

Kiel **Policy Brief**

Evaluating the Federal Reserve's Policy

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1. Introduction

On November 3rd, 2010 the Free Market Open Committee (FOMC, henceforth) announced to purchase an additional amount of \$ 600 billion of longer-term Treasury securities by the end of the second quarter of 2011. The Federal Reserve System (FED, for short) will also continue to reinvest principal payments from agency debt and agency mortgage-backed securities into longer-term Treasury securities in the amount of approx. \$ 300 billion over the same period. In summation, the FED will purchase longer-term Treasury securities in the amount of roughly \$ 900 billion, implying average purchases of \$ 110 billion per month. \$ 75 billion of those are associated to additional purchases, while \$ 35 billion are associated with reinvestment purchases. In addition, the target range for the federal funds rate will remain unchanged at 0 to 1/4 percent.

What has been the rationale for this decision? First, we observe that unemployment remains high (at a rate of 9.8 % in November) and – due to the slow pace of economic growth – is likely to remain so for some time. In addition, household spending is increasing only gradually, being constrained by high unemployment, lower housing wealth and tight credit. Second, measures of underlying inflation have trended lower and remain somewhat low relative to the Committee's long-run target that is consistent with healthy economic growth in the long-run, while longer-term inflation expectations have remained quite stable.¹ These two observations are not in line with the FED's statutory mandate to ensure price stability – i.e. low and stable inflation – and maximum employment.

We will discuss the theory of open-market operations in the next section in more detail, however, the asset purchases are aimed to influence relative yields and drive down long-term real interest rates. This can be achieved by buying a large enough volume of long-term debt that is characterized by different risk characteristics as short-term debt, i.e. the FED influences the maturity structure of government debt. Reducing the net risk exposure of private agents, average compensation should fall which finally flattens the slope of the yield curve.

Let me make a first and preliminary assessment of the effectiveness of QE2. After the announcement that the FED will pursue some kind of easing during the speech of Chairman Bernanke at Jackson Hole, markets started to shift into the desired direction. Asset prices increased while long-term real interest rates declined, because inflation expectations increased. After the official announcement on November 3rd, nominal Treasury yields and long-term real interest rates are climbing higher. Rising inflation expectations are a signal of expected higher nominal spending, which – in an environment with sticky prices and spare capacity – will lead to expectations of stronger real economic growth. Therefore, the rising real yields can be seen as a bullish signal, as long-run real interest rates largely reflect the expectation of stronger real growth in the future. Of course, the direct effect of QE2 on real

¹ According to the National Association for Business Economics member survey (July 30 – Aug 10), 45 percent of respondents believed that deflation risks emerge.

interest rates is hard to identify, as e.g. incoming information about a somewhat stronger economic outlook and an additional fiscal package by President Obama can be considered as significant driving factors.

However, there has been an ongoing debate about the effectiveness and the implications of the FED's policy, especially in Europe and emerging economies. In the remainder of this comment, we will review major concerns against the recent decision and discuss the FED's policy from a global perspective.

2. The Federal Reserve's Policy

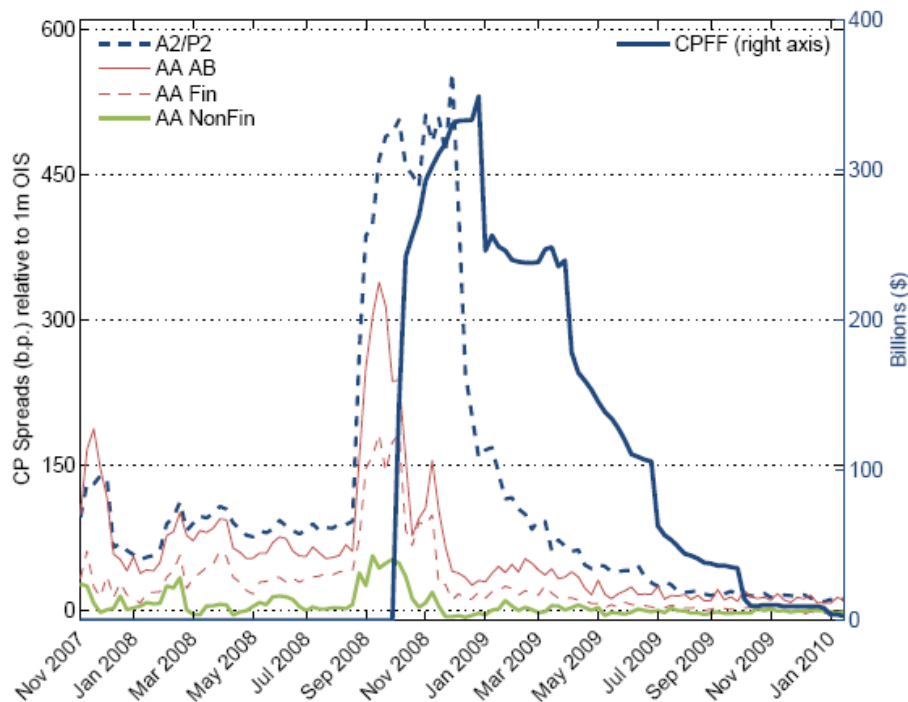
2.1 Some Theory on Open-Market Operations

Does the size or the composition of the monetary authority's balance sheet matter? This question is at the heart of whether open-market operations are effective or not. We therefore, need to understand under which circumstances open-market operations have an impact on asset prices. For this purpose, we assume complete and efficient financial markets. Furthermore, assets are only valued for their pecuniary returns and may not be perfect substitutes due to different risk characteristics and all investors can purchase arbitrary quantities of the same asset at the same market price. In this environment, open-market purchases of securities by the monetary authority have no effect on market prices of those securities – the well known Wallace (1981) Modigliani-Miller result. From the perspective of the representative-household asset pricing theory, we infer that the price of an asset is determined by the present value of the random returns of this asset, derived using an asset pricing kernel, i.e. a stochastic discount factor. This pricing kernel is derived from the marginal utility for the different states. Now, a change in the composition of asset holdings between households and the monetary authority will not affect the real quantity of available consumption resources in each state of the world. Hence, the marginal utilities will not change and neither the pricing kernel, if the returns do not change, nor prices will change. However, in the portfolio-balance theory, purchases of securities by the monetary authority will change the composition of the household's portfolio. If the household is forced to hold more of certain assets and less of others, this will change relative prices. Now, if the private sector holds a portfolio that has a high intrinsic exposure to a particular risk, agents will anticipate that the marginal utility in the bad state will be higher and pay a lower price for this security. However, if the monetary authority takes this risk onto its own balance sheet, the risk does not disappear. Instead, if the bad state occurs, monetary authority returns will be lower such that higher taxes are likely. This results in a lower after-tax income for households. But this simultaneously implies that the after-tax income of households will depend exactly as much on the risk as before. As a final consequence, asset prices will be unaffected by the open-market operation.

In short, if the monetary authority engages in open-market operations, the composition of private agents (and the monetary authority's) portfolio change. Households will exactly offset the effects of the initiated trades, so as to hedge against the increased income risk.

Figure 1:

Spreads between yields on four different classes of commercial paper and the one-month OIS rate. In addition, the graph shows the value of paper acquired by the FED under CPFF.



Source: Cúrdia and Woodford (2010).

So, can open-market operations have an effect on asset prices? Figure 1 shows that the Commercial Paper Funding Facility (CPFF, henceforth) – and to be precise, even its anticipation – had large effects on asset prices.

The CPFF was addressed to temporary liquidity distortions in the commercial paper market (and in the market for asset-backed securities).

In general, empirical studies by D'Amico and King (2010), Hamilton and Wu (2010), and Gagnon et al. (2010) show that asset purchases have been effective in easing financial conditions. Those papers suggest that the program significantly lowered long-term interest rates in the United States. Here, we should emphasize that the FED's quantitative easing policy is not identical to the policy approach used by the Bank of Japan from 2001 to 2006. In contrast to their approach, focusing on the quantity of bank reserves, the FED's policy focuses on the mix of loans and securities and on how this composition of assets affects credit conditions for households and businesses. Therefore, the FED's policy should rather be described as credit easing. Wide credit spreads and dysfunctional credit markets call for a different approach than the Japanese quantitative easing approach as various types of lending have heterogeneous effects and therefore, the composition of the balance sheet is an important monetary policy instrument.

In Cúrdia and Woodford (2010), the authors develop a tractable model that is designed to explain the credit easing policy of the FED.² The key assumption in this paper is that not all agents have access to all assets. Dropping this assumption creates space for open-market operations to have effects on asset prices. The reason is that purchases of commercial papers by the monetary authority are not offset by a reduction in private-sector purchases of that specific asset. They further show that in the presence of an impaired financial market, credit policy is able to stabilize the economy. They therefore suggest a theoretical explanation for the observed effects of the first round of easing.

2.2 Critical Assessment

This section will review some critical views on the FED's policy and puts them into perspective with analytical and empirical research results.

2.2.1 The Loss of Credibility

It is claimed that the FED's policy might cause a loss of credibility. It implies that, if the monetary authority deviates from its promised policy, it will not be able to further use its set of instruments. The set-up of this time inconsistency problem is simple: the monetary authority promises low inflation now and surprises agents with higher inflation later. However, agents understand the monetary authority's incentives and do not believe the promises. Put differently, the monetary authority might end up in a Nash equilibrium, in which it is not able to drive the inflation expectations of economic agents.

But how severe is this problem in reality? Chang (1998) has shown that reputational effects that reduce the inconsistency problem are likely to be caused by optimism and not by theory. Furthermore, reputations are heavily influenced by central bank independence and the way the monetary authority communicates its policy. The FED has made major steps to ensure that private agents are able to interpret the signals about future monetary policy. As Woodford (2005) discusses, the increased willingness of the FOMC to be more transparent and open about current policy decisions and the committee's view of likely future policy has increased the ability of private agents to anticipate and to understand the FED's policy. In addition, precise information about how monetary policy is likely to react under various economic circumstances reduces uncertainty and increase the effectiveness of monetary policy on longer-term interest rates. The new monetary policy tools require new ways of communicating their implications. For this purpose, the FED has provided extensive information. For instance, the Board has provided detailed information about the FED's balance sheet and the special liquidity facilities on a regular basis.

Moreover, the additional monetary stimulus will work against the disinflationary trend and keep the inflation rate near the FED's target. This is very important in maintaining credibility. Therefore, I hardly believe that the FED's additional – and highly expected – monetary policy intervention will reduce its ability to control monetary policy instruments in the future.

² Other papers include Gertler and Karadi (2009), Gertler and Kiyotaki (2010) and del Negro et al. (2010).

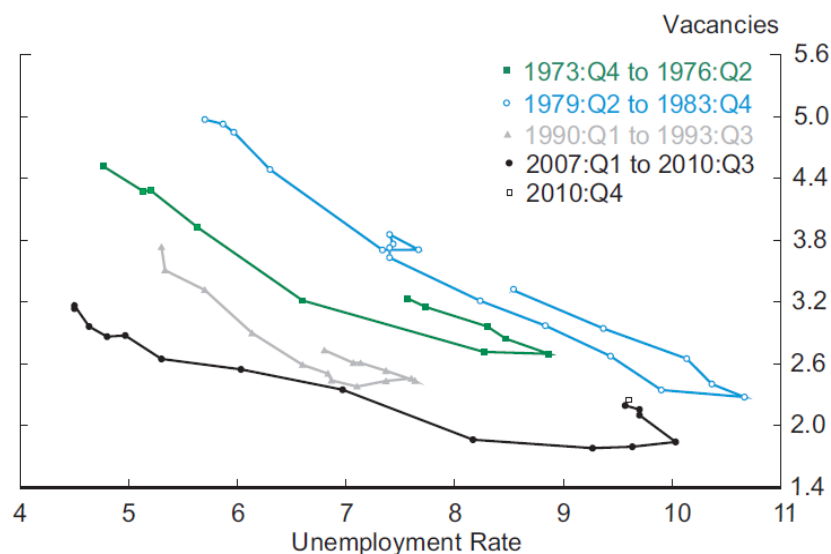
2.2.2 Real Effects and (Structural) Unemployment

After the crisis, the U.S. economy currently undergoes a process of reallocation and restructuring. Economic agents have now to correctly extract the new signals from relative prices, correctly value risks, and change their optimal allocations. This process will take some time until the economy has taken care of the slack and has reorganized itself.

Along this line, one major concern that is voiced by some economists is that structural unemployment in the United States has significantly increased and that the economy is consistently operating close to the NAIRU (the non-accelerating inflation rate of unemployment). They claim that the observed outward shift – see Figure 2 – of the Beveridge curve (the relationship between vacancies and unemployment) is an indicator for an increase in the level of structural unemployment. According to Batini et al. (2010) the crisis created extreme disparities across states in the U.S. in terms of skill mismatches and housing market performance. This could have raised the equilibrium unemployment rate by 1 to 1 ¼ percentage points. Furthermore, it would explain the outward shift of the Beveridge curve, since decreased labor mobility would decrease labor market efficiency. However, Barnichon and Figura (2010) have shown that the matching efficiency is likely to return to its long-run average over time.

Furthermore, Batini et al. (2010) show that it is not likely that the above mentioned effects will be persistent. It crucially depends on how quickly skill mismatches and the housing stress normalize. Furthermore, they show that the decline in employment can be attributed to exceptional high economic uncertainty. On the flipside, this implies that employment should rebound more strongly compared to past jobless recoveries, if economic agents become more optimistic about the future economic development.

Figure 2:
Evolution of the U.S. Beveridge Curve.

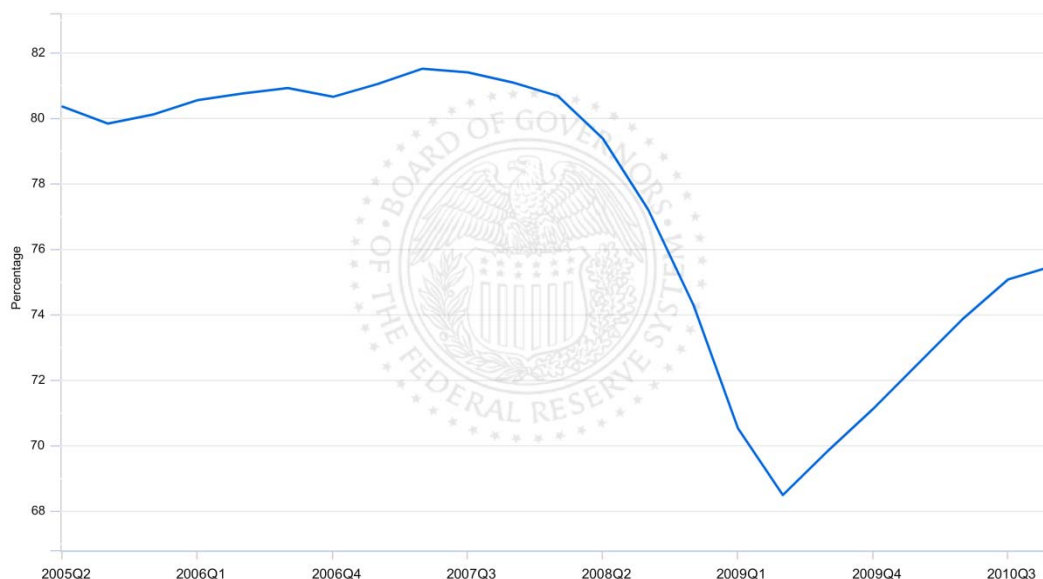


Source: Yellen (2011).

A further explanation for the outward shift is the increase in the maximum duration of unemployment benefits. This has increased the outside option for workers, who become more selective in the job offers they accept. Speaking about wages, rigid wages and indirect taxation for health care are two additional factors that drive the jobless recovery. However, as shown by Kuang and Valleta (2010), the increase in unemployment due to extended benefits is probably small relative to the overall increase in unemployment. Moreover, the influence of extended unemployment benefits will disappear, when this program expires.

Finally, besides structural influences also cyclical factors can explain the recent outward shift. As one example, we know that vacancies react faster to changes in labor demand, which causes counterclockwise movements in the vacancy-unemployment space. A phenomenon, that we observed in past recessions and that is in line with the disinflationary trend and consistent with low rates of resource utilization and spare capacity (see Figure 3).

Figure 3:
Capital utilization rate, total index, seasonally adjusted.



Source: Federal Reserve Board.

In summation, low labor demand might not be the only driving force of high unemployment rates, but it seems to be the predominant driving force.

When it comes to the real effects of credit easing, the reader should notice the following. While the open-market operations are named unconventional, their effects are rather conventional. In particular, real interest rates decline, inflation expectations rise and equity prices rise. Those are the same financial market effects one might observe when the FED eases monetary policy in ordinary times – in the interest rate targeting environment.

Besides the real interest rate channel, we can identify a second channel through which monetary policy could lead to an increase in economic activity, namely the expectation channel. If market participants expect stronger growth and price stability due to accommodative

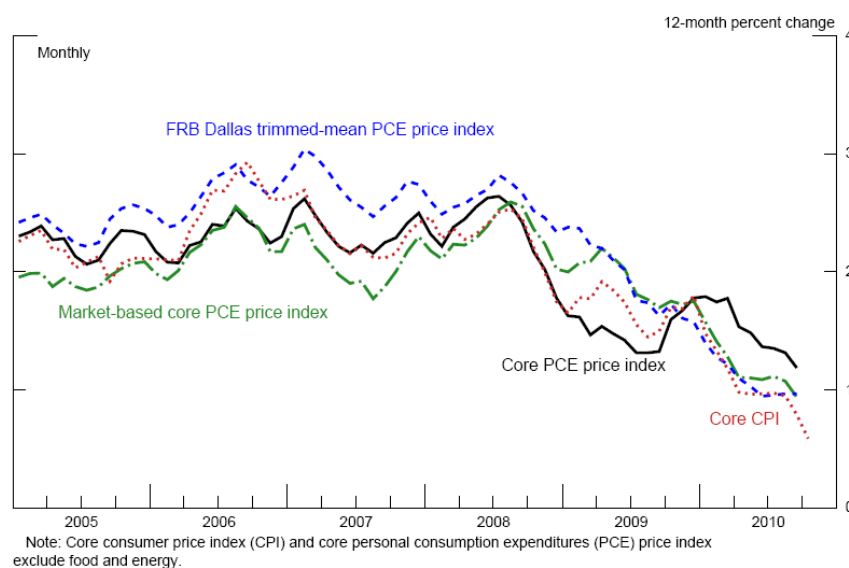
monetary policy, the FED would create hiring incentives and – at least to some extent – drive down unemployment. The third channel would be the credit channel. According to Bernanke and Gertler (1995) we can identify two sub-channels, (i) the balance-sheet channel and (ii) the bank lending channel. Falling interest rates increase the borrower's net worth and decrease the external finance premium. As a consequence, investment projects can be positively affected, such that e.g. firms invest more. The bank lending channel affects the external finance premium by shifting the supply of intermediated credit. In summation, lower interest rates propagate through the credit channel and should positively alter optimal investment/saving decisions.

The maximum impact on real variables, such as output, consumption and investment, is expected to arrive with a lag of six to 12 month. It should be emphasized, that it is difficult to isolate the effect that steams from monetary policy since economic performance is influenced by other developments over this time. But, as St. Louis FED President James Bullard writes, the real effects on the economy will be conventional, in the sense that they are likely to be identical to those effects caused by easing monetary policy in the interest rate targeting environment. Structural problems, on the one hand might be cyclical reallocations and on the other hand do not build a case against accommodative monetary policy.

2.2.3 It's all about (Expected) Inflation

A different concern is that the FED's policy will increase inflation. However, the earlier open-market operations had only very limited effects on the amount of currency in circulation. Even more precise, it had little effect on the broad measures of the money supply, such as bank deposits. Figure 4 shows that the FED's policy did not result in higher inflation or in an inflationary trend.

Figure 4:
U.S. Consumer Prices.



Source: Bernanke (2010).

In fact, inflation has declined significantly since the business cycle peak. Measures of underlying inflation have been trending downward. For instance, the core PCE price inflation has declined from approximately 2.5 percent at an annual rate in the early stages of the recession to an annual rate of about 1.1 percent over the first eight months of this year. The overall PCE price inflation rate (including food and energy prices) has been highly volatile in the past few years. In part, this can be explained by fluctuations in oil prices. However, for the last year we observe that the overall inflation rate is close to the core inflation rate. This decline reflects the extent to which cost pressures have been restrained by substantial slack in the utilization of productive resources.

Besides the actual inflation rate, the expected inflation rate influences inflation dynamics. Low inflation enables economic agents to extract the signals from relative prices in a more detailed way. Indicators of longer-term inflation expectations have been stable after the crisis. For instance, the FED of Philadelphia's Survey of Professional Forecasters median projection for the annual average inflation rate for personal consumption expenditures over the next 10 years has remained close to 2 percent. Households surveys also show that longer-term inflation expectations have been relatively stable. Finally, measures of inflation compensation at longer horizons in financial markets have – on net – moved down in this year, but remain within historical ranges.

A further disinflation could considerably harm the recovery, as short-term interest rates are close to zero, which implies that a lower actual and expected inflation would result in higher realized and expected real interest rates that decrease growth. The reason is straightforward. A higher real interest rate increases the real burden of household and business debts, relative to what was expected when the debt contract was signed. Furthermore, higher real interest rates negatively affect investment decisions and other spendings. Along this line, St. Louis FED President James Bullard argued that "U.S. policy should strive to avoid the possibility of a Japanese-style deflation", because within a near-zero nominal interest rate environment, mildly deflationary equilibria exists, implying that an escape would be difficult.

One major concern regarding the additional asset purchases is the fact that it significantly increases the quantity of bank reserves. This issue is at the heart of the FED's exit strategy. The FOMC has to be able to withdraw its monetary stimulus once the recovery is considered to be healthy. As a complete discussion on the exit strategy is beyond the scope of this paper, I would like to mention that the FED communicates that it will be able to manage short-term interest rates by raising the interest rate it pays on excess reserves. In addition, if this mechanism proves not to be sufficient, the FED has developed additional tools to further control short-term interest rates.

The fear that the FED would monetize the debt, is also rather not appropriate. The intention of such a policy is to enable the government to finance near-term deficits and inflate away some of the nominal value of government debt. However, this is not the FED's objective. The FED has communicated that it is committed to returning its balance sheet to pre-crisis levels over time. Then, the Treasury will be left with just as much debt held by the public as before the FED's actions. Furthermore, the FOMC has made clear that the program is conditional and will be evaluated in light of the economic development.

2.2.4 Should we Expect New Financial Imbalances?

While the FED's intention is to lower long-term real interest rates, it also embodies the risk that on the one hand, borrowers could employ excessive leverage to take advantage of those low financing costs. On the other hand, investors could accept less compensation for taking risks as they want to increase their rates of return in a low yield environment. This could result in threats to financial stability by creating new asset price bubbles.

In the stock and the real estate market, price-to-earnings ratios are within a reasonable range of their long-run averages. However, in the bond market, narrow risk spreads and risk premiums might be signs of excessive risk taking. In addition, we observe that credit flows remain sluggish. In particular, lending to small businesses remains weak. Even if nonfinancial corporations issued large amounts of bonds and syndicated leverage loans, those have to a large extent been used to refinance existing debt. Finally, recent bank lending surveys, providing information about changes in supply and demand for bank loans to businesses and households, indicate that banks only very gradually start to revise the historically large tightening in lending standards and terms.

In conclusion, it appears that leverage generally stays below the pre-crisis levels. However, those measures need to be watched closely and, in case of evidence of financial imbalances, supervision and regulation should be the preferred tools.

2.2.5 A Short Course on Exchange Rate Determination

U.S. monetary policy is often related to the Dollar weakness. In fact, there is no evidence at all that movements in exchange rates can be explained by changes in interest rates. The famous work by Meese and Rogoff (1983 a,b) shows that neither sticky-price nor flexible-price monetary models of exchange rate determination outforecasts a standard random walk model. From this thorough analysis we can infer that exchange rate movements have only very little correlation with changes in interest rates, inflation rates and current accounts. Further support for this theoretical result can be found in Yellen (2011). She shows that the first round of asset purchases in 2008 had only moderate effects on foreign currencies. The observed moments are not particularly large compared to the fluctuations in any given week or month. Furthermore, these exchange rate movements are "very modest in the broader context of developments over the past several years".

A different and widely overseen issue is that the FED is not responsible for exchange rate policy. In the United States, the Secretary of the Treasury is responsible for the conduct of exchange rate policy. No monetary policy intervention of the FED is aimed to pursue exchange rate policy. Moreover, the effectiveness does not depend on the Dollar depreciation. Even if one ignores the empirical results and postulates a relationship between interest rates and exchange rates, the additional open-market operations will have only very little effect on the interest rate and therefore would have almost no effect on the exchange rate. Claiming that the FED's policy is driving exchange rates through this channel does not stand on solid ground. We will discuss the effects of capital flows in the next section.

3. Global Challenges for U.S. Monetary Policy

The final chapter of this comment is dedicated to the global challenges for U.S. monetary policy.

After the financial crisis triggered a deep recession policy-makers around the world found themselves confronted with common challenges, viz. to prevent a further economic contraction, ensure the stability of financial markets, and foster growth. However, two years of economic recovery have changed this pattern. The recovery was in favor of some but not all countries, as a matter of fact we observe a bifurcated nature of global recovery. Economic growth in emerging market economies was larger compared to the growth rates in advanced economies, a fact we already observed in pre-crisis times.³ However, while output in the advanced economies has not yet returned to the pre-crisis levels, the emerging market economies have on the one hand made up the losses from the recession and on the other hand economic activity quickly approaches its pre-crisis trend.⁴ It appears that the recession in those countries had only very little lasting effects on growth. These differences are partially attributable to longer-term differences in growth potential between the two groups of countries, and – to a large extent – account for the weak recovery in advanced economies so far. Just as an illustrative example, the growth rate of output (four-quarter percent change) for emerging market economies was 8.49 in the second quarter of 2010, while it was only 2.55 for advanced economies.⁵

This created tensions among countries over economic policy. According to Chairman Bernanke those tensions "...arise from the lack of an agreed-upon framework to ensure that national policies take appropriate account of interdependencies across countries and the interests of the international system as a whole." The bifurcated global growth pattern and the different cyclical positions imply that different policy stances are appropriate for different groups of countries. Advanced economies need accommodative policy to ensure economic growth, while emerging market economies rather require somewhat tighter policies, to avoid the problem of overheating. It is therefore not surprising that some emerging market economies argue that the current U.S. monetary policy would create negative spillover for their countries. To be more precise, the fear is that excessive capital inflows would put upward pressure on emerging market currencies and potentially create asset price bubbles.

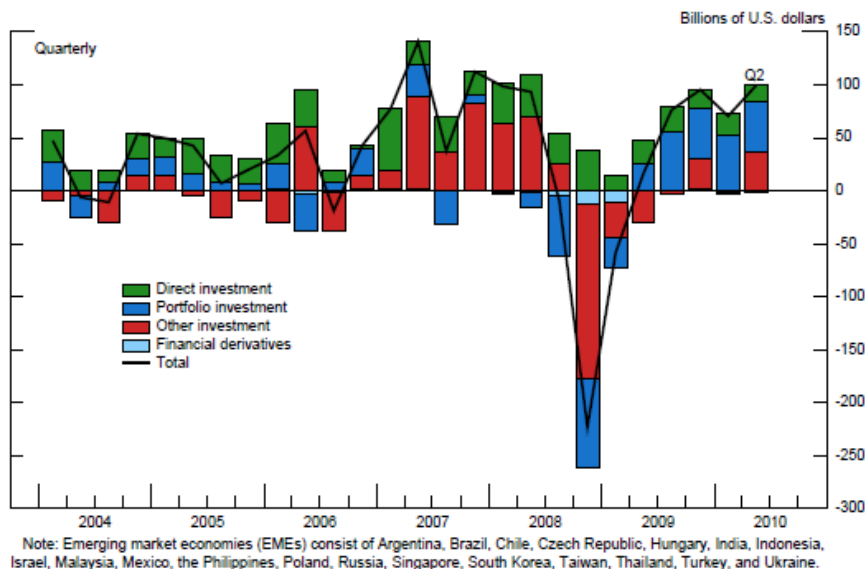
Figure 5 shows that capital inflows are substantial but not larger than in the year before the crisis. Even before the crisis, emerging market economies were attractive for cross-border investment. Those capital flows are on the one hand driven by fundamental differences, such as stronger expected short-term as well as long-term growth and higher interest

³ Advanced economies consist of Australia, Canada, the euro area, Japan, Sweden, Switzerland, the United Kingdom, and the United States. Emerging market economies consist of Argentina, Brazil, Chile, China, Colombia, Hong Kong, India, Indonesia, Israel, Malaysia, Mexico, the Philippines, Russia, Saudi Arabia, Singapore, South Korea, Taiwan, Thailand, and Venezuela.

⁴ See e.g. Janssen and Scheide (2010).

⁵ Aggregates weighted by shares of gross domestic product valued at purchasing power parity.

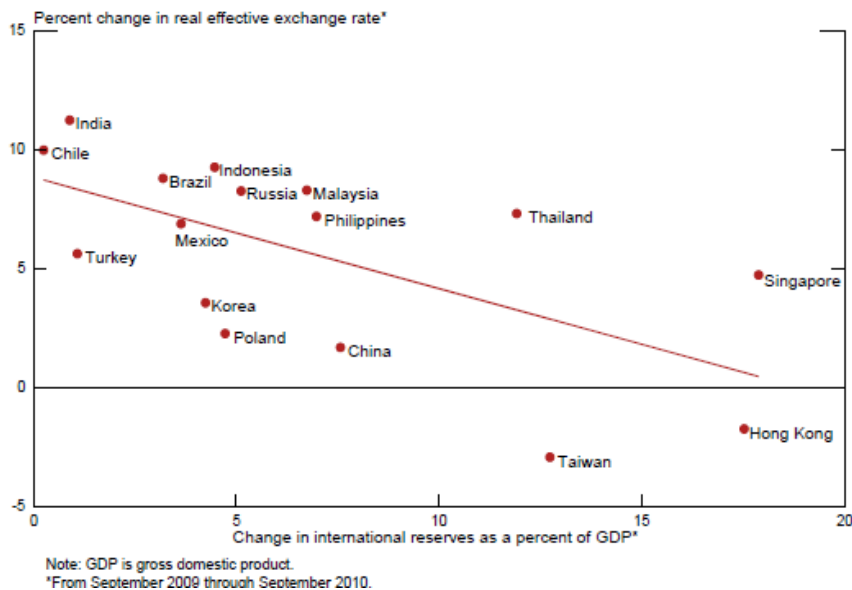
Figure 5:
EME Net International Financial Flows excluding Changes in Reserve Assets.



Source: Bernanke (2010).

rates. On the other hand, a very important driver is the incomplete exchange rate adjustment. Why is this the case? In part, because "...some emerging market economies have intervened in foreign exchange markets to prevent or slow the appreciation of their currencies" according to Bernanke (2010) and as Figure 6 shows.

Figure 6:
Exchange Rates and Reserves.



Source: Bernanke (2010).

As the empirical study of Cline and Williamson (2010) shows, countries like China, Malaysia, Singapore or Taiwan prevent market correction of currency valuation. They find that while the Dollar is approximately at its equilibrium value, the Euro is overvalued by 5.5 percent and the Chinese renminbi is undervalued by 17.3 percent.⁶ Overall, they find a Dollar overvaluation of about 12 percent on average against other currencies. What would happen in an international system, in which exchange rates fully reflect market fundamentals? Accommodative monetary policy in the advanced economies and tight monetary policy in the emerging market economies would cause a relative increase in emerging market interest rates in relation to advanced economies. This would lead to increased capital flows into emerging markets and to currency appreciation in those countries. As a consequence, net exports and current account surpluses would be reduced, helping to cool the fast growing economies and add demand in the advanced economies. In addition, the currency adjustment would shift more domestic output toward satisfying domestic needs in emerging markets. Overall, the result would be more balanced and sustainable global economic growth.

So, if this system shows advantages compared to the incomplete adjustment case, why do emerging market economies avoid currency appreciation? Here is my best answer. Currency undervaluation is a part of some countries long-term export-led growth strategy. This strategy implies that producers in those countries operate at a greater scale and produce a more diverse set of products than domestic demand alone might sustain.

However, there are some major drawbacks of this strategy. First, as our theoretical mind-game has shown, currency undervaluation delays structural adjustments and creates global challenges. Trade and growth are unbalanced, as the bifurcated recovery and persistent current account balances show. But, this situation is not sustainable. On the one hand, growth in the emerging market economies depends on the recovery in the advanced economies. The bifurcated growth pattern might end up in a slow growth for everyone result, if advanced economies can not grow fast enough. Here, a widely ignored argument is that higher growth in the United States will also increase U.S. demand for foreign goods and promote growth abroad. This would in turn offset potentially negative effects from movements in the Dollar value. On the other hand, large and persistent current account come with the cost of growing financial and economic risk. Second, this system implies that countries who allow substantial flexibility in their exchange rates will be left with a larger burden to adjust. Third, countries pursuing the strategy of currency undervaluation face large costs at the national level, e.g. a reduced ability to use independent monetary policy and face the risk associated with excessive and volatile capital inflows. Furthermore, economic growth is aimed at increasing the living standards at home. Hence, the benefits from shifting resources to satisfy domestic demand may outweigh the benefits from export-led growth. Trade surpluses also artificially create incentives for domestic savings and the production of export goods distort the mix of domestic industries and the allocation of resources, resulting in an economy that is less able to meet the needs of its own citizens in the longer term.

⁶ The equilibrium is the fundamental equilibrium exchange rate.

4. Conclusion and Policy Implications

The recent decision by the FED to use additional accommodative monetary policy was mainly driven by two observations. High – and persistent – unemployment and the continuation of a declining inflation trend that was bleeding into expectations about the probability of deflation. A still-recovering economy with very low interest rates and potentially emerging deflation expectations could result in a low-interest rate, mildly deflationary equilibrium that would seriously impede the prospect for continued recovery. This would imply higher realized and expected real interest rates that would considerably decrease growth. This comment evaluates major concerns against the FED's policy. Here, one not only has to look on the risk and uncertainties associated with this policy, but one has to look at the risk of not doing it. Declining inflation rates and stable inflation expectations reflect the extent to which cost pressures have been restrained by substantial slack in the utilization of productive resources. The low and falling inflation together with high unemployment indicates that the economy has considerable spare capacity, such that there might be room for additional monetary actions to stimulate economic activity and realize gains in employment, without risking an overheating of the economy.

The current action will work against the disinflationary trend and ensure that the inflation rate does not move further away from the FED's target. But, the impact of asset purchases depends on the state of financial markets. It seems that they have their largest effect during periods of economic and financial stress, with illiquid markets and high term premiums. Therefore, the effects of this second asset purchase program should be smaller compared to the first stimulus package. However, as the first round of easing, QE2 will ease financial conditions and positively influence the expectations of market participants.

As we observe a bifurcated global recovery, trade volumes and current account deficits are likely to rebound and should further increase global imbalances. However, as discussed in Langhammer (2011), those imbalances are rather of cyclical nature and should decrease over the long-run. Moreover, the FED does not pursue exchange rate policy. First of all, because it is simply not responsible for exchange rate policy. Second of all, there is no evidence that interest rates would drive exchange rates. As Christian Noyer, the Governor of the Banque de France, writes "Central Banks are independent, they are legally obliged to do so. Monetary policies are conducted with domestic objectives in mind...". Consequently, U.S. monetary policy is designed to foster a stronger pace of economic recovery in the United States and is not constructed to create additional demand by adjusting the value of the Dollar. As a matter of fact, stronger U.S. growth will boost U.S. demand for foreign goods and reduce the incentives for capital flows to emerging markets. Moreover, maintaining the value of the Dollar can only be achieved with a strong U.S. economy with stable inflation.

More balanced global growth can be achieved if countries like China and other East Asian countries accompany re-valuation (i.e. exchange rates need to fully reflect economic fundamentals) by actions to stimulate domestic demand. The unmet domestic needs, including improved social security and public pensions (see Bergsten et al. (2009) and Langhamer (2011)), create a potential to increase domestic demand. Neither does the protection of employment, nor do welfare concerns justify a reluctance to re-valuate. The stimulation of

domestic demand may even increase employment and shifts towards domestic need will increase consumption and hence welfare. On the other side, the United States need to increase their saving rate and ensure a sustainable path of government debt. However, U.S. monetary policy has nothing to do with currency re-valuations and can not be blamed for the effects driven by incomplete exchange rate adjustments caused by interventions in foreign exchange markets. As Christian Noyer puts it down: "No one should, nor can, manipulate their currency". Therefore, the FED's policy is designed to work against uncertainty in the economy by fostering expectations of economic growth, avoiding disinflationary pressures and facilitating a strong U.S. economy that is a major driving force of global growth.

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