

WorldView 4Q 2013

Navigating a Sea of Liquidity: Global Central Banks and Investing in 2014

IN BRIEF

- As in 2013, ebbs and flows in the sea of liquidity created by the world's biggest central banks will continue to shape the global investment environment in 2014.
- In 2014, the Federal Reserve is likely to phase out its bond-buying program, boosting U.S. interest rates. On the other hand, central banks in Japan and the Eurozone may ease further.
- While central banks have contributed to financial stability in recent years, combinations of QE and forward guidance have proven very ineffective at stimulating economic growth and have large potential negative side effects, some of which could disrupt markets in the years ahead.
- Regardless of the wisdom of central bank policies, investors should position themselves to take advantage of these policies. In general, this implies a current overweight to equities relative to fixed income around the world but also an alertness to any market disruption these policies may eventually cause.

WORLDVIEW

The key to successful investing is not seeing the future with some kind of mythical vision – it is seeing the present with clarity. This is truer today more than ever, in a world recovering from financial crisis, rife with political discontent, extreme monetary easing and deep-seated investor prejudice. In this quarterly publication, we try to provide clarity by looking at the big issues shaping the global economic investment environment and fostering both opportunities and risks for long-term investors.



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Prior to joining J.P. Morgan Funds, David served as Economic Advisor to Putnam Investments. He has also served as a senior strategist/economist at SPP Investment Management, Primark Decision Economics, Lehman Brothers and DRI/McGraw-Hill.

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INTRODUCTION

The challenge in writing any article about the global economy and financial markets is finding one broad idea in a world of many complex and contradictory trends. However, for better or worse, at the end of 2013, the investment environment is clearly dominated by a universal “theme,” namely the implications of the recent, hugely expansionary monetary policies being pursued by the biggest central banks in the developed world.

Over the past five years, the global stock of dollars, euros and yen has risen by 21%, far eclipsing nominal GDP growth in the U.S., the Eurozone and Japan of 10%. Even more dramatic has been the growth in the monetary base (that is, essentially, the right to expand deposits) over the same period.

This huge expansion reflects the impact of quantitative easing (QE) programs employed by central banks to reduce long-term interest rates once the traditional tool of lowering short-term rates had been exhausted. These policies have had some positive effects in helping stabilize the financial sector, counter-balance and reduce the need for fiscal austerity and promote a rebound in asset prices. However, for various reasons they have largely failed to ignite stronger economic growth.

Moreover, they have a very long list of nasty economic side effects, many of which have yet to manifest themselves and most of which are not well understood. Among these are the potential for these programs to generate asset bubbles, exacerbate inequality, misallocate capital, pressure other nations into inappropriately low interest rates, enable governments to avoid necessary fiscal reforms, undermine the balance sheets of the central banks themselves and generally

VIEWPOINT

The financial landscape in 2014 will continue to be shaped by the world's largest central banks.

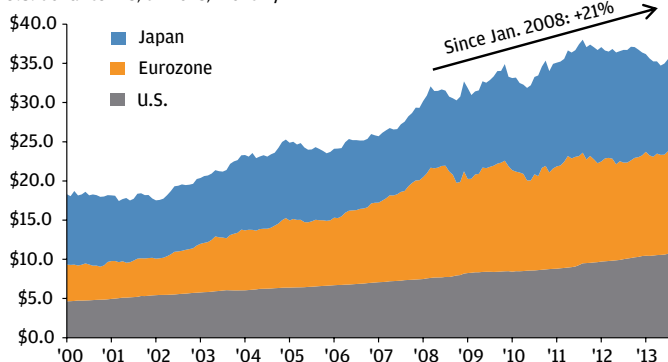
set the stage for both future inflation and potential shocks to global bond markets.

A greater understanding of these side effects and a gradual strengthening of global economy should make 2014 a year in which some central banks embark on the long path to normality. Others will continue to push the limits of monetary stimulus. Either way, however, the central banks and the sea of liquidity they have created will shape economic and investment outcomes for years to come.

Central banks have boosted both the money supply and the monetary base

EXHIBIT 1A: GLOBAL MONEY SUPPLY* GROWTH

U.S. dollar terms, trillions, monthly



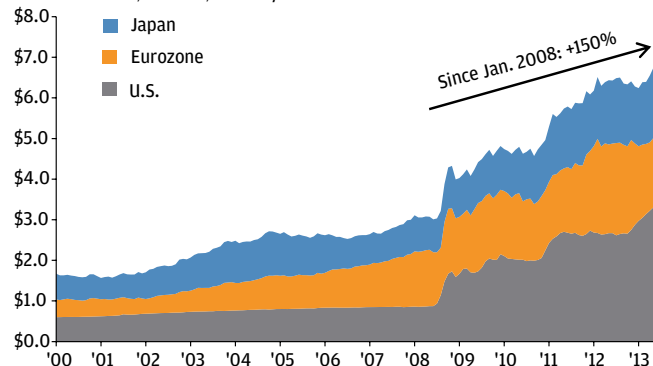
Source: Federal Reserve, OECD, ECB, J.P. Morgan Asset Management.

*Data uses U.S. M2 series and Japan and Eurozone's M3 series for an appropriate comparison.

Data are as of 11/27/13.

EXHIBIT 1B: GLOBAL MONETARY BASE GROWTH

U.S. dollar terms, trillions, monthly



Source: Federal Reserve, OECD, ECB, BOE, J.P. Morgan Asset Management.

Data are as of 11/27/13.

In the following pages we first look at the current policies of the U.S. Federal Reserve, the Bank of Japan and the European Central Bank¹. We then assess the success of these programs and the potential side effects of these extraordinary measures. This is followed by a consideration of how central bank policy might evolve in 2014 and what this implies for investment strategy in 2014 and beyond.

VIEWPOINT

The Federal Reserve is likely to phase out its bond-buying program in 2014.

The Federal Reserve: Finally Time to Taper

The Federal Reserve (Fed), which celebrates its 100th birthday in December, continues to implement the most aggressive monetary stimulus in its history. Since December 2008, when it cut the target federal funds rate to a range of 0-0.25%, it has relied on quantitative easing and forward guidance on interest rates as a way to reduce long-term interest rates. Successive quantitative easing programs have boosted the size of the Fed's balance sheet as well as extended the maturity of its assets. The latest program, effectively scaled up in December 2012, involves

buying \$45 billion in Treasuries along with \$40 billion in mortgage securities each month. So far, this has boosted the Fed's asset base to \$3.9 trillion – a dramatic increase shown in the charts below.

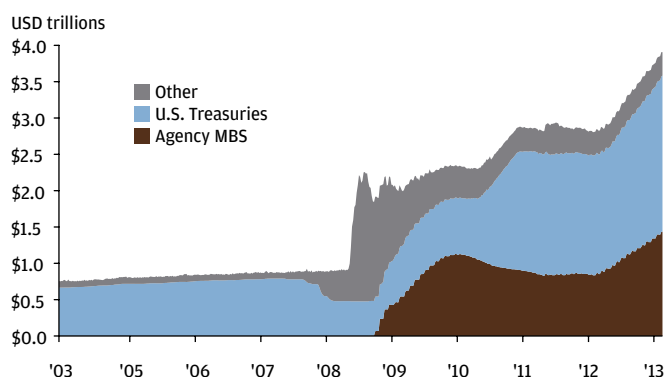
This pace of monetary expansion cannot persist forever and in a post-Federal Open Market Committee meeting press conference in June, the Fed Chairman, Ben Bernanke, outlined a rough timetable by which a phase-out of bond purchases could begin later this year and end in the middle of 2014.

Fed surprise at the extent of the rate backup caused by this announcement, along with worries about its impact on housing, concerns about still high unemployment and uncertainty surrounding the economic impacts of a federal government shutdown caused the Fed to avoid tapering at its September and October meetings.

However, even with this and with the nomination of the relatively dovish Janet Yellen to be the new Fed Chair, the odds remain high that the Fed will finally begin to reduce bond purchases either this month or next. Given the timetable originally outlined by Ben Bernanke, it seems probable that bond purchases will be entirely phased out over the course of 2014. However, Fed officials have emphasized that they are likely to maintain the federal funds rate at near-zero levels for a considerable period after bond purchases have been phased out.

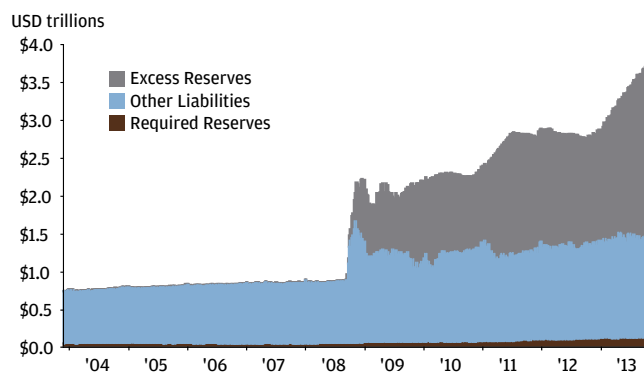
The Fed's balance sheet is approaching \$4 trillion

EXHIBIT 2A: FED'S BALANCE SHEET: ASSETS



Source: Federal Reserve, FactSet, J.P. Morgan Asset Management.
Data are as of 11/27/13.

EXHIBIT 2B: FED'S BALANCE SHEET: LIABILITIES



Source: Federal Reserve, FactSet, J.P. Morgan Asset Management.

Note: Other liabilities of the Federal Reserve primarily consist of currency outstanding.

Data are as of 11/27/13.

¹We, of course, recognize the interesting and important steps taken by the Bank of England, the Swiss National Bank, the Bank of Canada, the Reserve Bank of Australia and many central banks in emerging market nations. However, most of the important points can be made with reference to the Federal Reserve, the European Central Bank and the Bank of Japan so, for ease of exposition, we have restricted the analysis to these three.

VIEWPOINT

Japan may need a further yen decline to weather the impact of a hike in the consumption tax.

Bank of Japan: QE Intensity

If the Federal Reserve begins to pull back on quantitative easing in 2014, there are no signs that the Bank of Japan (BoJ) will do the same thing. In fact, the BoJ is likely to continue to ramp up its programs.

The Bank of Japan has had long and largely ineffective experience in using QE to try to stimulate economic growth. Indeed, since 1995, short-term interest rates in Japan have never exceeded 0.5%, making conventional monetary policy inoperable for almost 20 years. The BoJ's first foray into QE occurred between 2001 and 2006 when they bought Japanese government bonds (JGB) in order to boost the reserves (or current account balances) held by the commercial banks at the Bank of Japan. More recently, since the onset of the global

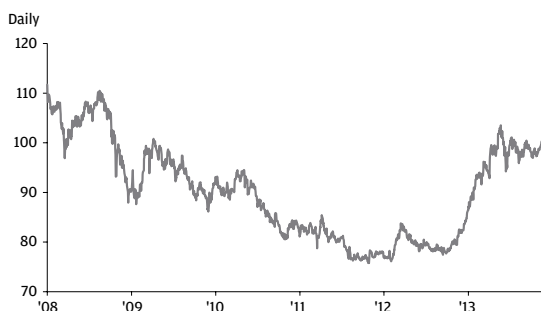
financial crisis, the BoJ has both increased loans to banks and purchased additional JGBs and other private assets.

However, Japanese quantitative easing moved into hyper-drive earlier this year with the appointment of Haruhiko Kuroda as governor of the Bank of Japan and the unveiling, in April, of what the BoJ has titled "Quantitative and Qualitative Easing." This program includes plans to double the monetary base, double central bank holdings of JGBs, extend the maturities of JGB holdings and raise the inflation rate to 2%, all within two years.

This very extreme program of quantitative easing is part of "Abenomics," a broad strategy outlined by Prime Minister Shinzo Abe both in the run-up to his election in December 2012 and subsequently. This policy includes the "three arrows" of fiscal stimulus, monetary stimulus and economic reform, and it has met with some early success. In particular, it has contributed to a sharp slide in the yen, a sharp rise in the stock market and corporate earnings, an improvement in consumer and business confidence and solid GDP growth.

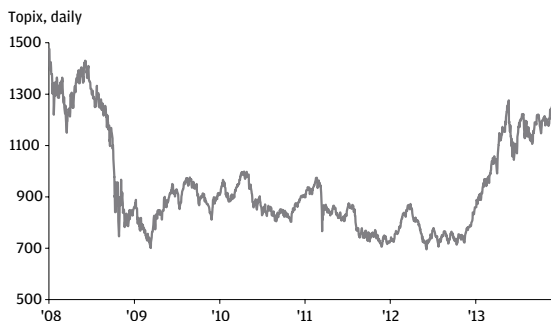
Abenomics has had significant impacts so far

EXHIBIT 3A: JAPANESE YEN VS. U.S. DOLLAR



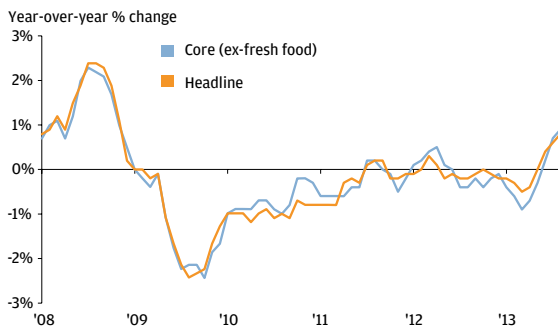
Source: WM/Reuters, FactSet, J.P. Morgan Asset Management.
Data are as of 11/27/13.

EXHIBIT 3C: JAPANESE EQUITIES



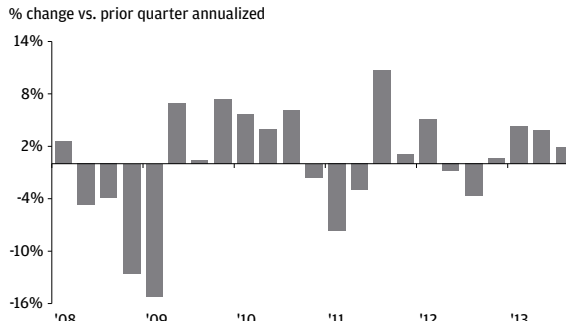
Source: Tokyo Stock Exchange, J.P. Morgan Asset Management.
Data are as of 11/27/13.

EXHIBIT 3B: INFLATION IN JAPAN



Source: Bank of Japan, J.P. Morgan Asset Management.
Data are as of 11/27/13.

EXHIBIT 3D: JAPANESE REAL GDP GROWTH



Source: Japanese Statistics Bureau & Statistics Center, Bank of Japan, J.P. Morgan Asset Management. Data are as of 11/27/13.

However, Japan remains very far from healthy. In particular, while the 25% fall in the yen/dollar exchange rate from September 2012 to May 2013 was positive for the Japanese economy, the currency has stabilized in recent months and a further fall may be needed to sustain higher domestic inflation. In addition, the fiscal side of Abenomics has left Japan in a frightening budget situation. According to the International Monetary Fund's latest forecast, Japan is likely to run a huge general government budget deficit of 9.5% of GDP this year with gross government debt ballooning to 244% of GDP. Even with a stronger economy, fiscal tightening is essential to hold this debt in check, and Prime Minister Abe has decided to implement the 3% hike in the consumption tax scheduled for next April to take a partial step in this direction. While the government has also decided on further temporary fiscal stimulus to soften the impact of this on the Japanese economy (and its impact in reducing deficits), there is a danger that the economy could slump after a buy-ahead-of-the-tax-hike boom over the next six months.

This being the case, it is quite possible that the BoJ will implement some even more extreme QE measures early next year to try to combat these impacts. The world's easiest central bank looks set to get easier still in 2014.

VIEWPOINT

The ECB has succeeded in stabilizing the financial system but not in boosting lending.

European Central Bank: The Ghost of Deflation

The European Central Bank (ECB) is by far the youngest of the major global central banks, being established in 1998 to manage the new single European currency, the euro. Since its inception, it has reflected the struggles in the European Union itself as the interests of prosperous "hard-money" core countries and particularly Germany have always been seen as opposed to those of the economically and fiscally weaker peripheral nations.

This conflict contributed to an ineffective ECB response to the European debt crisis as it exploded in late 2009. A combination of very weak economies, high debt and high deficits in the periphery caused government bond yields to soar as investors

wondered if these governments would ever be able to pay. Moreover, because European commercial banks held significant quantities of these bonds, this selloff in sovereign debt further weakened bank balance sheets that were already overloaded with non-performing private sector debt. This banking crisis, in turn, restricted lending, undermining economic growth in a very vicious cycle.

The best way to manage the problem at the time involved three components: (1) The ECB would effectively guarantee the debt of peripheral nations by pledging to buy unlimited quantities of it, if necessary, (2) core nations would transfer immediate resources to peripheral nations to allow their economies to recover without draconian short-term austerity, and (3) peripheral nations would, in return, commit to a detailed long-term program of spending and tax reform with the ECB only committing to backstop their sovereign debt if they stayed on this program.

Tragically, Europe has been too divided to implement transfers, so debt-laden economies have had to impose sharp spending cuts and tax increases in the midst of deep recessions.

Moreover, a combination of confusion about the extent of the ECB's commitment to stabilize the sovereign debt market and badly designed plans meant that it was only in 2012 that the ECB succeeded in calming sovereign bond markets. They achieved this through two huge Long Term Refinancing Operations (LTRO), which provided cheap long-term credit to European banks and the Outright Monetary Transactions (OMT) program that pledged to protect the sovereign bond market in return for adherence to fiscal adjustment programs.

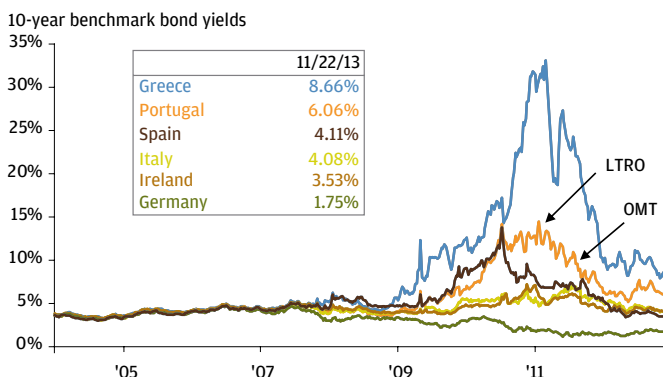
The good news, as can be seen in **Exhibit 4**, is that they have now achieved this stability. However, they have done so only after years of recession with low inflation and a 12.2% unemployment rate across the Eurozone.

As we enter 2014, the ECB has reason to feel a little more comfortable about financial stress across Europe. Moreover, the European economy has returned to growth, albeit weak, with real GDP rising in both the second and third quarters of 2013 following six quarters of output decline. However, with banks still carrying substantial bad loans and unemployment at record high levels, the ECB cut overnight rates one more time in late 2013 to 0.25%. In addition, in preparation for its role as bank regulator across the Eurozone, the ECB has outlined Asset Quality Reviews (AQR) for the banks that it expects to regulate, tests that will take most of 2014 to conduct and may well have the consequence of discouraging bank lending. Given this, and

the general ineffectiveness of expansionary monetary policy in stimulating economic growth, the ECB is likely to maintain very low interest rates for years to come.

The ECB has helped stabilize the sovereign bond market in the last two years

EXHIBIT 4: EUROPEAN SOVEREIGN FUNDING COSTS



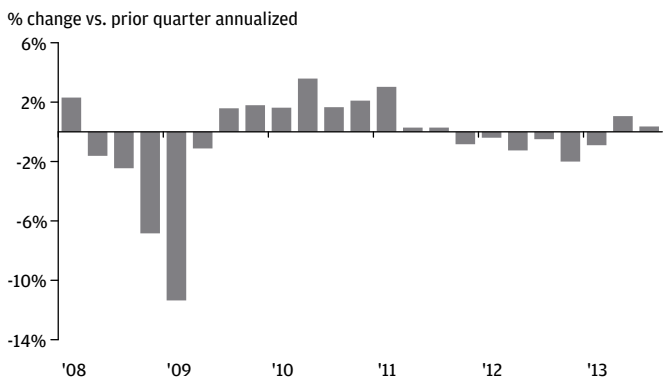
Source: Tullett Prebon, FactSet, J.P. Morgan Asset Management.

Note: The ECB announced the second round of Long Term Refinancing Operations (LTRO) in February 2012. The Outright Monetary Transaction (OMT) program was announced in September 2012.

Data are as of 11/27/13.

Europe is finally back on a growth path

EXHIBIT 5: EUROZONE REAL GDP GROWTH



Source: Eurostat, J.P. Morgan Asset Management.

Data are as of 11/27/13.

VIEWPOINT

Very easy money has created negative side effects and longer-term risks.

Limits to the Effectiveness of Easy Money

Watching unconventional monetary policy being implemented is a little like watching a TV commercial for a new drug: some mild positives and a long list of nasty side effects.

All three of the mega central banks can claim some success in recent years. They all served as lenders and buyers of last resort and thus contributed to a stabilization of the global financial system in the wake of the collapse of Lehman Brothers. They have also allowed highly indebted governments to borrow more cheaply – **Exhibits 6A** and **6B** below show both the sharp growth in government debt as a percentage of GDP as well as a decline in government debt service as a percent of GDP.

Easy money has allowed government debt service to fall even as debt levels have soared

EXHIBIT 6A: NET DEBT-TO-GDP RATIO

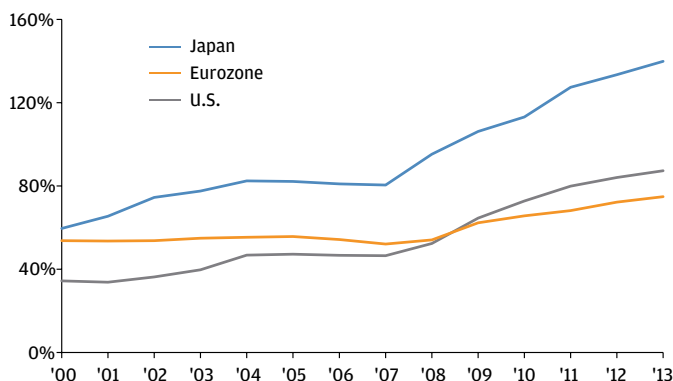
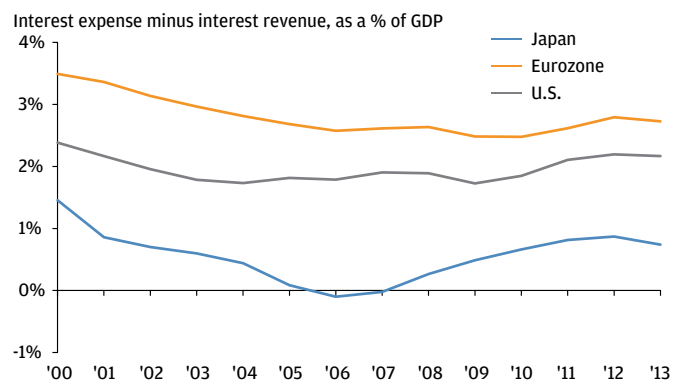


EXHIBIT 6B: NET INTEREST-TO-GDP RATIO



Source: IMF - World Economic Outlook Database October 2013, J.P. Morgan Asset Management.

IMF estimates after 2011 for Japan and 2012 for the U.S. and Eurozone.

Note: Net interest/GDP is calculated as (net primary lending/borrowing, % of GDP) - (net lending/borrowing, % of GDP). Data as of 11/27/13.

Moreover, they can each claim some other achievements.

For the Federal Reserve, a combination of quantitative easing and forward guidance does appear to have reduced long-term interest rates below levels implied by economic fundamentals. Indeed, it is hard to find another plausible explanation for having real 10-year Treasury yields running below 1% in the fifth year of expansion at a time when home prices and stock prices have risen sharply and the unemployment rate continues to fall steadily.

For the Bank of Japan, the anticipation and implementation of dramatically easy money over the past year has succeeded in depressing the yen and moving the economy to positive economic growth and positive inflation.

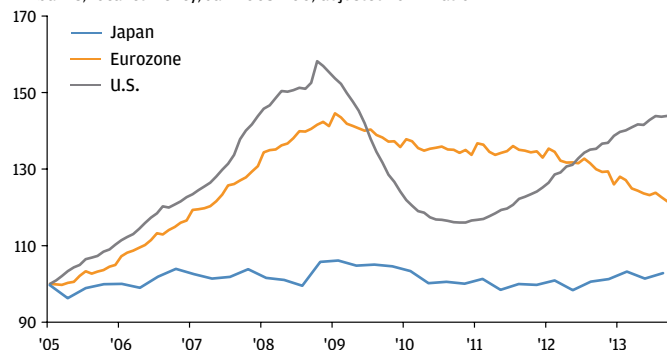
In Europe, after a number of false starts, the ECB has provided a measure of stability to both the banking system and the sovereign bond market.

However, in a broader sense, the last few years are testament to the ineffectiveness of monetary policy in boosting economic growth. Real GDP growth over the past four years has averaged just 0.9% in the Eurozone, 1.9% in Japan and 2.2% in the United States, remarkably soft for what was supposed to be the bounce-back from a big global recession. More significantly, commercial and industrial loans, presumably the single biggest target of easy money, are still well below their pre-recession peak in real terms. So why hasn't easy money worked better at stimulating growth?

Easy money has not spurred strong gains in lending

EXHIBIT 7A: BUSINESS LOANS

All banks, local currency, Jan 2003=100, adjusted for inflation



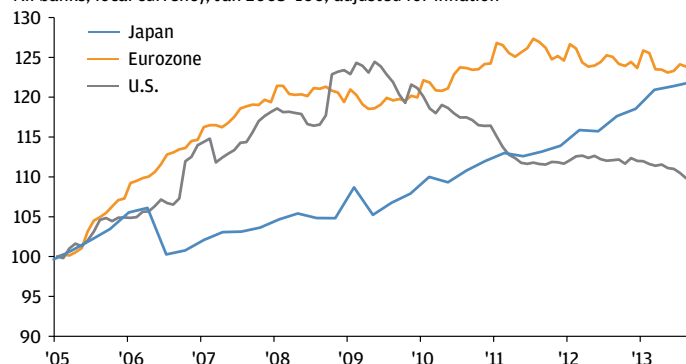
Source: Federal Reserve, BLS, ECB, Eurostat, J.P. Morgan Asset Management.

Note: Adjusted for inflation using each region's core CPI measure. For the U.S., this is ex-food and energy, for the Eurozone ex-energy, food, alcohol and tobacco and for Japan, ex-fresh food.

Data are as of 11/27/13.

EXHIBIT 7B: CONSUMER LOANS

All banks, local currency, Jan 2003=100, adjusted for inflation



Source: Federal Reserve, BLS, ECB, Eurostat, J.P. Morgan Asset Management.

Note: Adjusted for inflation using each region's core CPI measure. For the U.S., this is ex-food and energy, for the Eurozone ex-energy, food, alcohol and tobacco and for Japan, ex-fresh food.

Data are as of 11/27/13.

Similar forces have probably been at play in all three regions.

First, and probably most important although hardest to measure, are the psychological aspects of super easy money. Lending and borrowing are both crucially dependent on confidence. Unfortunately, a continued pattern of exotic monetary operations to "fix" the economy have undermined confidence that it is capable of fixing itself. This is further reinforced by highly counter-productive policy of "forward guidance." Forward guidance has been applied by many central banks including the Federal Reserve and Bank of England, to convince market participants that short-term rates won't be raised for many years in an attempt to hold down long-term rates. However, it is impossible to transmit this message without also indicating that the central bank is very pessimistic about economic prospects and that borrowers don't have to worry about missing out on low rates by delaying their borrowing, messages that both tend to depress, rather than boost, borrowing.

Second, central bankers will readily admit that they have pushed the price of long-term credit below its equilibrium level. However, this is probably actually reducing loan volume since setting interest rates below normal levels, while a positive for borrowers, is a negative for lenders. For example, in the United States, banks have held borrowers to unusually strict underwriting standards in recent years in part because it is very hard to make money on 30-year fixed rate mortgages in the long-run if the long-term mortgage rate is below expected short-term interest rates over the term of the loan.

Third, around the world, commercial banks are under intense regulatory scrutiny and pressure to boost their capital bases in

line with the requirements of Basel III. However, it needs to be recognized that pressure to improve capital ratios and raise the quality of balance sheets directly undermines the stated desire of governments and central banks to encourage lending.

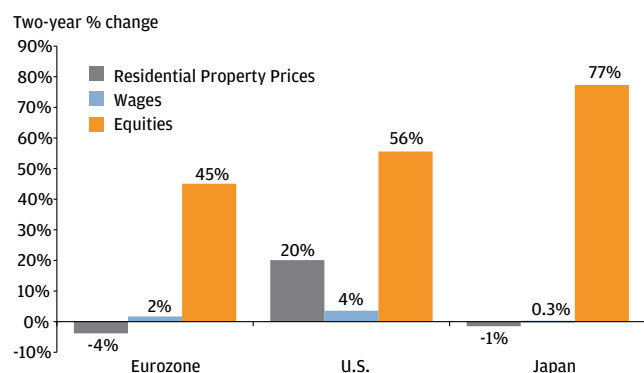
Side Effects of Easy Money

There is no such thing as a free lunch, and even a lunch lacking in nutrition, such as central bank easy money, can be expensive. Most of these side effects will not manifest themselves for some years but they should all be considered by investors today.

Asset Bubbles: First, super easy money is much more likely to generate asset bubbles than economic growth. Building businesses that employ more workers requires a complex mixture of innovation, financing, confidence and consumer and business demand. This takes time, particularly in a world where financial risk-taking is derided and fiscal austerity is undermining demand growth. However, it is far easier for homebuyers to bid up the price of scarce real estate with cheap mortgage financing or for investors to switch from low-yielding bonds and bank accounts to equities. Consequently, while the last two years have seen little growth in wages across the developed world, stock prices have risen sharply. Moreover, real estate prices have seen a significant rebound in the United States and will likely move higher in Europe and Japan also if interest rates remain at super-low levels. While neither DM equity markets nor real estate markets could be described as being in a bubble condition yet, asset bubbles are an inevitable long-term side effect of inappropriately easy money.

Easy money is more likely to boost asset prices than wages

EXHIBIT 8: WAGES AND ASSET PRICES



Source: Eurostat, OECD, National Association of Realtors, U.S. Department of Labor, FactSet. Equity indices used are Eurostoxx 50 for the Euro Area, S&P 500 for the U.S. and Topix for Japan, and returns are price returns in local currency. Data are as of 11/27/13.

Worsen Inequality: Moreover, a policy that increases asset prices faster than incomes almost by definition worsens inequality since wealth is more unequally distributed than income. For example, research suggests that in the United States, the top 10% of households account for roughly 50% of taxable income but 75% of total wealth. Inequality is not as extreme in Europe and Japan but it is more extreme in wealth than in income. Because of this, a policy that is better suited to increase asset prices than incomes will tend to worsen inequality and, potentially, undermine the political legitimacy of centrist political parties that are seen as supporting the status quo. The recent political success of parties on the extreme left and right in Europe and the increased polarization of U.S. politics may, in part, reflect this growing gap between rich and poor.

Wealth is distributed even more unevenly than income

EXHIBIT 9A: LATEST SHARE OF INCOME OWNED BY TOP 10%

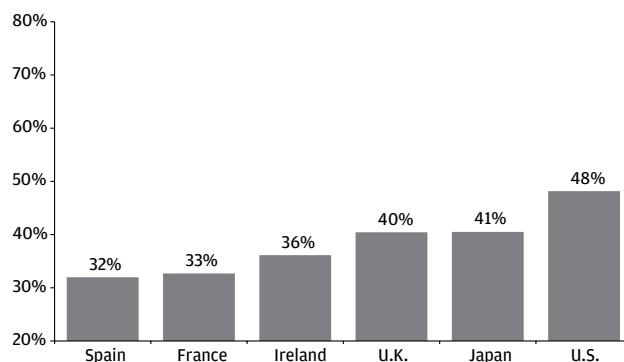
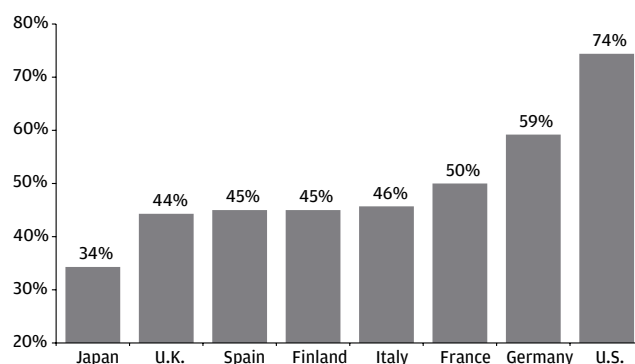


EXHIBIT 9B: LATEST SHARE OF WEALTH OWNED BY TOP 10%



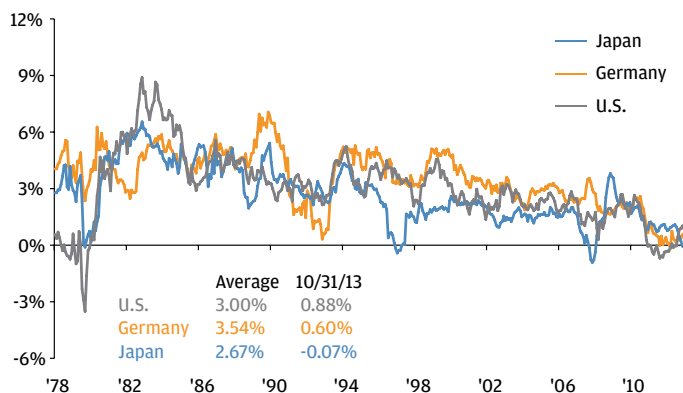
Source: Paris School of Economics - The World Top Incomes Database, Credit Suisse - Global Wealth Databook 2013, J.P. Morgan Asset Management.

Note: Latest income data is as follows: U.S. 2012, Japan and Spain 2010, U.K., Ireland and France 2009. Income excludes capital gains.

Latest wealth data is as follows: Germany 2011, U.S., France and Italy 2010, Japan and Greece 2009, U.K. and Spain 2008. Data are as of 11/27/13.

Make Future Bond Market Losses Larger than in Normal Recoveries:

Eventually and inevitably, quantitative easing will be phased out and short-term interest rates will return to normal levels. This should allow real government bond yields to trade back to their historical averages. Moreover, to the extent that quantitative easing is reversed (i.e., central banks reduce the size of their balance sheets) or investors even fear that it will be reversed, long-term real interest rates could overshoot their average levels, inflicting even greater losses on bondholders.

Real interest rates are abnormally low across developed economies**EXHIBIT 10: REAL 10-YEAR GOVERNMENT BOND YIELDS**

Source: Tullett Prebon, BLS, Bundesbank, FactSet, Ministry of Internal Affairs & Communication, J.P. Morgan Asset Management.

Real 10-year government bond yields are calculated as the monthly yield less year-over-year core inflation for that month. Core inflation for Japan is ex-fresh food, and for Germany and the U.S. is ex-food and energy.

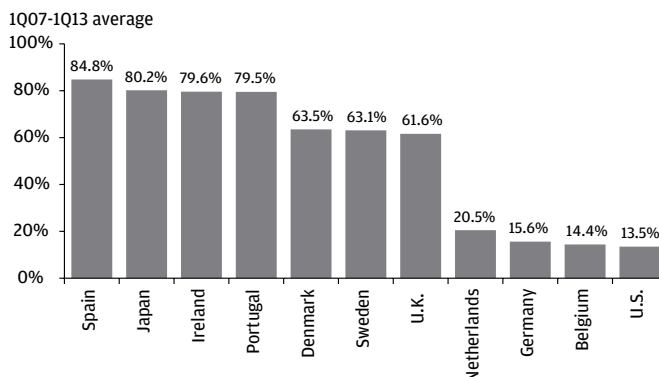
Data are as of 11/27/13.

Foster Inflation: The Fed, ECB and BoJ are not concerned about current inflation. However, continued very easy money could lead to inflation down the line. In the United States, tightening labor markets could begin to generate wage inflation. The unemployment rate has been falling by 0.7% per year since its peak and now stands at 7.3% compared to 10.0% in October 2009. If it continues to fall at the same pace over the next three years, it will reach roughly 5.0% by the end of 2016. By that time, wage inflation may well have begun to take hold. While too quick a return to normal monetary policy could cause interest rates to spike, too cautious a policy might well lead to general inflation.

In Japan, one risk is that genuine concern about its ability to repay its debts in the long run, combined with super easy

money, could eventually cause a collapse in the yen, leading inflation finally to exceed its long-term targets in a big way.

In Europe, the danger of inflation may be least for the moment and the ECB is concerned about deflation and its impact on debt dynamics. However, assuming that the overall Eurozone inflation rate remains positive (as, indeed, the ECB predicts), rising inflation may eventually become a problem. This risk will likely be heightened by the political pressure on the ECB to maintain easy money even when inflation has begun to rise. Because of the wide-spread use of adjustable rate mortgages across Europe and the relative expense of European housing, ECB tightening, when it comes, will significantly reduce the discretionary income of European households.

Japanese and many European households may be vulnerable to higher interest rates because of the widespread use of adjustable rate mortgages**EXHIBIT 11: ARM ISSUANCE % NEW RESIDENTIAL MORTGAGE LENDING**

Source: European Mortgage Federation, Mortgage Bankers Association, Ministry of Land, Infrastructure and Transport Housing Bureau, J.P. Morgan Asset Management.

Note: ARM refers to adjustable-rate residential mortgages. In Europe, these encompass loans extended at floating rates or with an initial period of rate fixation of up to one year.

Data are as of 11/27/13.

Moreover, throughout the developed world a low interest rate, low inflation environment has caused the velocity of money to fall. As interest rates and inflation begin to rise anew, velocity is likely to pick up. While many central banks would likely regard a revival in velocity as a positive, the reality is that, if more economic activity can be serviced with less money, then central banks will have to tighten (either by selling bonds or raising short-term interest rates) even more than they would expect if they are to hold inflation in check. The very real risk is that, when push comes to shove, they may not have the will to do this.

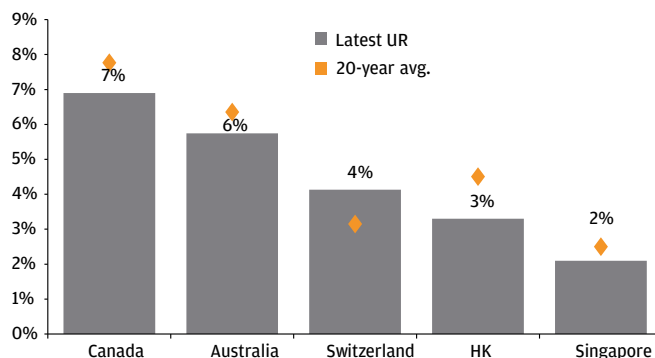
Undermine Central Bank Balance Sheets: In fiscal 2013, the Federal Reserve System made a profit of \$76 billion, which it paid to the U.S. Treasury. This profit was largely derived from receiving interest income from its swollen asset total while paying just 0.25% interest on the now nearly \$2.5 trillion in reserves held by banks at the Fed (and no interest at all on the \$1.2 trillion the public is willing to hold in Federal Reserve notes). Returning the federal funds rate to normal levels while maintaining the size of the balance sheet would switch this profit to a significant loss, depriving the Treasury of a nice source of income and effectively gradually eroding the Fed's own capital base.

The ECB and BoJ are far less profitable, earning roughly 1 billion euros and 550 billion yen, respectively, in 2012. However, both of them have essentially the same vulnerability at a time when they wish to raise short-term interest rates. Like commercial banks, they are attempting to fund a longer-term asset base with short-term liabilities. If they raise short-term interest rates, they can get pushed into a negative net income situation while, if long-term interest rates rise, the implicit value of their assets will fall. Taxpayers can, of course, recapitalize underfunded central banks. But in an area in which trust is essential, it is troubling seeing central banks eat into their own capital.

Spillover Effects on other Economies: One of the most regrettable aspects of extreme monetary easing is the problems it causes for countries around the world that would like to maintain a more balanced approach. Very low short-term interest rates in major developed nations will tend to cause a capital outflow in search of higher yields. If nations such as Canada, Switzerland, Australia or Singapore decided to adopt a more normal monetary policy, their currencies would tend to soar, undermining their ability to export. However, maintaining interest rates that are clearly too low for their relatively healthy domestic economies runs the risk of asset bubbles. And indeed, to some extent this is what has happened. The charts to the right show that in each of these countries, while unemployment is close to normal levels, interest rates are usually low and home prices are rising quickly.

Despite moderate unemployment, many foreign central banks are being forced into a too-easy monetary policy by Japan, Europe and the United States leading, potentially, to asset bubbles

EXHIBIT 12A: UNEMPLOYMENT RATES

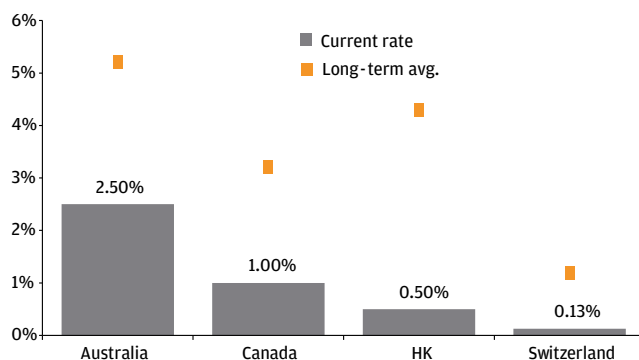


Source: Statistics Canada, ABS, SNB, CSC, J.P. Morgan Asset Management.

Note: Latest data for Canada, Australia, Switzerland and HK is October 2013, and for Singapore is 2Q13.

Data are as of 11/27/13.

EXHIBIT 12B: OFFICIAL TARGET RATES

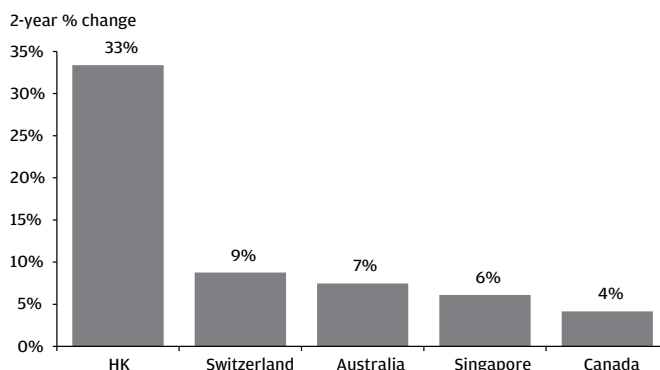


Source: Bank of Canada, RBA, HKMA, SNB, J.P. Morgan Asset Management.

Note: Long-term average for Australia, Canada and Hong Kong is 19 years, and for Switzerland is 13 years.

Data are as of 11/27/13.

EXHIBIT 12C: RESIDENTIAL PROPERTY PRICES



Source: BIS, J.P. Morgan Asset Management.

Note: Australia property prices are a weighted average of 8 capital cities.

Data are as of 11/27/13.

Some emerging market economies also suffer from excessive capital inflows when developed market (DM) interest rates are too low and excessive capital outflows when DM rates rise. This was clearly evident earlier this year when many emerging market (EM) currencies fell in response to tapering talk from the Fed. It could be argued that those countries that have avoided fiscal and trade imbalances domestically fare best in these kinds of episodes. However, emerging market nations face many domestic challenges and it is reasonable for them to expect that DM central banks would operate in a way that enhances rather than undermines global economic stability.

VIEWPOINT

Despite doubts about the wisdom of central bank policies, investors shouldn't "fight the central banks" but rather position themselves to take advantage of their actions and their consequences.

Investment Implications: Navigating a Sea of Liquidity

This is, of course, an incomplete survey. The Bank of England is pursuing many of the same policies as the ECB, BoJ and Fed, with many of the same modest positive direct effects and substantial negative side effects. The Peoples' Bank of China may have the trickiest job of all as it tries to rein in the shadow banking system and excessive credit creation without causing too much of a slowdown in an economy that will increasingly need to find balanced macro-economic growth at home. Meanwhile, central banks in India, Brazil and Turkey are tightening policy to deal with a very real current inflation problem. However, the dominant theme in 2014, as in 2013, will be the ebb and flow of the sea of liquidity created by the world's biggest central banks. What does it mean for investors?

- In the U.S., a continued tightening of labor markets and a growing recognition of some of the destabilizing aspects of QE will likely cause the Fed to phase out its bond-buying program over the course of 2014. This (notwithstanding pedantic arguments about "tapering not being tightening") will very likely lead to higher government bond yields. Indeed, 2014 could well turn out to be a repeat of 2013 in the U.S. bond market, with yields rising by between 0.5% and 1.0% as the Fed embarks on its long journey back to monetary neutrality.

It is important to note that the backup in yields could be tempered by the implicit Fed threat of more bond purchases if yields rise too much and the lack of any monetary pullback by the ECB or BoJ.

- In this environment, fixed income instruments with either low duration (such as floating rate notes) or a closer connection to the equity market (such as high yield and convertible bonds) should outperform.
- Rising bond yields, improved economic sentiment and still huge household and corporate cash balances may well further fuel the U.S. stock market in 2014. While U.S. stocks are no longer inexpensive in absolute terms, they do remain attractive relative to the expected returns on cash and fixed income and could continue to rally in 2014. Although at current loftier levels, they are clearly vulnerable to a correction.
- In Europe, easy money in recent years had helped support the demand for both sovereign debt and equities. However, with even peripheral yields at much lower levels, more investor money may be funneled into European stocks in 2014. The risk in European stocks is of an economic relapse as some austerity continues and bank lending remains constrained. However, if Europe can slowly build on its recent return to economic growth, it has a lot of room to run in falling unemployment, rising output and earnings and enhanced investor confidence. Despite all its problems, European equities look attractive entering 2014.
- In Japan, economic growth is expected to rise in late 2013 and early 2014 from some softness in the third quarter. However, markets have been conditioned to believe that the consumption tax increase on April 1, 2014, has the potential to slow the economy. If the economy can weather this impact relatively well, then Japanese equities could benefit. Moreover, global investors need to weigh this possibility against the risk of an economic relapse or the possibility that local currency equity gains could be wiped out by a further BoJ-engineered fall in the yen.
- In emerging markets, a sea of liquidity should continue to be supportive. While a pull back by the Fed could have some temporary effects, the reality is that very low interest rates are likely to persist across the developed world for years to come, a trend that should direct global capital toward EM equities and debt. Commodities could also benefit from a pick-up in economic growth and the reality that near-zero interest rates mean near-zero carrying costs for commodity investors.

Finally, 2014 should be another positive year for risk assets. In many ways, this is not a great thing for the global economy. The risks taken may well show up in the secondary market for stocks and in higher real estate prices, areas of “investment,” which, while positive from a wealth perspective, do little to foster higher productivity in the long run or significant job gains in the short run. But this is the landscape that has been laid out for investors by the deliberate policies of our biggest central banks. 2014 will not be a year in which to fight the Fed, the BoJ or the ECB.

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