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April 2018

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## Macroeconomics

# TEN YEARS AFTER THE GLOBAL FINANCIAL CRISIS: WHERE ARE WE HEADING?

### EXECUTIVE SUMMARY

- While central banks deserve credit for implementing quantitative easing (QE) programs that arguably saved the global economy, they face an uncertain future as those programs are withdrawn.
- New regulations may have curtailed the riskier activities of investment banks, but could they also dampen economic activity and exacerbate future crises by limiting the availability of liquidity?
- Financial markets have performed well in recent years, but as QE is withdrawn the global economy may face a return of volatility, inflation, and political unrest amid growing inequality.
- In this environment, investors may need to reconsider their strategies as a trickier market environment throws up more idiosyncratic opportunities.

It's been just over a decade since the sale of stricken investment bank Bear Stearns to JP Morgan Chase provided a clear warning sign that the collapse of the U.S. subprime mortgage market was developing into a much larger financial crisis. Now, 10 years later, the vast amounts of emergency monetary stimulus injected into the global economy during and after the crisis are being withdrawn. But as central banks pursue the long process of unwinding their quantitative easing (QE) programs, the question arises: What kind of investment landscape will investors now face?

We asked six of T. Rowe Price's senior investment professionals to share their views on the legacy of the global financial crisis (GFC) and how it might continue to influence markets in the years to come. Our questions focused on four main areas: (1) the role of central banks, (2) the effects of financial regulation, (3) the outlook for

the global economy, and (4) changes in investor behavior. Their answers point to a challenging period ahead as market participants adjust to a post-stimulus environment marked by declining liquidity, tougher regulations, rising interest rates, and higher volatility—but one that also should offer compelling opportunities for those with the insight and agility to benefit from them.

### CENTRAL BANKS RECEIVE A STRONG REPORT CARD, BUT FACE AN UNCERTAIN ROLE

Given the severity of the GFC, the subsequent recovery in global financial markets has been remarkable. In 2008, the financial system was on the verge of disintegration; since then, stock markets have surged (Figure 1), bond yields have declined, property and commodity prices have risen, and expected volatility has—apart from the occasional spike—remained largely muted (Figure 2).

QE has played a major role in this recovery. Unprecedented levels of bond purchases by central banks kept interest rates low, liquidity in plentiful supply, and volatility suppressed—very likely preventing the financial crisis from becoming an economic catastrophe. “I think history will write the central banks a very strong report card,” says Arif Husain, head of International Fixed Income. “QE has had some costs—savers were not exactly high-fiving each other about negative rates, for example—and you could argue that central banks have been too slow to withdraw stimulus. But overall, you have to say that they did what they needed to do, and it worked very well.”

Having deployed QE with such largesse once, however, central banks may have exhausted it as an option for the foreseeable future, Husain believes. “When it was first implemented, there was the ‘wow’ factor—and markets responded accordingly,” he says. “But when the element of surprise is no longer there, future monetary stimulus may be less marginally effective, which may mean that central banks will have to find new methods to have any impact.”

It may also be politically difficult for central banks to undertake further rounds of monetary stimulus. One reason is the sheer cost: QE has resulted in supersized central bank balance sheets, which are difficult to justify over the long term (Figure 3). Another reason is the fact that while QE has boosted asset prices, its economic impacts are less clear. For most of the decade following the financial crisis, growth remained sluggish in most parts of the world, inequality increased, broad income gains were difficult to find, and central banks repeatedly fell short of their inflation targets. More recently, growth levels have begun to indicate that a more synchronized global recovery is now underway, but skepticism remains about whether QE has significantly benefited economies as well as financial markets—meaning any further rounds would potentially be unpopular with the public.

**FIGURE 1: MSCI World Index, 2007–2018**

As of March 15, 2018. Figures in USD.

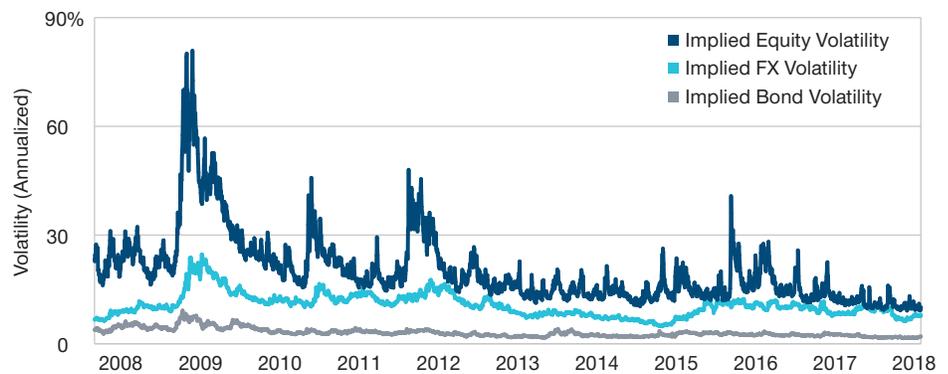


Source: MSCI World.

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**FIGURE 2: Expected Volatility, 2007–2018**

As of February 28, 2018



Implied equity volatility is represented by the VIX index; implied bond volatility is expressed by the MOVE index. Sources: Chicago Board Options Exchange and Bank of America Merrill Lynch; data analysis by T. Rowe Price.

“There are a lot of people in Congress who don’t like it that the Fed bought USD \$4 trillion in government-issued securities, and there are people in Europe who feel the same about the ECB’s [European Central Bank] bond purchase program,” says Alan Levenson, chief U.S. economist. “So there could be considerable political pushback against doing QE again.”

The reaction to QE raises an important question about the future role of central banks: Should they continue in their postcrisis guise as powerful, largely independent bodies with the scope to rescue national economies when fiscal

policies prove inadequate, or should they return to their traditional role of seeking to manage interest rates and inflation? If it is the former, it may be necessary to formally redefine the role of central banks and their relationship with government in order to improve transparency and accountability. If it is the latter, central banks will need to demonstrate that their primary focus is once again on managing inflation.

If extraordinary QE measures are deemed either too ineffective or too politically difficult to use when the next significant downturn or crisis strikes, central banks may find themselves with limited tools

to act—particularly as interest rate cuts, their traditional tool to stimulate demand, will not be a viable option for some time to come as rates are still very low by historical standards. “We’re a long way from the crisis now, and central banks have exhausted the stimulus they can administer,” says Levenson. “So it stands to reason that they are past the peak of their influence for the time being.” In other words, central banks may have fewer levers to pull in the next downturn unless asset price declines threaten to become extremely severe.

### HAS REGULATION MADE THE FINANCIAL SYSTEM MORE RESILIENT?

The postcrisis period not only redefined the role of central banks, it fundamentally changed the way that commercial banks operate. A raft of regulatory measures has been enacted in recent years to improve the resilience of the global financial system, driven by major legislation such as the Dodd-Frank Act in the U.S. and the European Market Infrastructure Regulation in the EU. The international Financial Stability Board has divided these measures into four key areas. In its 2017 annual report on regulatory reform in the G-20 countries,<sup>1</sup> the Board said that advances had been made in all of them—although it also stated that overall progress had been “uneven” and that more work needs to be done (see “Progress on Regulatory Reform”).

Rob Sharps, head of Investments, says that many of the rule changes introduced since the crisis have been crude but effective. “Regulation is a blunt instrument, but the GFC was so extreme that it required an extreme regulatory response,” he says. Sharps cites measures that limit the use of leverage by financial institutions. “Banks are now required to hold a greater quantity of better-quality and more liquid capital than before, which will restrict their activities,” he says. “But I think the new rules will mean that the system as a whole is better-placed to prevent contagion in the event of a future crisis.”

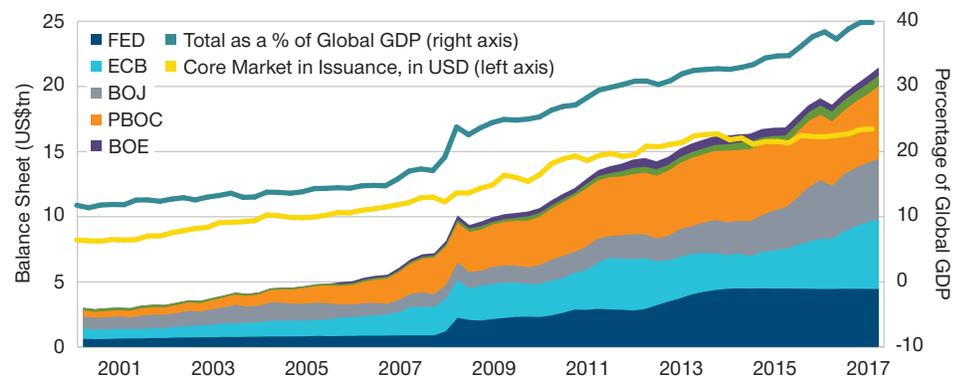
### PROGRESS ON REGULATORY REFORM

In a 2017 report, the Financial Stability Board delivered this scorecard on financial reform in the G-20 countries:

- 1. Strengthening Financial Institutions**  
Implementation of Basel III capital and liquidity standards has generally been timely, and banks continue to build higher- and better-quality capital and liquidity buffers. More work is needed to implement other Basel III standards.
- 2. Ending Too-Big-to-Fail**  
Implementation of higher loss-absorbency, total loss-absorbing capacity, and more intensive supervision is advancing well for global systemically important banks. But progress has been slower on other resolution reforms.
- 3. Making Derivatives Markets Safer**  
Implementation of these reforms is now well progressed, although it has taken longer than originally intended. Overall, implementation is most advanced in trade reporting, but significant challenges remain for its effective use.
- 4. Transforming Shadow Banking Into Resilient Market-Based Finance**  
Implementation of reforms on the oversight and regulation of shadow banking entities, including money market funds, securities, financing transactions, and securitization, is progressing but remains at a relatively early stage.

**FIGURE 3: Central Bank Balance Sheets**

As of December 2017



Sources: ECB, Bank of Japan, Federal Reserve, Swiss National Bank, Bank of England, Haver Analytics, and U.S. Treasury Department.

Other measures, such as ring-fencing investment banking away from retail banking and imposing tighter lending criteria, are also likely to have an impact. But while these initiatives will reduce the risks that financial institutions can take, they could also dampen economic activity by preventing individuals and businesses from borrowing money when they need it.

So far, this has not caused major problems as the economic impact of the new rules has been largely offset by the amount of central bank liquidity in the system. Indeed, Gabe Solomon, portfolio manager of T. Rowe Price’s financial services strategy, says the tougher regulations introduced since the GFC may have even helped prolong the post-crisis bull market. “I think restrictions on the financing available to individuals and companies have

<sup>1</sup>Implementation and Effects of the G-20 Financial Regulatory Reforms, 3rd Annual Report, July 2017.

significantly extended the business cycle since 2008,” Solomon says. “It’s difficult for small businesses to get loans, which has limited the risk they are able to take. Without this effect, we would probably have had a much more dramatic—but perhaps shorter-lived—expansion over the past few years.”

The curbs on banking activities are likely to be more keenly felt in the future, however. With investment banks no longer able to provide market liquidity to the extent they have done in the past and central banks potentially challenged to materially expand QE, the onus will be on other market participants to bridge the funding gap. If they do not do so, the resulting lack of liquidity could make any future crisis worse, undermining efforts to safeguard the system by restricting bank activity. “In the past, banks would deploy capital wherever they believed assets were undervalued and they therefore could sell them back to the market for a profit at a later date,” says Quentin Fitzsimmons, a senior portfolio manager in the Fixed Income Division. “This provided a lot of liquidity. But in the future, that buffer will be considerably thinner.”

It is also important to note that while the regulations put in place over the past few years may prevent a repeat of the last crisis, they may provide only limited protection against a future crisis if the causes are different—which they almost certainly will be. “The next significant financial crisis will likely be caused by something that most people are not concerned about today,” says Solomon. “Future asset bubbles will invariably arise. It is simply the unavoidable cyclical nature of financial markets.”

The lesson? Regulations are never a substitute for vigilance and risk awareness from institutions and investors.

### A RECOVERING GLOBAL ECONOMY FACES INFLATION, VOLATILITY, AND INEQUALITY

The financial and regulatory changes put in place since the GFC make it difficult

## LOOKING BACK

## LOOKING FORWARD

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 Arif Husain, Head of International Fixed Income



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**KEY POINT:** Central banks may have fewer levers to pull in the next downturn

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**KEY POINT:** Regulations are never a substitute for vigilance and risk awareness

“QE has been great for those who already owned stocks, bonds, or property, but many people have seen their wages stagnate in recent years.”

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**KEY POINT:** Financial and regulatory changes make it difficult to chart a clear course

“One of the biggest long-term impacts of the GFC has been on investor time horizons. Even many traditionally long-term investors [have] adopted a shorter-term approach.”

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“...selectivity and agility will be key to taking advantage of the opportunities that arise.”

 Rob Sharps, Head of Investments

**KEY POINT:** Investors may consider increasing exposure to actively managed strategies

to chart a clear course for the global economy over the next few years. If QE was unprecedented, so may be the process of adjusting to its withdrawal. As things now stand, yields continue to hover near record-low levels in most bond markets, equity markets remain robust, unemployment is falling in many countries, and global

growth is improving. At the same time, however, there are concerns that many financial assets are overvalued, corporate leverage is too high, and inflation—followed by rate hikes—may be lurking in the wings.

Fear of rapidly rising inflation, in particular, remains a concern for many investors.

“The biggest risk to markets outside of a major geopolitical shock is that central banks suddenly wake up and realize they’re behind the curve on inflation, then hike rates too quickly,” says Chris Alderson, co-head of Global Equity. “If aggressive hikes arrive on the back of the withdrawal of QE, rates could rise more quickly than people expect, which will put pressure on bond markets and eventually on equity markets too. I think this is making people nervous at the moment.”

However, while sudden bouts of inflation may crop up, they appear less of a threat in the longer term, according to Sharps. “I’m not really worried about inflation over the long term because I think the factors weighing on it are powerful and durable,” he says. “High levels of debt among developed countries should keep growth in check, while disruptive technology and demographics should also prevent inflation from spiraling out of control.”

Another burgeoning concern is that market dynamics and technological changes have created growing inequality in many developed markets, which could bring about policy changes that impede economic growth. Certainly, many people who have little or no exposure to stock markets have not benefited from market gains; wages have also stubbornly stagnated for some time. “QE has been great for those who already owned stocks, bonds, or property, but many people have seen their wages stagnate in recent years,” says Alderson, “I believe this has been a key driver behind the election of Donald Trump, Brexit, and the strong performance of certain conservative parties in Europe.”

Indeed, this shift in political sentiment has given rise to the potential for trade restrictions, which could harm industries and workers, and to additional stimulus, which could cause economies to overheat. “Some of the political trends we’ve seen, such as a rise in protectionist policies, can be traced back to a period of abnormal monetary policies,” Alderson says. “These reactions, in my view, are not as bad as deflation and certainly

not as bad as depression, which we may have had without QE, but they are still a problem. I think governments will inevitably have to look at ways to reduce inequality, such as new taxes on wealth.”

#### **INVESTORS MAY NEED TO TAKE A MORE ACTIVE APPROACH**

The period ahead may be challenging for investors. Central banks face the difficult task of extricating themselves from abnormal monetary policies introduced in the wake of the GFC while simultaneously trying to control inflation in a way that does not threaten the economic recovery; new restrictions on commercial bank activity may mean less liquidity in the system, potentially exacerbating future market moves; populist forces in a number of countries threaten to disrupt the status quo; and investors are trying to navigate all of the above with no clear precedent to follow.

So far, these concerns have not proved too disruptive. Last year, for example, was notable for the remarkable sanguinity of the markets—unpredictable events came and went without unleashing sustained turbulence. The volatility spike in February this year proved similarly short-lived. However, in our view, this is unlikely to continue indefinitely, and investors need to be aware of the potential impact on their portfolios of future volatility spikes. Husain believes that short-term thinking is a particular risk: “One of the biggest long-term impacts of the GFC has been on investor time horizons,” he says. “Even many traditionally long-term investors have, consciously or unconsciously, adopted a shorter-term approach.” This may exacerbate short-term volatility if and when investors seek to exit crowded trades, a factor that Husain says may have been partially responsible for February’s volatility spike.

Solomon says that investors seeking to adjust effectively to the post-QE world need to look to the long term. “Whether you are investing in funds or individual stocks or bonds, you really need to think about the long-term attractiveness

of what you’re buying,” he says. “The behavioral psychology of fads means that they tend to draw in a lot of people at the riskiest moments, so it pays to be smartly contrarian and look deeply at the long-term durability of the prospects you are looking at.”

Correlations are also important. The period of ultralow yields since the financial crisis has driven many fixed income investors to turn to high yield credit in order to generate meaningful returns from their bond allocations. However, credit tends to be highly correlated with equities, meaning that investors with heavy allocations to high yield corporate bonds risk being hit hard on both sides of their portfolio in the event of a downturn. As higher interest rates tend to cause volatility, the prospect of central banks raising rates over the next few years should be of concern for investors whose portfolios are not well diversified.

For many investors, preparing for the next phase of the global economic recovery may require a review of their use of passive and active investment vehicles. While passive strategies have performed very well since the equity bull market began a year or so after the GFC, they could struggle to generate comparable returns going forward if the withdrawal of QE leads to a return of inflation, rate hikes, and volatility. “Passive investing can be a very crowded trade and can lead to highly concentrated exposures,” says Sharps. “If a particular sector or country dominates the index, you are not going to be diversified, and if the market goes down, you’ll go down with it.”

Sharps believes that in order to benefit from the types of opportunities that are likely to arise over the next few years, investors may need to consider increasing their exposure to actively managed strategies. “Over the past year or so, risk appetites have increased among many investors,” Sharps says, “but selectivity and agility will be key to taking advantage of the opportunities that arise.”

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