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2015 Global Investment Outlook

The Good Deflation

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GLOBAL ALTERNATIVE ASSET MANAGEMENT

2015 Global Investment Outlook: The Good Deflation

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Although economic activity in the U.S. appears to have accelerated, measures of inflation expectations signal renewed risk of falling prices. The five year breakeven inflation rate implied by Treasury Inflation-Protected Securities (TIPS) has fallen by more than 40% since July 2012 to its lowest level since 2009 (Figure 1). While some of the decline can be attributed to the plunge in oil prices, the 10-year breakeven inflation rate has declined by more than 25% over the same period, suggesting something more is at work. These recent moves at least raise the prospect that the U.S. could enter a sustained period of uncomfortably low inflation, as Minneapolis Fed President Narayana Kocherlakota warned in his dissent to the December 2014 FOMC Statement.¹

Figure 1: 5-and-10 Year Breakeven Inflation Rate, 2012-2014



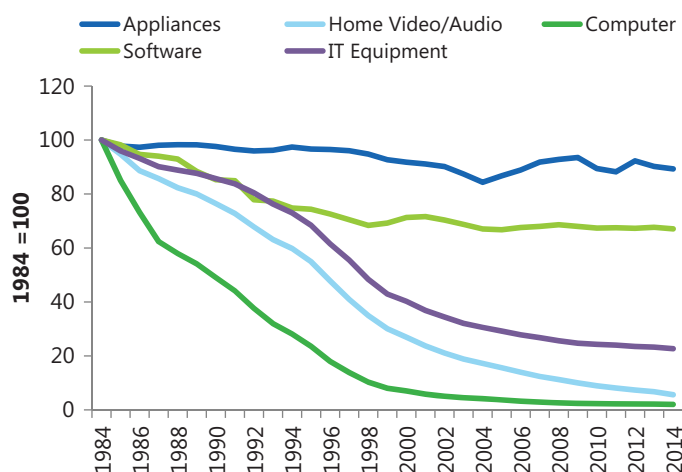
Delineating Between “Good” & “Bad” Deflation

Deflation can be a pernicious force, as the experience of Japan makes clear.² But abstract discussions of deflation risk too often ignore that deflation is a phenomenon already well entrenched in many competitive product markets. The question is not whether the U.S. will experience deflation, but whether the deflation already experienced in many product markets will become more generalized.

Perhaps the drop in oil prices has come as such a jolt because energy was one of the last vestiges of persistent inflation, along with education and health care. Pricing power in much of the rest of the economy is largely absent and has been for some time. Over the last 30 years, the price of consumer durable goods (automobiles, home

furnishings, appliances, video and audio equipment, etc.) has fallen by 0.7% per year, on average. Over the same period, the price businesses pay for computers, information technology equipment, and software has declined by 1.3% to 12.4% per year.³ While *real* household incomes in the U.S. have stagnated over the past twenty years as wages have grown at roughly the same rate as the consumer price index, median household income has grown by nearly 50% relative to price of new cars.⁴

Figure 2: Cumulative Price Changes by Category, 1984-2014⁵



Businesses operating in sectors open to global competition have to innovate continuously to sell much improved products at roughly the same price. In this competitive environment, deflation stimulates additional investment to develop new products and streamline production processes. Deflation in high-tech consumer goods prices has not caused households to postpone purchases in order to buy the same goods more cheaply in the future; instead price declines have stimulated more spending.⁶

This experience makes it clear that deflation is not always and everywhere a bad thing. Would we be better off if higher inflation were achieved by erecting supply constraints so that competitive product markets more closely resembled those of health care, housing, and higher education?⁷ Problems arise when deflationary expectations become generalized and infect wage formation and expected return calculations across the economy. If expected declines in output prices prevent most businesses from

1 Statement available at: <https://www.minneapolisfed.org/news-and-events/messages/statement-on-dissenting-vote-at-december-17-2014-meeting-of-the-fomc>
 2 “Japan’s Necessary Gamble,” *Economic Outlook*, The Carlyle Group, April 2013.

3 BEA, NIPA Tables 2.4.4 and 5.3.4.
 4 BEA, New Auto Sales Deflator, NIPA Table 2.4.4; Census Bureau, *Household Income in the U.S.*
 5 BEA, NIPA Table 2.4.4.
 6 *Science and Engineering Indicators 2014*, Table 6.8, National Science Foundation.
 7 For an alternative view that suggests less flexible prices may generate more spending by reducing real interest rates, see Eggertson, G. and Krugman, P. (2012), “Debt, Deleveraging, and the Liquidity Trap: A Fisher-Minsky-Koo Approach,” *Quarterly Journal of Economics*.

generating profits at current wage rates, employment and wages will have to adjust downward, potentially intensifying the deflation. Similarly, if expected declines in output prices reduce expected returns on investment across industries, nominal interest rates will have to fall to compensate. If nominal rates are already zero, as is the case today, a decline in investment will have to account for the entirety of the adjustment.

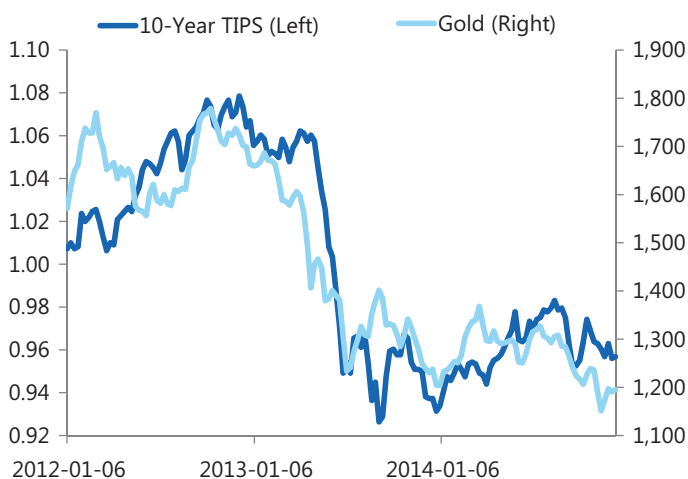
Inflation Expectations & the Inflation Risk Premium

Does the U.S. economy suffer from the symptoms commonly associated with generalized deflation? We think not: annual nonfarm payroll employment growth has been steady at a monthly rate of 230,000 net new jobs;⁸ nominal wages continue to grow at an annual rate of 2.5%, with recent signs of acceleration; and cyclically-sensitive time series from Carlyle's U.S. portfolio suggest that business equipment purchases and construction spending are growing briskly.⁹ Overall, there is little evidence that expectations of future price declines are suppressing employment, wages, or fixed investment rates.

Instead of reflecting a decline in expected inflation, the observed drop in breakeven inflation rates can be attributed to a fall in the inflation risk premium. The breakeven inflation rate is not an unbiased forecast of future inflation rates. Demand for TIPS is sensitive to uncertainty about future inflation. When the Fed launched its large-scale asset purchase program, many commentators feared the policy introduced unacceptable risks of "currency debasement."¹⁰ Concerns about the inflationary consequences of "printing money" likely increased demand for TIPS just as it appears to have stimulated speculative demand for gold and other assets thought to hedge inflation risk. As the Fed has ended its asset purchase program and signaled its intention to raise rates in 2015, the price of insuring against a surprise upward move in inflation has naturally declined.

This dynamic was first evident in May 2013 when the prices of gold and TIPS fell sharply after then-Chairman Bernanke suggested that the Fed could "taper" asset purchases (Figure 3). There was no change in survey-based measures of inflation expectations,¹¹ but rather a decline in the probability that open-ended QE would generate a spike in realized inflation. A continuation of this phenomenon is likely at work today as a less accommodative Fed reduces the risk of an unanticipated rise in inflation even as the "most likely" path for medium-term inflation remains roughly unchanged.

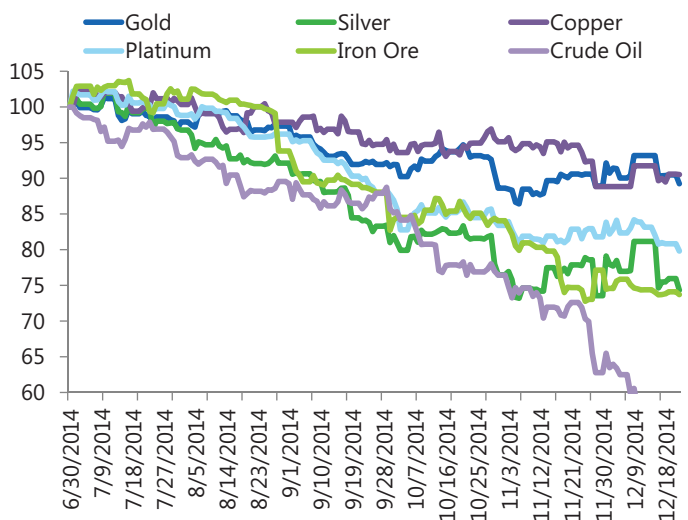
Figure 3: Gold and 10-Year TIPS Prices¹²



The Rise of King Dollar

One must also distinguish deflation from a welcome increase in purchasing power. Over the course of 2014, the U.S. dollar appreciated by over 8% on a trade-weighted basis, with even larger moves against dollar-invoiced global commodities like oil, gold, silver, copper, platinum, and iron ore.¹³ Producers and traders have narratives to explain these price declines in terms of market-specific supply and demand factors, but the common source of variation is dollar strength (Figure 4).¹⁴

Figure 4: Commodity Prices, June 30, 2014=100¹⁵



The dollar's rise is anticipated to place downward pressure on prices in the first half of 2015 and may even generate a few months of year-over-year declines in the consumer

8 Bureau of Labor Statistics, Employment Situation, December 2014.

9 Carlyle Analysis of Portfolio Company data; Bureau of Economic Analysis, NIPA Table 1.5.5.

10 "Open Letter to Ben Bernanke," *The Wall Street Journal*, November 15, 2010.

11 The University of Michigan Inflation Expectations survey, for example, remained at or above 3% throughout the entirety of the "taper tantrum" episode.

12 Federal Reserve, H.15; Federal Reserve Bank of St. Louis (gold price).

13 Federal Reserve H.10, Broad Index. S&P Capital IQ Database; price quotes from NYMEX and COMEX.

14 Crude oil is an outlier, but how much of its incremental decline is explained by creditors' reliance on short positions in oil futures to hedge their exposure to oil producers? Energy producers account for 16% of speculative grade credit outstanding and oil futures are the only liquid contract available to hedge this exposure.

15 S&P Capital IQ Database; price quotes from NYMEX and COMEX.

price index. This type of deflation would actually represent a welcome boost to real household incomes. Rather than predict future deflation, the increase in the foreign exchange value of the dollar likely reflects the substantial disinflation that has already occurred. Wage stagnation, the domestic natural gas revolution, and the drop in the price of capital have combined to radically improve the competitive profile of the U.S. Since 2009, aggregate production costs in the U.S. have increased by just 9%, compared to an average of nearly 50% in the six largest emerging market economies.¹⁶ When coupled with natural advantages in innovation, labor market flexibility, and capital market development, the U.S. has become an especially attractive place to invest and hire. The dollar's rise reflects a natural adjustment of relative price levels that will help partially to undo the declines in real household incomes since the crisis.

Debt Deflation: "Our Currency but Your Problem"

Continued appreciation of the U.S. dollar may indeed trigger a "debt-deflation" scenario, but one that is likely to play out in emerging market economies (EMEs). Between 2009 and 2013, non-financial corporate borrowers in EMEs increased foreign indebtedness by \$650 billion, often to fund domestic operations.¹⁷ While there are no hard data on the unhedged currency exposure, the scale of the potential disruption is massive given the \$5 trillion global stock of cross-border loans and bonds outstanding, most of which is denominated in U.S. dollars.¹⁸ As the value of (U.S. dollar) liabilities rise relative to (home currency) assets and sales, the real burden of servicing the debt increases. This negative shock to balance sheets could force non-core asset sales, trigger domestic rate increases to defend the currency, and further depress valuations.

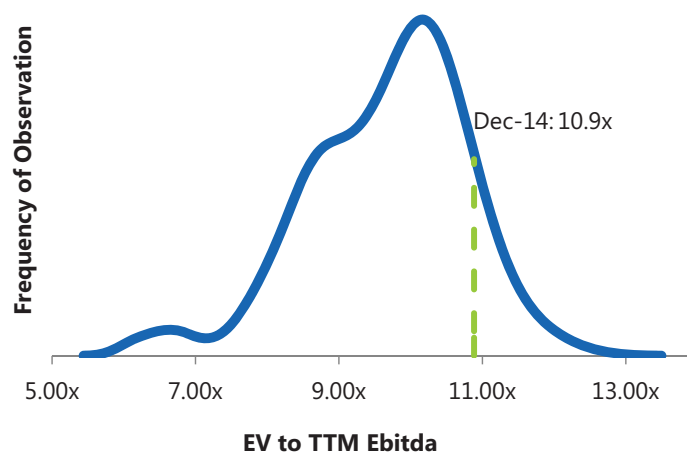
The situation will be quite the opposite in Europe and Japan, where corporate liabilities are mostly denominated in local currency. These economies are likely to be the primary beneficiaries of a strengthening dollar for three reasons. First, the domestic value of U.S. dollar-denominated sales will increase, which will translate to increased earnings and returns on equity. Second, European and Japanese exporters will find themselves in an improved position relative to U.S. competitors in fast-growing markets in Asia, Latin America, and Africa. If local competitors in these markets experience financial distress from dollar appreciation, the market share gains among European and Japanese companies could be even greater. Finally, a weaker exchange rate should diminish the risk of deflation as higher import prices are passed through to consumers and inflation expectations adjust upward.

The U.S. Market: High Prices & Renewed Volatility

The situation in the U.S. may resemble that of the late 1990s, for both good and ill. Momentum in the labor

market and declines in commodity prices should combine to generate the largest real income gains seen in the U.S. since 1999. Businesses leveraged to domestic consumption should perform well in 2015. At the same time, valuations of corporate assets are already high and could soon reach levels not seen since 1997-2001. The aggregate enterprise value of U.S. public stock market constituents finished 2014 at 10.9x trailing twelve month's Ebitda, which places current valuations at the 90th percentile of 20-year distribution (Figure 5). The effects of U.S. dollar appreciation will reduce the domestic value of U.S. businesses' foreign earnings, causing valuation ratios to rise further even if prices remain unchanged. The effects will be especially pronounced among larger businesses that account for the bulk of foreign sales.¹⁹

Figure 5: Distribution of U.S. Corporate Valuations, 1994-2014²⁰



The withdrawal of Fed stimulus is not likely to have an especially large impact beyond the front of the yield curve because today's low rates have less to do with Federal Reserve policy than many originally had supposed.²¹ Instead, Fed tightening is likely to alter risk perceptions and impair market and funding liquidity conditions. Spikes in volatility similar to that witnessed in October 2014 will likely become more common. Since the crisis, dealer inventories of credit instruments have fallen by over 70%.²² Unable to sell loans and bonds without steep discounts, credit market participants rely more heavily on equity markets to hedge exposure, effectively transmitting liquidity risk to stock prices. A default in Russia or elsewhere could generate especially large stock sales even if the U.S. economy continues to grow steadily.

Conclusion

A strengthening U.S. dollar and a decline in the inflation risk premium have combined to create conditions that

¹⁶ IMFWEO Database, October 2014.

¹⁷ Chui, M. et al. (2014), "Risks related to EME corporate balance sheets: the role of leverage and currency mismatch," Bank for International Settlements.

¹⁸ Borio, C. (2014). Bank for International Settlements Quarterly Review.

¹⁹ Foreign sales account for 46% of S&P 500 constituents' total sales relative to 15% for the overall business sector.

²⁰ Carlyle Analysis of S&P Capital IQ Data; Value-weighted average of U.S. public companies, 1994-2014.

²¹ Conway, W. and Thomas, J. (2013), "Don't Fear the Taper," Economic Outlook, The Carlyle Group.

²² Federal Reserve, L. 218.

may bear superficial resemblance to deflation. Do not be alarmed: the type of deflation likely to be observed in 2015 will benefit the U.S. economy by increasing households' real purchasing power. A strengthening dollar will also increase stress on emerging market corporate balance sheets, as the market value of dollar-denominated liabilities rise relative to assets and income. Conversely, dollar strength should improve the competitive position of European and Japanese businesses and raise their domestic earnings and equity returns.

In the U.S., we may witness a decoupling between the economic and investment environments. While the U.S. economy has strengthened, the investment environment actually looks more precarious than a year ago, with high valuations and periodic bursts of volatility. Optimism about U.S. growth prospects attracted record inflows into U.S. stock funds in December 2014.²³ The late timing of these retail fund flows may serve to demonstrate why investment returns tend to be uncorrelated with economic growth rates.²⁴ Low prices

induce investors to hold risky assets in more uncertain times; by the time a consensus emerges on the growth outlook, asset prices tend to have already adjusted upward.

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²³ "U.S.-based stock funds attract record \$36.5 billion inflows in week: Lipper," Reuters, December 26, 2014.

²⁴ Ritter, J. (2005), "Economic growth and equity returns," Pacific-Basin Finance Journal.

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