Invited Editorial

Are long-term trends changing?

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Introduction

This paper engages in long-term forecasting of equity prices and bond yields. While short-term trading has become more popular recently due to growing assets under the management of hedge funds, most money managers must have a long-term investment horizon to better serve their clients. Since long-term trends of rising stock prices and falling interest rates might be entering the final stage as the nominal interest rates approach 0 per cent, we foresee the following alternative new trends emerging: (1) Goldilocks — a continuation of a 25-plus-year trend of rising equity prices accompanied by low and stable interest rates; (2) Stagflation — 1970s-like rising interest rates and volatile but stagnant stock market; or (3) Deflation — 1930s-like deflation with zero nominal interest rates and falling equity prices. Our discussion leads to a conclusion that policy makers (central banks and legislators) should be able to maintain the Goldilocks scenario, but we caution that any policy errors could easily tip the financial markets into stagflation or, even worse, deflation. Our analysis is based mostly on US fundamentals; however, due to recent high correlation among global financial markets and the importance of the US economy, the implications are global.

The long-term trend since the early 1980s

Since the early 1980s, the S&P 500 index has been on an uptrend, reaching an all-time high as recently as late 2007 (see Figure 1), while the yields on 10-year US Treasury

bonds have been falling (see Figure 2). In hindsight it appears as though it was easy to make steady positive returns in equities. There have, however, been many historical events that contributed favourably to financial markets. To name a few: in the mid-1980s Japan agreed to revalue the yen versus the US dollar; in the early 1990s Communism fell and Eastern Bloc countries experimented with market economy models; in the mid-1990s the US Congress passed NAFTA, which started a new wave of free trade agreements; global markets successfully endured the emerging market crisis of the late 1990s and the tech stock market bubble of the early 2000s; global financial markets successfully emerged from the 9/11 terrorist attack while policy makers relatively successfully contained other major terrorist activity. Thereby, there have been many challenges for the financial markets over the last quarter of a century.

Nevertheless, the next quarter of a century will present new challenges, and the fate of financial markets will greatly depend on the ability of policy makers to successfully address those challenges. To begin with, the year 2008 has started as the worst ever for the stock market, mostly due to the burst of a housing bubble in the United States and the resulting credit crunch globally. More importantly, the first generation of baby boomers has just begun to exit the workforce and retire. Over the next 20 years retiring baby boomers are expected to create serious budgetary problems for the United States. Also, the geopolitical situation is likely to continue to be a problem, while energy prices are likely to remain elevated. Finally,

Figure 1 Historical price of S&P 500

Figure 2 Long-term trends in interest rates

current environmental issues could escalate into a serious problem.

As a result, our forecasting ability is limited to isolating likely scenarios based on policies that address the challenges of the early 21st century. In this paper we do not engage in econometric forecasting.

Price stability risks

Considering all these expected (and unexpected) challenges, two major risks for financial markets are: (1) the downside risk of falling prices — deflation and (2) the upside risk of rising prices — inflation. We define the consumer price index (CPI) as a

consumer liquidity measure: the ability of corporations to unload increasing quantities of goods without having to lower the prices. Similarly, we view the producer pricing index also as a business liquidity measure: the ability of producers to unload increasing quantities of raw materials without having to lower the prices. Ultimately, inflation measures the relationship between the consumer demand and the supply of goods/services.

A closer look at the US CPI components with relative weights improves our forecasting ability. Currently, housing costs represent 42.7 per cent of the CPI, while the owners-equivalent rent alone represents about 23.83 per cent of the CPI index. Food and beverage expenses weights additional 15 per cent, while transportation and medical care weight 17.25 per cent and 6.28 per cent, respectively. We will focus on these categories to explain our primary risks of stagflation and deflation.

The downside risk — Deflation

Deflation is a situation where prices are falling — negative inflation. Nominal interest rates are zero or close to zero, while real interest rates are high. Deflation can be supply driven or demand driven. Supply-driven deflation can result from overinvestment or overproduction of a particular good. It usually results in a temporary slowdown in production until the excess inventory is removed. A recent example is overinvestment in telecommunication equipment during the dot-com bubble of the late 1990s. Supply-driven deflation, however, is usually contained within the specific industry and rarely causes headline deflation.

The demand shock usually causes the chronic headline deflation — the most dangerous situation for the financial markets. Not surprisingly, the chronic deflation was one of the characteristics of the Great Depression of the 1930s. Consumer demand can sharply collapse primarily due to severe job losses and high unemployment. Job losses generally discourage immigration (or cause negative net immigration) and also put off family creation, both causing slow or negative population growth and enforcing the vicious circle of deflation. High real interest rates encourage savings and consequently further reduce consumption and investment. Asset values participate in deflation and further erode consumer demand.

Japan is one of the most recent examples of deflation. Since the early 1990s, Japan had flat to falling CPI (see Figure 3) and frequent recessions, even as the rest of the world was booming in the late 1990s and more recently in the mid-2000s. Before the emergence of deflation, Japan had a property price bubble and a stock market bubble, partially caused by strengthening currency in the late 1990s. In addition, Japan had negative labour force growth (Figure 4) during the deflationary period. In a sense, Japan is leading industrialised

Figure 3 Change in Japanese CPI

Figure 4 Labour force in Japan from 1980–2007 and prediction to 2030
Source: Economics Intelligence Unit

Figure 5 Deflationary scenario

nations in demographical trends of aging population.

What are the risks of deflation in the United States over the next 10–20 years? Unfortunately, the risks of deflation are somewhat elevated. Consumer demand could sharply drop due to several reasons: (1) The United States could experience negative labour force growth rates like Japan due to retiring baby boomers; (2) the United States is barely entering the down-slope of the real estate bubble, another similarity to Japan pre-deflation; (3) US consumers are heavily in debt; (4) the Shelter component of CPI could significantly fall due to extensive inventory of unsold homes that are likely be

available for lease if not sold. Therefore, excess housing inventory, shrinking labour force, and debt burden are all potentially deflationary, as all major components of the CPI are likely to fall: housing, food/beverage and transportation. Medical care costs are likely to remain elevated due to demographics unless legislation changes the current structure of medical care.

During one of the Fed easing cycles, the Federal Funds rate would be at 1 per cent, while the 10-year T-Bond yields would continue to decrease (see Figure 5). At that point, Fed might be forced to lower the Federal Funds rate to 0 per cent, while the 10-year T-Bond yields would continue to

collapse to close to 0 per cent as well. Essentially, economic data would not respond positively to monetary policy stimulus. Once Federal Funds rate reaches 0 per cent, Federal Reserve essentially loses the ability to boost the economy with lower interest rates, relies only on quantitative easing and likely falls into a liquidity trap. Soon thereafter, the yields on long-term Treasuries would approach 0 per cent and remain at that levels until an effective policy is enacted. The stock market would deflate as well, possible crashing in 1929-like style. It is unlikely that the global economy would decouple from a US stock market crash and deflation since most of the developed world is facing similar demographical challenges. In addition, emerging countries would likely face serious political instability. Consequently, policies that assume that the global consumer would replace the US consumer and that the US economy would survive as an exporter are likely erroneous.

The US economy faces a serious deflationary threat due to a high incidence of baby boomers retiring over the next 20 years. An exodus of the labour force will leave the US aggregate demand vulnerable to sharp contraction. In addition, there are potential generational bubbles in equities and real estate. Fortunately, the United States has been a desirable destination for younger immigrants; however, recent immigration has been mostly illegal. US legislators will have to pass an immigration policy to replace the labour force with legal immigrants who possess appropriate skills. The inability of Congress to address immigration issues due to political backlash and ideology will leave the US economy vulnerable to deflationary slowdown.

The upside risk — Stagflation

Stagflation is a situation where inflation and inflation expectations are high, while the economic growth is stagnant. From the mid-1960s to the early 1980s, the United States

has experienced a prolonged period of rising interest rates due to rising inflation, a stagnant stock market and several recessions. Tokic (2007) explains that demographical factors greatly contributed to rising inflation during this period. Specifically, as baby boomers entered the workforce and demanded more goods and services, rents increased along with other costs, causing high inflation and rising interest rates. Due to high interest rates, homebuilders postponed housing starts until interest rates decreased, which trickled down to economy and caused high unemployment. Consequently, economy entered frequent recessions. Eventually, as all baby boomers entered the workforce and eased the population-driven demand shock, the inflation expectation decreased in the early 1980s and stagflation essentially ended.

What are the risks of US stagflation over the next 10–20 years? Essentially, there would have to be another population-driven demand shock. Specifically, the labour force in the United States would have to significantly increase, along with the demand for jobs. Current US demographics do not suggest that there is a population shock on the horizon. On the contrary, retiring baby boomers will actually shrink the labour force, and the generation following the baby boomers is much smaller. The retirement of baby boomers will, in fact, be a major risk to the US economy over a longer period of time. One of the solutions to the risk associated with retiring baby boomers is to promote immigration to the United States and essentially import the labour force. A combination of less restrictive immigration policies and anti-globalisation policies whereby US policy makers decide to restrict outsourcing to promote domestic job creation would essentially create a domestic demand shock — a prerequisite for high inflation. In addition, anti-trade policies would cause a negative supply shock, escalating inflation worries. The other major risk for the US economy is the troubled

Figure 6 Stagflationary scenario

Figure 7 Goldilocks scenario

housing market. The spike in the new labour force due to immigration would increase demand for housing and likely stabilise the home prices, while increasing rents. Since housing alone accounts for 42.7 per cent of CPI, the inflation would remain elevated. A slower growth portion of the stagnation formula would most likely result from falling or stagnant equity prices due to the negative effect of anti-globalisation policies on corporate profits and higher interest rates.

Since less restrictive immigration policy combined with protectionist policies would likely result in higher inflation, the Federal Reserve would have to tighten/ease interest rates in a rising higher-highs-higher-lows trend (Figure 6), which would dampen the economic growth outlook. Long-term Treasury yields would begin an uptrend as well, anticipating higher inflation in the future, which would reduce the attractiveness of equities. Consequently, the

stock market would stagnate and remain very volatile and news driven. Eventually, in a more distant future, inflation expectations would decrease and the stock market would begin another major bull market.

Goldilocks scenario

In the Goldilocks scenario, the Federal Reserve would keep the Federal Funds rate between 1 per cent and 5 per cent in successive easing-tightening cycles to boost the economy and restrain inflation (Figure 7). The yields of 10-year Treasury Bonds would range between 3 per cent and 5 per cent. Consequently, interest rates would remain historically low and stable, suggesting steady economic growth. As a result, the trend of rising stock prices would continue. The likelihood of this scenario depends on legislative policies, particularly on immigration and trade. Immigration policy

would have to be loose enough to ensure continuous growth in the labour force, yet restrictive enough to prevent a sudden population explosion. Trade policy would have to be open enough to ensure continuous trade and capital flows, yet closed enough to ensure that new immigrants had job opportunities with decent wages to keep the unemployment rate down and consumer demand strong.

Policy and market implications

Policy makers, central bankers and legislators will have to address major risks to the US economy, which unfortunately appears to be deflationary. As a scholar, current Fed Chairman Bernanke actively researched the Great Depression and published on the downside risks (Bernanke, 2003). Money printing presses and the US dollar devaluation appear to be major tools in combating deflation. A liquidity trap is, however, a major risk when considering a loose monetary policy. For example, Japan was not successful in combating deflation even with zero nominal interest rates, quantitative easing and a falling yen. A New Deal-like government intervention seems more appropriate in creating jobs and boosting consumer demand. Legislators, however, would have to pass an immigration reform to essentially import the labour force to replace the retiring baby boomers and to fill 'new openings'. In addition, a more protectionist trade policy would have to be in place to create US jobs. As previously explained, looser immigration policies and protectionism could easily lead to stagflation — which is the lesser of two evils. US policy makers are facing a fine balancing act when it comes to how to address deflationary risk without causing stagflation. Financial market forecasters should carefully monitor the political landscape in the United States.

Financial markets will continuously anticipate new information and react to new information as it develops. The US Treasury bond market will be of a particular interest because Treasury bonds yields are primarily affected by expected inflation. We previously defined inflation as a business and consumer liquidity measure and therefore an indicator of real economic activity. Consequently, we view long-term US Treasury bond yields as indicators of future real economic activity and short-term US Treasury bond yields (primarily affected by the Federal Funds rate) as indicators of current real economic activity. Hence, we recommend that financial market participants closely monitor Treasury bond yields and Fed actions.

Conclusion

Long-term trends of rising stock prices and falling interest rates might be entering the final stage as the nominal interest rates approach 0 per cent. New long-term trends will emerge as a function of policies enacted by US policy makers to address the challenges to the US economy such as the pending retirement of baby boomers. While appropriate policies could ensure price stability and rising stock market, policy errors could easily tip the US economy into stagflation or even worse, deflation. Therefore, market participants should carefully monitor the political landscape in the United States and the resulting policies as crucial indicators of future economic trends.

References

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