

Research Paper

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# The Evolution of US and European Monetary Policy after Bretton Woods

## A Historical Overview and Lessons for the Future

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## Summary

- Many of the seemingly ‘established’ norms of monetary policy are in fact quite recent, having emerged since the breakdown of the Bretton Woods system in the 1970s. These norms include inflation targeting, central bank independence from political authority, and the separation of monetary policy from regulatory activity such as bank supervision. Central bank orthodoxy has also, until recently, largely ignored the international ‘spillover’ effects of monetary policy.
- The 2008–09 financial crisis and its aftermath changed the picture. Monetary policy was recruited to assist governments in stabilizing financial markets and restoring liquidity. And conventional assumptions about the primacy of central banks’ responsibility for price stability were challenged as quantitative easing (QE) proved less inflationary than feared. Indeed, eight years after the crisis, the inflation rate – the most significant driver of monetary policy under the old regime – remains consistently low in most major economies.
- In this context, the United States faces some unique challenges. The dollar’s status as the global reserve currency means that the US Federal Reserve’s decisions often have international ramifications. Emerging markets are becoming more exposed to spillovers from US policy, as globalization renders their economies and financial systems more interdependent and as finance becomes increasingly important relative to other economic activity.
- In Europe, the euro’s problems reflect similar shortcomings to those that undermined the 1944 Bretton Woods system. Launched in 1999, the euro was in effect an attempt to maintain fixed exchange rates between member states. However, the single currency’s designers underestimated the difficulty of maintaining such a system across multiple national economies, each with different growth profiles and fiscal policies. The euro’s structural problems have been exacerbated by the secular shift from a world of politically ‘subservient’ central banks, as existed before the creation of the European Central Bank (ECB), to the current system in which the ECB is highly independent.
- Despite the current strains on the monetary system, consensus on a formalized new international framework in the mould of Bretton Woods is unlikely. A more plausible outcome is the organic development of a new set of norms articulating principles both for the mechanisms by which central banks pursue price stability and for the governance of central banks themselves. The United States and Europe are likely to be at the forefront of this process. They should proactively shape the new norms to ensure that they meet the challenges of today’s evolving economic landscape.

## Overview

For several decades after the collapse of the Bretton Woods system of fixed exchange rates in the early 1970s, central banks in the United States and Europe conducted monetary policy in a relatively ad hoc fashion. Policy-makers tried to accommodate the often-conflicting goals of supporting economic growth, limiting inflation and maintaining stable exchange rates. And there was no agreed, centralized ‘system’ articulating principles by which central banks should operate.

That did not mean a complete lack of international coherence in monetary policy-making, however. In the absence of a formalized framework, there was a certain consensus – especially between the United States and Europe – on the characteristics of successful central banking. These norms included the desirability of rigorous inflation targeting and central bank independence from political interference – both seen as essential for such institutions’ credibility and for price stability after the abandonment of the gold peg. Analysts have even suggested that this orthodox or ‘correct’ approach to monetary policy was one of the key causes of the so-called ‘great moderation’ – the period of relative economic calm that started in the 1980s.

The 2008–09 global financial crisis and its aftermath put these norms under significant strain, to the point that many scholars now believe that the ‘great moderation’ is over. Time will tell whether this prognosis holds up, but one thing is clear: so long as slow and uncertain growth continues, ‘conventional’ monetary policy in both the United States and Europe will remain inadequate for addressing post-crisis economic conditions; the continued use of heretofore unorthodox policies such as quantitative easing (QE) will increasingly be needed.

In this context, it is worth remembering that the current ‘consensus’ view of monetary policy is quite new, and was controversial as recently as the 1990s. If the norms put into place after Bretton Woods have run their course, both politically and economically, developments stemming from the 2008–09 crisis and its aftermath have increased the pressure for fundamental change, both in the United States and Europe.

The actions of Western central banks since the financial crisis have challenged orthodoxy in four broad areas. In each case, the norms that policy-makers have partially abandoned were developed only within the last 40 years, and the departure from them is indicative of tensions in the post-Bretton Woods economic environment – tensions that for decades have been masked or mitigated by the reduction in macroeconomic volatility associated with the ‘great moderation’.

First and most noticeably, conventional monetary stimulus (i.e. with interest rates as its primary instrument) in the major economies has in effect been exhausted, as interest rates have hit what is known as their ‘zero lower bound’. With policy interest rates near or at zero, the major central banks – the US Federal Reserve, the European Central Bank (ECB), the Bank of England and the Bank of Japan – have been forced to adopt unorthodox and controversial policies such as QE. More recent breaks with orthodoxy include the introduction of negative interest rates and consideration of ‘helicopter money’ policies – i.e. direct financial transfers to households by central banks.

Meanwhile, economic growth – particularly in the EU but even in the United States – has been significantly below the pre-crisis average, while inflation levels also remain low. As a result, interest rates are also unlikely to rise to their pre-crisis levels, so central banks will have even less room to manoeuvre if rates need to be cut again in a future downturn.

In this environment, the possibility of frequent ‘zero lower bound’ problems is apparent. This paper does not assess the respective technical merits of QE, negative interest rates, ‘helicopter money’ or any other approach. However, if the zero lower bound persists, unorthodox mechanisms will need to be employed more regularly.

The second challenge to the post-Bretton Woods consensus is that the inviolability of central bank independence is starting to be questioned. This is particularly relevant in Europe, where most central banks had historically been accountable to their governments, and where the ECB has attracted criticism from some quarters for supposedly exemplifying the EU’s ‘democratic deficit’. However, similar complaints have arisen in the United States, where politicians have proposed auditing or limiting the powers of the US Federal Reserve; and in the United Kingdom, where Jeremy Corbyn, the leader of the opposition Labour Party, has proposed revoking the independence of the Bank of England.

An important additional factor is that the most important emerging-market central bank, the People’s Bank of China (PBOC), is very clearly *not* independent. Yet until China’s stock market crash and currency devaluation in August 2015, the PBOC had a reputation for monetary policy competence, even though its more interventionist approach to managing exchange rates and capital flows would be anathema to the central bank of any advanced economy. China’s status as a potential role model now seems somewhat tarnished, yet if the country’s transition to a more modern economy and financial system succeeds, the PBOC could eventually provide an alternative template for more explicitly politicized central banks in other emerging markets.

Third, given that inadequate system-wide supervision of the financial sector has been often cited as a cause of the financial crisis, central banks have been given significantly expanded powers of macroprudential supervision. In most advanced economies, these powers were previously vested in a separate regulator or not addressed explicitly at all. This potentially changes the role of central banks quite fundamentally: whereas the conduct of monetary policy is relatively disconnected from the businesses and individuals it affects, macroprudential supervision requires regulators to take a more hands-on approach, directly interacting with and (where necessary) sanctioning private banks. Tools that directly target financial institutions’ daily operations – such as dynamic capital buffers, and leverage ratio requirements – in some respects affect banks far more directly than simple monetary policy. Such tools are also more intrusive than the pre-existing regulatory powers of central banks, and therefore likely targets for lobbying and other attempts to influence a new regulator.

Additionally, the tool of last resort of macroprudential regulation in the event of a systemic bank failure is a capital infusion by the sovereign – a ‘bailout’, in other words. Because spending powers are controlled by a democratically elected legislature in most countries, a capital infusion is necessarily a highly political act. Therefore, by taking a more ‘hands on’ role in the regulation of the financial sector, central banks are likely to become more politicized, even if they nominally remain independent.

The fourth area in which orthodoxy is being challenged concerns the role of the US dollar. The dollar has been at the centre of the global monetary system since Bretton Woods, but globalization and freer capital flows have left emerging markets more exposed to shocks from US monetary policy. This was seen in the financial crisis, and in the negative economic reaction in emerging markets to the Federal Reserve's 'tapering' of QE in 2013 (Eichengreen and Gupta, 2014). As this trend continues, it is likely that the Federal Reserve will exert an even stronger influence on the global economy, even if the United States' economic dominance becomes less pronounced in other respects.

Whether or not the 'great moderation' is in fact over, these four issues are likely to figure prominently in what is set to be a turbulent period for monetary policy cooperation in the years ahead. It is therefore worth examining how and why the current monetary system has evolved as it has – and in particular how its development reflected specific circumstances in the post-Bretton Woods environment. With this in mind, this research paper offers a brief historical overview of the post-Bretton Woods system and the development of its defining norms. It reviews the breakdown of the post-war system of pegged exchange rates, the creation of the euro and genesis of the ECB, the apparent success of inflation targeting in the context of the 'great moderation', and the shock to established thinking that was engendered by the 2008–09 financial crisis. A concluding section proposes some suggestions as to how policy-making challenges might be addressed in the future.

# Unsustainable System: the Breakdown of Bretton Woods

## The end of global fixed exchange rates

The modern era of monetary policy in the United States and European countries began with the breakdown of the Bretton Woods system, a process that started in the late 1960s and continued into the early 1970s. The Bretton Woods agreement had been designed towards the end of the Second World War to create a system whereby exchange rates would remain stable while inflation remained under control. This was to be achieved primarily through a peg to the price of gold. Under Bretton Woods, 14 European currencies became fully convertible with the US dollar, which itself was pegged to gold (Garber, 1993). The maintenance of a gold standard reflected the assumption that a currency not linked to gold would promote undisciplined and expansionary monetary and fiscal policy (Astrow, 2012). In order also to encourage stable exchange rates, European countries would hold their foreign exchange reserves primarily in dollars, which could be exchanged for gold at any time. However, from the 1960s onwards, the system became increasingly unsustainable (Garber, 1993).

The problem was that the US dollar was the primary source of liquidity in European capital markets, which allowed the United States to enjoy significant balance-of-payments deficits without the risk of currency devaluation or higher interest rates (Eichengreen, 2004). Eventually European economies, which had grown faster than the United States as they recovered from the Second World War, began to exchange their dollar reserves for gold, feeding speculation that the dollar was overvalued. Attempts to mitigate this development began almost immediately, most notably with the establishment of the London Gold Pool in 1960, which aimed to fix the price of gold through strategic buying and selling. However, over time European commitment to this consortium wavered, starting with France in 1962, and continued rises in demand for gold led to increasingly frequent runs against the dollar (Garber, 1993).

Despite the gold peg, US monetary policy at this time was also very expansionary. The economic pressures of the Vietnam War meant that Federal Reserve Chairman Arthur Burns was under pressure from President Richard Nixon to keep interest rates low throughout his presidency – a policy that, in a fixed exchange rate system, further contributed to the dollar's overvaluation (Lowenstein, 2011). Eventually the system became unworkable, and President Nixon suspended the dollar's convertibility with gold on 13 August 1971. The dollar, and most other Western currencies, became free-floating by 1973. Once the United States had abandoned the gold standard, the dollar rapidly depreciated, its decline exacerbated in part by the shock from the Middle Eastern oil crisis. Expansionist monetary policy led to a prolonged period of low growth and high inflation (Subacchi and Driffill, 2010).

The breakdown of the Bretton Woods system had a profound impact on the International Monetary Fund (IMF). Created at the Bretton Woods conference in 1944, the IMF had been designed to administer the pegged exchange rate system, and as late as 1974 it was still actively attempting to re-establish that system (Cononi and Hellerstein, 1994). In an attempt to manage the shocks to the

Bretton Woods system, the IMF created Special Drawing Rights (SDRs): claims issued by the IMF on a certain amount of foreign currency that IMF members had agreed to voluntarily exchange for these new instruments (IMF, 2016). While SDRs were seen as a way of compensating for the increasingly unbalanced dollar, the breakdown of the fixed exchange rate system meant that only SDR 204.1 billion were ever issued (and of this sum, the vast majority, SDR 182.7 billion, was issued in 2009 in response to the financial crisis – Subacchi and Driffill, 2010). Eventually, in 1976 the IMF’s incorporation agreement was amended to codify a new role for the Fund in the floating exchange rate system. Its previous mission – to provide the reserves and payment system necessary for a fixed exchange rate system – was de-emphasized. Instead, the IMF’s role became more advisory and reactive – with a mandate to supervise the monetary and fiscal policies of its members, and to limit the likelihood and impact of crises. This new role of disseminating information, developing best practices and providing direct assistance to member countries with balance-of-payments problems contrasted with the IMF’s original mission of proactively managing the monetary system as a whole (Cononi and Hellerstein, 1994).

### **Europe’s Economic and Monetary Union, and the rise of the independent Bundesbank model**

Despite the abandonment of a global gold-convertible international monetary system, the goal of harmonized exchange rates continued within Europe. In many ways, the project of European monetary integration was an attempt to revive the fixed exchange rate system, but with the dollar peg – and consequently the gold peg – removed. Indeed, plans for monetary union in Europe had been mooted since the end of the Second World War, and a commission led by Luxembourg’s finance minister, Pierre Werner, drafted a serious proposal in 1970 (European Union, 2011). In a Bretton Woods-type framework, in which all currencies were already fully convertible, the project would have been simpler. However, the collapse of Bretton Woods meant that there was no central peg on which to base such a system.

Several failed attempts to devise a new intra-European fixed exchange rate system were eventually followed by the successful creation of the European Monetary System (EMS) in 1979. This had the primary goal of ‘increasing monetary stability’ in Europe (Delors et al., 1989). The EMS created the European Currency Unit (ECU) as its central point of reference. The ECU consisted of a basket of currencies of the participating countries, with each individual currency pegged to the basket itself at an exchange rate that fluctuated within a narrow band (Mundell, 1995). The system was viewed as a preliminary form of monetary union, and as a prelude towards a European single currency. While the EMS did not formally put any individual country at its centre, as the Bretton Woods system had, Germany quickly came to dominate. The size of the country’s economy relative to the rest of Europe, and the Bundesbank’s success in controlling inflation, caused the Deutsche Mark to become the de facto ‘anchor’ of the EMS insofar as price stability was concerned (Mundell, 1995).

To understand the reasons for the Bundesbank’s success in maintaining price stability, it is key to examine its governance. One notable complication in developing a harmonized monetary policy across Europe was that the idea of an independent central bank was, at the time, unorthodox. Monetary policy was driven largely by politicians, who would set target interest rates for central banks to implement (Goodhart, 2010). Even the US Federal Reserve, which was one of the more independent central banks at the time, could still be pressured by President Nixon to keep interest

rates low (Lowenstein, 2011). The only other two central banks that were considered fully independent in the 1970s were the Swiss National Bank and the Bundesbank (Goodhart, 2010).

The Bundesbank had been established in 1957 as the world's first fully independent central bank (Alessi, 2013). Its creation marked an attempt to avoid a repetition of the hyperinflation of the 1930s. As a result, the bank maintained a higher level of independence from political leaders than the central bank of any other industrialized country well into the 1990s (Debelle and Fischer, 1994). Because of this, the Bundesbank could pursue inflation-based targeting with very little political pressure to keep interest rates low, and so achieved significantly lower inflation than the rest of Europe (Alessi, 2013). At the time, questions arose as to whether, by pursuing its inflation target so rigorously, the Bundesbank was 'leaving growth on the table'. A particular example of this dilemma occurred when the bank presided over two recessions in the 1980s, rather than loosen monetary policy in support of economic growth (Debelle and Fischer, 1994). The contrast between the Bundesbank's actions and those of other central banks meant that the merits of independence remained in debate until as late as the 1990s.

The problems with the Bundesbank's dominance were that monetary policy was too tight for many other EMS countries to maintain, and that the Deutsche Mark was too strong to work as the reference currency in a fixed exchange rate system. Indeed, in the early years of EMS, countries were forced into frequent currency revaluations, with seven such actions occurring between 1979 and 1983 (Sevilla, 1995). From 1987 onwards there followed a period of relative stability, in which no currency realignments occurred, until in September 1992 Italy and the United Kingdom were forced out of the Exchange Rate Mechanism (ERM), the latter permanently (Sevilla, 1995). One of the rationales for the eventual adoption of the euro was the need to mitigate the imbalances across the EU that had plagued the ERM – the theory being that a common central bank would target the EU average inflation rate, rather than the German one (Mundell, 1995).

The final architecture for establishment of the euro was developed in the *Delors Report* in 1989. The report outlined the goals of a European currency union and the institutional framework needed for such a union to succeed. In particular, it emphasized greater coordination of economic and monetary policies between member states – including structural reforms, common macroeconomic policies, and measures to encourage economic convergence between member states (Delors et al., 1989). The question of the new central bank's approach to monetary policy was spelled out: its specific goal ought to be price stability and the bank should be independent from any other European institution. The ECB would have to provide periodic reports to the European Parliament and Council, but actual oversight and supervision oversight would be conducted by a 'supervisory council or committee of independent auditors' (Delors et al., 1989).

By this point the principle of central bank independence had become broadly accepted. The Maastricht Treaty required that all prospective eurozone members adopt central bank independence as a precondition for membership (Debelle and Fischer, 1994). In order to get German buy-in to the idea of a single central bank, the ECB itself was structured very similarly to the Bundesbank, with a strict focus on price stability, and heavily insulated from popular accountability (Alessi, 2013). This arrangement would later contribute to the more general critique of other European institutions, that they are too poorly understood by the greater European population to be held democratically accountable in any real way. Ironically, the adoption of the

Bundesbank model for the ECB led to a reversal of the pre-1970s state of affairs: instead of a world in which central banks in Europe were mostly ‘subservient’ to governments and the US Federal Reserve independent, the ECB now has a primary mandate of simple price stability whereas the Fed has a dual mandate (price stability and full employment) that allows for substantially more focus on broader economic conditions (see Table 1).

**Table 1: Central bank mandates**

Central bank	Source	Mandate
US Federal Reserve	Federal Reserve Act 1977	‘The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy’s long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices and moderate long-term interest rates.’
Bank of England	Bank of England Charter 1998	‘In relation to monetary policy, the objectives of the Bank of England shall be – (a) to maintain price stability, and (b) subject to that, to support the economic policy of Her Majesty’s Government, including its objectives for growth and employment.’
European Central Bank	Lisbon Treaty 2009	‘The primary objective of the European System of Central Banks ... shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union ... The ESCB shall act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources.’

Sources: Federal Reserve, Bank of England, European Commission.

## Monetarism, inflation targeting and the ‘great moderation’

The other innovation during the period of ad hoc policy development post-Bretton Woods was the emergence of inflation rate targeting as the priority of monetary policy, and the refinement of various tools to achieve a desired rate of inflation. After the abandonment of the gold peg in 1971, the combination of political pressure to keep interest rates low during the Vietnam War, low consumer confidence due to the breakdown of the gold-backed system, oil shocks in the Middle East and slow economic growth produced a period of ‘stagflation’ in the United States. In order to overcome persistent slow growth and high inflation, the Federal Reserve’s policy framework had to change. The appointment of Paul Volcker as Federal Reserve chairman in 1979 signalled this change in approach. The Fed began to target the level of bank reserves rather than the money supply itself, an initiative that was eventually adopted by most central banks (Goodhart, 2010). Under the directorship of Volcker, the Fed raised interest rates as high as 19 per cent (see Figure 1), pushing the United States into recession in 1980 and again in 1981–82. However, after the US economy emerged from these recessions, growth became less volatile. This was mirrored by a similar decline in volatility in Europe. Since then, inflation has not risen to 1970s levels in either the United States or the EU, and GDP growth rates (at least, up until 2008–09) have been steadier (see Figure 2).

Analysts are unsure of the causes of this ‘great moderation’, but generally attribute it to some combination of structural changes, improved monetary policy and luck (Young, 2008; Summers, 2005; Hakkio, 2013). Insofar as monetary policy has been identified as a cause, the most commonly cited factors have included the worldwide trend towards central bank independence and the

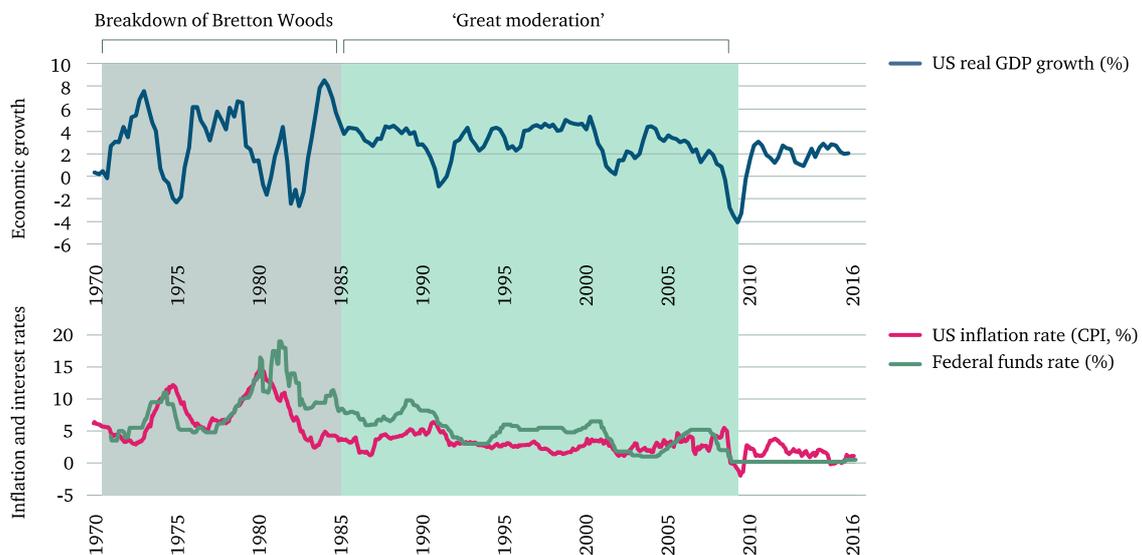
adoption of inflation targeting (Young, 2008; Hakkio, 2013; Goodhart, 2010). These two innovations have been so widely accepted that it is important to remember how recent norms they are. Inflation targeting was first adopted formally only in 1988, by New Zealand, before it became commonplace (Goodhart, 2010); and the merits of central bank independence were contested as recently as the mid-1990s (DeBelle and Fischer, 1994). Indeed, if the current system of floating exchange rates and independent central banks can be said to have existed only since 1971, then what is now considered ‘normal’ in monetary policy had a mere 37-year lifespan from inception to the financial crisis in 2008. Moreover, all but the first 10 years of this period were characterized by extremely low volatility, rendering assessment of the system’s fundamental resilience more difficult.

**Figure 1: The US federal funds target rate**



Sources: Thomson Reuters Datastream, US Federal Reserve.

**Figure 2: The ‘great moderation’ in the United States**



Source: Thomson Reuters Datastream.

## The 2008–09 Financial Crisis and its Aftermath

The nearly three-decade period of relative calm that started from the 1980s was punctuated by the 2008–09 financial crisis, which tested many of the propositions that had come to characterize both European and US monetary policy: the utility of European Monetary Union (EMU), now fully ‘locked in’ through the single currency and the ECB, and with a rigid mandate of price stability; the limits of monetary stimulus, given near-zero interest rates and a crisis of almost unprecedented magnitude; and the stability of a globalized and financially interconnected world economy with the US dollar as its reserve currency.

### **The dollar, unorthodox monetary policy: quantitative easing**

Throughout the ‘great moderation’, the US Federal Reserve’s federal funds rate target had trended steadily downwards, as high inflation became less of an issue. As a result, the rate was only at 5 per cent when the financial crisis occurred. The Federal Reserve exhausted its use of conventional monetary policy relatively early in the crisis, lowering rates to near-zero (see Figure 1), but this was insufficient on its own to stimulate economic growth.

The Fed therefore took monetary policy in an unorthodox direction. First, it embarked on a programme of quantitative easing (QE) to provide liquidity now that traditional monetary policy instruments were no longer effective – i.e. as interest rates were already at or near the zero lower bound (Fawley and Neely, 2013). Japan had experimented with a version of QE in 2001–06 in an effort to reflate its economy. In the US context, the new policy consisted of three rounds of asset purchases by the Federal Reserve between 2008 and 2013. These purchases, primarily of long-dated US government bonds and mortgage-backed securities, were designed to increase overall liquidity in the financial system and boost asset prices (Lim, Mohapatra and Stocker, 2014).

QE in the United States was significant for two additional reasons. First, the asset-buying programme was unprecedented in size (Lim, Mohapatra and Stocker, 2014), as the Federal Reserve expanded its balance sheet by over \$3 trillion (Bauer and Neely, 2013). Second, the central role of the United States in the global economy meant that QE had substantial spillover effects, particularly in emerging markets, where inward investment rose by roughly \$406 billion and more than doubled as a percentage of GDP for the affected countries (Lim, Mohapatra and Stocker, 2014).

These spillover effects spurred growth in emerging markets through three related channels. First, in buying US government bonds and mortgage-backed securities from private banks, the Federal Reserve drove up prices for similar assets in the domestic market as a whole, thereby unbalancing the risk profiles of many banks’ investment holdings. Banks needed to turn to foreign markets to rebalance their portfolios, which boosted demand for assets in emerging economies. Second, the increase in total liquidity in the system created a wider pool of readily saleable assets to be invested. Finally, the fact that QE signalled the Federal Reserve’s intention to keep interest rates at near zero for the foreseeable future meant that investors seeking higher returns needed to look outside the

United States; again, this boosted demand in emerging markets and also kept the dollar low relative to emerging-market currencies (Lim, Mohapatra and Stocker, 2014).

All this had implications for America’s persistent trade imbalances, long driven by the dollar’s role as the primary reserve currency, as described in the ‘Triffin dilemma’.<sup>1</sup> For many years after the suspension of dollar convertibility with gold, such imbalances were mitigated by exchange rate adjustments and the development of larger, more liquid financial markets – which counteracted the tendency of the US economy to run an unsustainable current-account deficit (Smaghi, 2011). However, the United States’ external position since the early 1990s has been a source of renewed concern.

The deficit has been driven most significantly by emerging markets, which until recently had been building up substantial reserves of dollar-denominated assets and dollar reserves. Their exposure to US monetary policy is greater than it was 20 years previously (see Figure 3 below), and as a result QE has attracted substantial criticism from emerging markets. For example, in 2010 Brazil’s then finance minister, Guido Mantega, derided the policy as part of a ‘currency war’ that would artificially reduce the value of the dollar and raise asset prices, harming the competitiveness of emerging markets (Eichengreen, 2013).

Three years later, when the Federal Reserve began discussing the scaling back – or ‘tapering’ – of QE, reaction in emerging markets was also negative. In particular, countries that had benefited from increased liquidity to run a stronger exchange rate or finance a large current-account deficit suffered substantial reversals when the United States began to signal that it would reduce its asset buying. These countries often had highly developed financial sectors (Eichengreen and Gupta, 2014). Both the implementation and the withdrawal of QE in the United States created economic shocks elsewhere, which the policies of central banks in emerging markets were often unable fully to counteract (Eichengreen and Gupta, 2014).

**Figure 3: Growth of US dollar reserves globally**



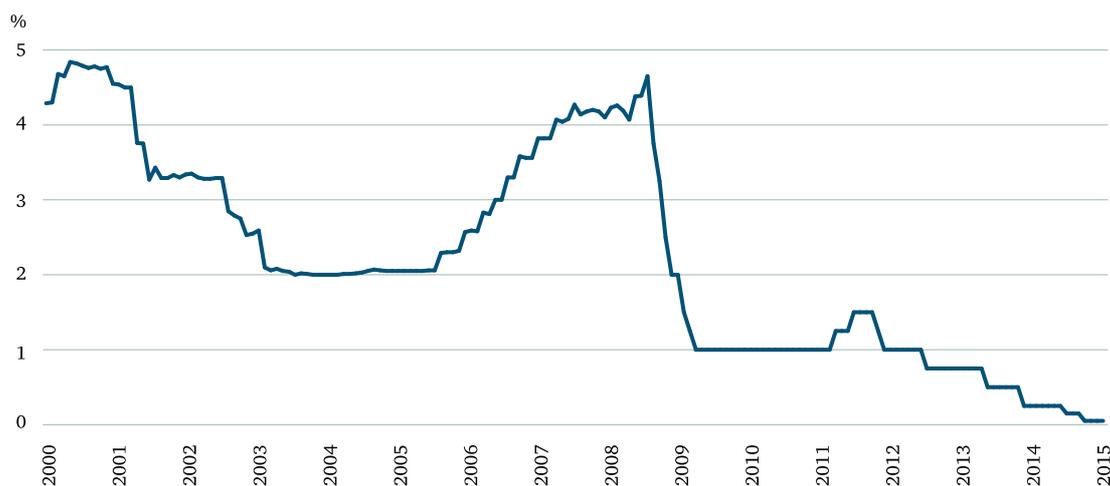
Sources: Thomson Reuters Datastream, IMF.

<sup>1</sup> This is the principle, named after Belgian-American economist Robert Triffin, that a country possessing a global reserve currency will be forced to run current-account deficits in order to meet the demand of other countries for its currency reserves.

## The euro crisis – a fixed exchange rate and tight monetary policy

The ECB's response to the global financial crisis in 2008–09 contrasted with that of its US counterpart. At first, the crisis was considered simply an American problem, and even as it led to recession in Europe the ECB remained conservative in lowering its interest rates, even raising them again in 2011 (see Figure 4). Part of this probably had to do with the fact that the ECB had not faced a significant economic downturn before, and so its ability to respond even to a 'normal' recession was untested. It had only lowered its main interest rate under much milder economic conditions between 2001 and 2003; and these interventions required a much smaller lowering of rates to be effective than the 2008-09 lowering of rates (see Figure 4). However, a significant part of this was also likely due to the strong culture of inflation targeting that the ECB had inherited from the Bundesbank.

**Figure 4: ECB main refinancing rate**

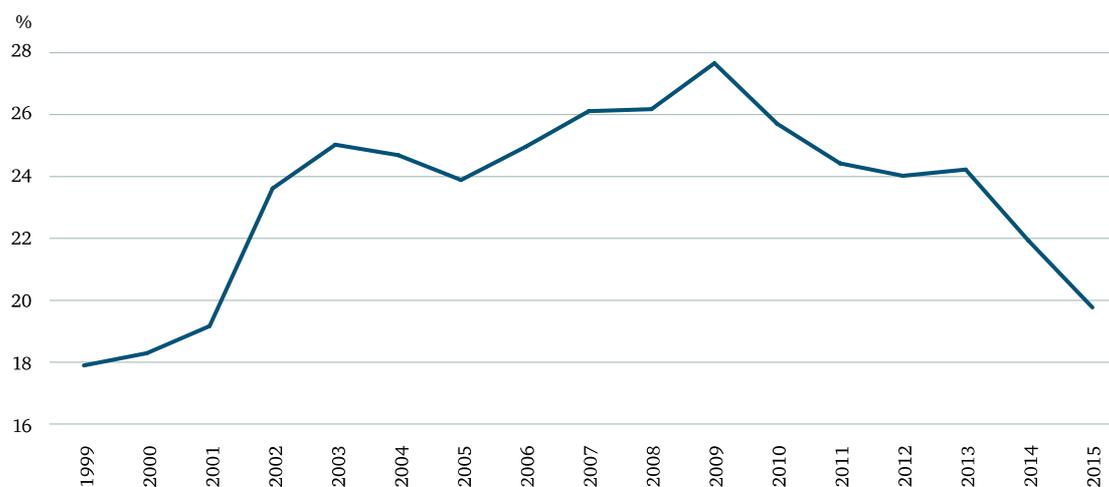


Source: Thomson Reuters Datastream.

The Bundesbank was a key opponent of the extraordinary measures belatedly undertaken by the ECB. Although recession contributed to a sovereign debt crisis in Greece, the Bundesbank had opposed the ECB's Securities Markets Programme, begun in 2010, to buy Greek government bonds on the secondary market (Alessi, 2013). Only after two years did the crisis become so acute that Mario Draghi, the ECB's president, was forced to make his high-profile promise to do 'whatever it takes' to save the euro. Even then, the unorthodox monetary policy that the ECB pursued, so-called Outright Monetary Transactions (OMT) or purchases of sovereign bonds, would be 'fully sterilized' to ensure that the net liquidity in the system as a result of this action did not rise indefinitely (European Central Bank, 2012). Any increase in liquidity would be counterbalanced, limiting its stimulative effect. The euro had a similar flaw to that in the Bretton Woods system of fixed exchange rates: participating countries were unable to devalue their currencies, leading to distortions that had to be resolved through real economic adjustments. The euro's problems were exacerbated by the hawkish bias of the ECB, a bias that the ECB's predecessor institutions did not have.

This technical flaw in the euro's design – combined with the ECB's insulation from politics, which reduces the bank's legitimacy in the eyes of some – has contributed to concerns about the single currency's very viability. When the euro was first launched, there was significant speculation that it was capable of complementing or even replacing the dollar as a global reserve currency if the US current-account deficit became too severe (Eichengreen, 2004). As a result of the sovereign debt crisis in the euro zone, this expectation has almost entirely vanished and the euro project now remains mired in concerns over the basic stability of the single currency. In the first 10 years after the introduction of the euro, the share of total foreign exchange reserves held in euros increased sharply – from 17 per cent in 1999 to 27 per cent in 2009. However, in the aftermath of the global financial crisis, and especially since the Greek sovereign debt crisis that started in 2010, reserves held in euros have diminished as a percentage of all reserves (see Figure 5). The dollar's share of global reserves, meanwhile, has remained steady at 60–65 per cent. The euro still has a major role to play in the global economy, due to the size of its home market and the maturity of the European financial system, but its potential as a supplemental reserve currency to the dollar has been severely curtailed.

**Figure 5: Foreign reserves held in euros**



Sources: Thomson Reuters Datastream, IMF.

Looking ahead, slower GDP growth in Europe than in the United States and residual concern over the euro crisis make it unlikely that the share of foreign exchange reserves denominated in euros will return to its pre-crisis level. While it is possible that the single currency could regain the credibility it lost during the eurozone crisis, this would likely require the creation of a much deeper political union and debt mutualization to assure markets that the European institutions or national governments would stand behind the euro, and to ensure the euro would remain a functional currency. Even if that were to be accomplished, Europe is shrinking in relative terms as a contributor to world GDP. It is more likely, therefore, that the most active role for Europe in governance of international monetary policy lies in the institutions that have been created or enhanced as a result of the financial crisis – such as the G20 and Financial Stability Board (FSB).

## The crisis and central bank legitimacy

Over the next several years, pressures on central banks will take two seemingly contradictory directions: towards greater politicization, and towards entrusting them with new supervisory powers and responsibilities. Questions about the legitimacy of central banks draw on a number of arguments. First, there is the possibility of domestic political discontent. The ECB pursued substantially tighter monetary policy than the Federal Reserve, especially before 2012, including raising interest rates in 2011 (see Figure 4 above). While this was done out of fear of inflation, it may have exacerbated the crisis in the European periphery. In effect, the ECB has continued the previous focus of the Bundesbank on keeping inflation low despite political pressures for more expansive policy. Its monetary policy has likely been much tighter than many pre-ECB European central banks would have prescribed, considering that many of them were not independent until the 1990s and would have been subject to greater political pressure. It is not inconceivable that the ECB's governance structure will be called into question as a result.

Equally, the United States has already seen the emergence of a movement criticizing the Federal Reserve's monetary policy – particularly QE – during the global financial crisis. The critics have called for a thorough audit of the Federal Reserve, with an aim to make it more accountable to politicians (O'Keefe, 2012). While more robust economic growth has muted these opinions, they were still championed by multiple presidential candidates (including Ted Cruz, Rand Paul and others) in the 2012 and 2016 US presidential election campaigns, and such ideas retain a political following (Rappeport, 2015).

Another potential force pushing against central bank independence could come from external players, in particular China. The People's Bank of China (PBOC) is one of the largest central banks in the world, and is likely to continue to gain in importance as time goes on. It is not independent from the Chinese government (Altman, 2014). In addition, many of the central banks in emerging markets have significantly less independence than their counterparts in the developed world (Arnone, Laurens and Segalotto, 2006). While the Chinese model of central banking is unique in many ways, the rise of China's economy may cause that model to become more popular elsewhere – especially if the PBOC resolves China's most recent financial difficulties more effectively than the West resolved the 2008–09 crisis. This alternative model may provide a platform for criticism of the concept of central bank independence.

Ironically, at the same time as their independence is being questioned, central banks are being entrusted with new powers. The US Federal Reserve, the Bank of England and the ECB have all recently obtained new mandates to supervise systemically important banks, in addition to their existing mandates to act as lenders of last resort and preserve price stability (Borio, 2011). It is their very independence that has allowed this to happen, as politicians see an organization more insulated from political pressures as better able to supervise banks than one which may be politically motivated to act leniently (Goodhart, 2010; Borio, 2011).

Additionally, the relationship between financial stability and growth has become more apparent since the crisis. This has meant both that central banks have been given regulatory powers pertaining to financial stability and also that they must coordinate with political actors more closely

in the event of a bank failure – as any act requiring public funds or public guarantees is inherently political.

Finally, as the financial system has grown more international, central banks are seen as better able to undertake international cooperation more quickly (Borio, 2011). However, there is a possibility that supervisory duties may undermine one of the main purposes of central bank independence – to ensure that central banks focus on price stability above all. The Bundesbank, in particular, has expressed concern about more supervisory powers being transferred to the ECB, out of fear that this would dilute the latter's independence (Alessi, 2013). In this sense, central banks may have *de jure* independence, but the nature of their expanded powers could subject them to significantly more lobbying and political pressure. They would be required to coordinate with governments in more complex ways, which might diminish their ability to act as effective arbiters of monetary policy (Goodhart, 2010).

## Towards a New ‘New’ System

The financial crisis and subsequent recession have broken down significant norms both technical and political. Economic recovery has remained sluggish in the United States and especially the EU, and financial and geopolitical shocks, including the fallout from Britain’s referendum on EU membership, may negatively affect growth prospects. Structural problems with the eurozone, and with the dollar’s role in the international monetary system, linger on.

Compounding these problems is the open question of overall volatility: was the financial crisis an anomaly or a turning point? Eight years on, it remains unclear whether we will return to a ‘great moderation’ of stable growth rates and business cycles, or if increased volatility is the new normal. However if interest rates, which were the central tool of monetary policy during the ‘great moderation’ (Hakkio, 2013), consistently remain near zero, the use of unconventional monetary policy will by necessity become the norm. This would have uncertain ramifications.

Other actors are becoming discontent with the status quo, in particular with the role of the United States at the centre of the global financial system. If the United States conducts monetary policy without sufficient regard to the rest of the world, this would play havoc with emerging markets in the future. As developing markets such as China gain more economic clout, the international monetary system will likely have to depend less on the US Federal Reserve – at the same time, the Federal Reserve will have to focus more on the effects of its policies beyond the United States. Already we have seen the ‘BRIC’<sup>2</sup> countries attempt to create new institutions for global economic governance where existing ones have failed. This will be significantly harder to do in the case of the dollar, but it is still a possibility.

### Best practices for an uncertain world

A significant but often overlooked factor in the history of monetary policy is that the ‘great moderation’ was partially the result of a post-Bretton Woods system that was not centrally planned through any agreements or treaties, but that grew instead out of best practices and norms developed primarily by the US Federal Reserve, European central banks and the IMF. Just as the norms of Bretton Woods broke down, the norms of this system have also begun to break down, either due to technical limitations – the inability of existing monetary policy tools to promote growth – or due to popular discontent. This system will need to be updated, a process that implies a period of uncertainty in monetary policy. Barring a new Bretton Woods-style agreement, which seems highly unlikely, this new system will again take the form of best practices and norms.

In any new framework, the United States will likely have to take a less central role in global economic governance, instead becoming the largest stakeholder in an international system

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<sup>2</sup> Brazil, Russia, India, China.

(Subacchi, 2010). We have seen the beginnings of this transition. The G20 acted as just such a forum during the financial crisis, ensuring standardization on macroprudential supervision through the creation of the FSB (Subacchi and Pickford, 2011). Many of the new macroprudential powers given to central banks were the product of FSB policy development and advocacy. Although the G20 has become a major forum for global governance because of its inclusion of developing and non-Western countries, much of the technical expertise remains with European and US policy-makers, who collectively represent six of the grouping's 20 members.<sup>3</sup> By presenting a unified front on the need for independent central banking in this forum, the United States and European nations will be able to ensure that best practices are maintained.

A new system will have to reform those areas of the old regime that have failed over the last eight years and defend and institutionalize those areas that, while successful, have become controversial. Most notably, the pre-existing consensus approach to monetary policy has been inadequate for dealing with crises when interest rates remain near the zero lower bound. New technical solutions such as QE will need to be formalized in the coming years and decades. There is also the challenge of how the US Federal Reserve, the Bank of England and the ECB can manage the greater supervisory requirements they have inherited while limiting the politicization of policy. A further question is how central banks should regard independence in a world in which their responsibilities are becoming more political, and in which discontent with the economic status quo is growing. Finally, while the Bretton Woods system collapsed over four decades ago, many of the causes of its failure linger in the current economic system. In particular, the system remains centred on the United States in a way that (a) requires the US economy to run a large current-account deficit, and (b) effectively leaves other countries at the whim of the Federal Reserve's policies.

In light of the history that this paper has reviewed, the author proposes several policy recommendations for the ECB and US Federal Reserve:

- First and foremost, policy-makers should avoid a focus on inflation to the exclusion of economic growth, as that will delegitimize independent central banking. This is particularly important for the ECB. Even within Europe, most countries have had a tradition of much looser monetary policy and politically 'subservient' central banks. Given the wide economic disparities between European nations, the economic hardship created by 'leaving growth on the table' in a country like Greece can lead to sustained political unrest. This suggests that the ECB's mandate may need to be reassessed.
- Second, the use of unorthodox monetary policy must be standardized and made to appear less ad hoc in nature. In the event that growth remains slower and less predictable than before, and that inflation also remains low, the problem of the zero lower bound will persist. Whether a form of QE, negative interest rates, 'helicopter money' or some other solution becomes the tool of choice for central banks in zero-lower-bound scenarios, these choices should be coordinated between the ECB and US Federal Reserve, and their legitimacy must be conveyed to the public in advance of their use. However, just as interest rate targeting developed organically over time,

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<sup>3</sup> United States, European Commission, Germany, France, United Kingdom, Italy.

these new tools will also necessarily evolve in a decentralized way, until a basic system of norms becomes accepted.

- Third, the needs of countries vulnerable to fluctuations in the US dollar should be accounted for. This could be done either through a more concerted effort by the United States to take into account and mitigate their positions, or by decreased dependence on the dollar. The IMF may be able to provide smoother access to liquidity, possibly through enhanced use of SDRs. An expansion and formalization of central bank swap lines would also be beneficial. The Federal Reserve could officially acknowledge that its actions have repercussions for the global economy rather than just for the domestic US economy, and could offer guidance on how it might take these issues into account. This would undoubtedly prove politically difficult domestically, but as slowdowns in the rest of the world would also affect US economic growth, internationally minded policy options should be considered more proactively by the Fed.
- Fourth, if macroprudential supervision functions are being moved from government ministries to central banks, prudential regulation must be kept operationally separate from the implementation of monetary policy within each central bank. While certain areas of macroprudential supervision should be controlled by central banks, the United States and Europe should focus as much as possible on robust enforcement of financial regulation through government agencies that are more politically accountable, rather than move those functions to a central bank. This will limit the incentives for lobbying or politicization of central banks in response to decisions of a non-macroprudential nature.
- Fifth and finally, the US Federal Reserve and the ECB should attempt to use their clout to encourage best practices in central banks elsewhere. Monetary policy and macroprudential regulation require cooperation between home-country and foreign regulators, and the large US and European markets and financial systems will give the Federal Reserve and ECB significant bargaining power. This will help to spread norms on issues such as central bank independence and the coherent use of unorthodox monetary policy. The role of international bodies such as the G20, the FSB and the IMF will also be key in maintaining best practices.

Global trends will ensure that the role of both the US Federal Reserve and the ECB will change significantly in the next several years. It is important that policy-makers are mindful of previous missteps and challenges in monetary policy. If the present moment does indeed represent the end of the ‘great moderation’, with central banks now needing to employ unorthodox monetary policy more regularly, it is very possible that the world will experience instability in monetary policy similar to that seen in the 1970s. However, more coordinated engagement on these issues between the Federal Reserve and the ECB should improve their chances of arriving at best practices and ensuring their legitimacy, independence and effectiveness in the years to come.

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