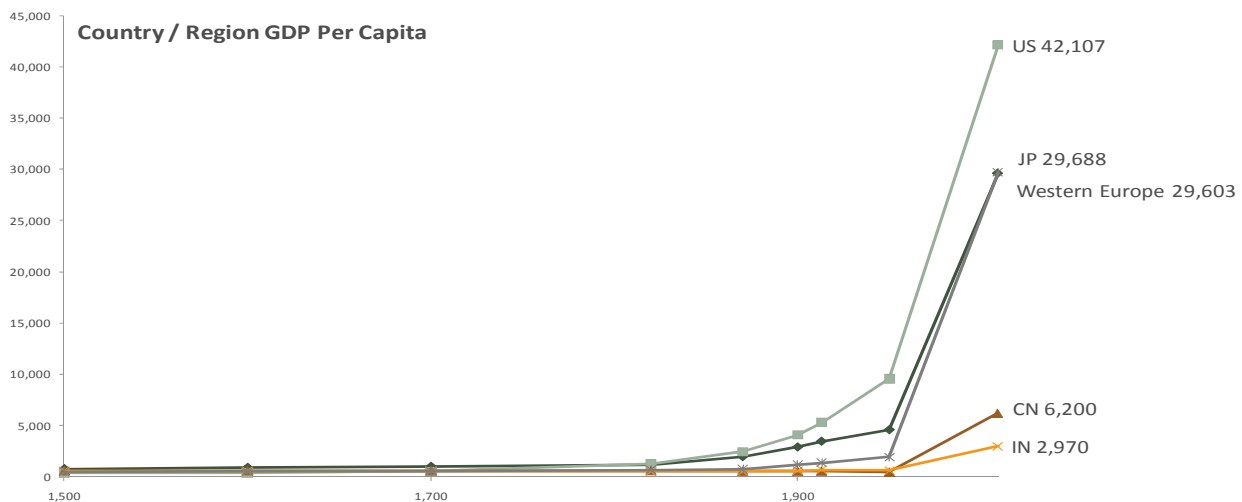
Figure 22: Country/Region GDP as a Percentage of World GDP



Source: OECD, World Bank

Note: Data up to 2000 from OECD in 1990 International Geary Khamis Dollars; Data from 2000 from World Bank in 2005 International Dollars.

Figure 23: Country/Region GDP Per Capita



Source: OECD, World Bank

Note: Data up to 2000 from OECD in 1990 International Geary Khamis Dollars; Data from 2000 from World Bank in 2005 International Dollars.

We believe that half of the world's population will soon experience the prosperity that just 15% of the world has been experiencing over the last 150 years, and we also believe that this presents an unprecedented opportunity for building and accumulating wealth. Because developing economies, with their rapidly-growing populations, are facing growth in demand and lack of capacity to meet that demand, asset inflation in these regions should be considerable. We believe going long growth in emerging markets is an optimal strategy, as we expect that equities will be very productive over the long run. Because volatility still may prove significant, however, we believe it is also important to reserve a role for risk management.

If demographics, productivity, innovation, trade, and capital are the driving forces behind GDP growth, what will the world look like from a demographics perspective in 30 years? The U.S. is expected have the second-highest demographic growth rate after India, with China ranked fifth. We do not believe, however, that the U.S. is in a doomed place: trade wars, policy failures, and restriction on capital flows are all risks, but history teaches us that these have always been short-term factors, and that equilibrium will eventually be achieved.

UNPRECEDENTED OPPORTUNITIES AHEAD

The current environment— in which equity markets face deflationary forces and debt markets face bubble conditions— is highly uncertain, with high volatility and underpricing of risk. What, then, is the optimal investment strategy for such an environment? In general, long-term shorting of equity can be a very productive strategy, but it can also be tedious due to the volatility; in Japan, for example, long-term shorting was a terrific trade, but it can test conviction in the short-term. However, the flip side of this is also true: it is no longer productive to go long a depreciating asset. Retail markets have absorbed this, but institutional markets have not. The challenge is that we need modified investment tools, and we believe that the key is to go neutral on equity. Asset repricing, defaults, and M&A activity (a form of both deleveraging and also consolidation) are the most bankable and strong forces. In an environment of such significant risk, alpha is still at an unprecedented magnitude (7.0%-15%). This, then, is an alpha-centric opportunity, and while the wide swings in the short-term would produce big gains (or losses) in case of beta strategies, the optimal investment solution in asset-impaired and bubble conditions is more alpha and far less beta. The new world— in which investment opportunities are no longer solely dependent on U.S. economic growth and asset classes represent more than just differences in beta— offers real choice and, we believe, extraordinary investment opportunities.

If you have questions, comments or other feedback on this piece, please contact Sam DeRosa-Farag at sderosafarag@morgancreekcap.com or Investor Relations at InvestorRelations@morgancreekcap.com.

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Risk Summary

Investment objectives are not projections of expected performance or guarantees of anticipated investment results. Actual performance and results may vary substantially from the stated objectives with respect to risks. Investments are speculative and are meant for sophisticated investors only.