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Monetary Policy since the Financial Crisis: Why Interest Rates Need to Be Low[1]

Central banks around the world lowered interest rates to almost zero and took exceptional measures in response to the financial crisis. It has been claimed that these policies have unintended side effects while yielding little benefit for the real economy. In particular, a long period with low interest rates may induce unsustainable asset-price developments and financial instability. These concerns need to be taken seriously. Currently, however, there is little evidence that the unintended side effects are dominating the benefits of the expansive monetary policy. Nevertheless, an exit from the low-interest-rate environment will be challenging. Central banks should focus on price stability as their main target.

JEL Number: E52
Keywords: asset prices, monetary policy

1 Introduction

After the collapse of Lehman Brothers monetary authorities around the world lowered interest rates quickly and in a coordinated fashion. When policy rates reached almost zero, central banks in the major advanced economies continued with so-called unconventional monetary policy measures, notably asset purchases, which increased their balance sheets dramatically. Nevertheless, these policies were slow and less effective than desired in reviving growth and (perhaps surprisingly) until now inflation has remained low and stable.

Many objections have been raised against the expansive monetary policy stance since the financial crisis (for instance, White, 2012). They mainly fall into two groups. First, expansive monetary policy does not help to revive the economy because in the current environment the monetary transmission mechanism does not work. Second, expansive monetary policy may actually be harmful since it entails unintended side effects. In particular, low interest rates might lead to a misallocation of real resources and provide adverse incentives to banks and governments. Moreover, the ample provision of liquidity might create asset-price bubbles and thus induce financial instability.

These concerns are important and need to be taken seriously. Nevertheless, I will argue that central banks in advanced economies are right to continue with their current policy stance. But before discussing these issues in more detail, let me briefly review how the monetary transmission mechanism works, i.e., how monetary policy transmits to the real economy.

[1] *This paper was written for the session Monetary Policy Crisis Management and Price Stability at the Oesterreichische Nationalbank's 41th Economics Conference 2013. I would like to thank Romain Baeriswyl, Signe Krogstrup, Thomas Moser, Thomas Nitschka, Samuel Reynard, Jack Tatom and Mathias Zurlinden for comments. The views expressed in this paper are those of the author and do not necessarily represent those of the Schweizerische Nationalbank.*

2 Monetary Policy and the Real Economy

Monetary policy influences the economy through various channels. The most prominent one is the interest-rate channel. Changes in the policy rate have a widespread effect on market rates of various maturities. Market rates in turn determine consumption and investment decisions of agents and thus affect spending.[2] Typically, the central bank can steer the various interest rates in the economy through changes in its policy rate. In many countries, however, this channel cannot be used to achieve a further loosening of the monetary stance as policy rates have reached zero and thus cannot be lowered further. Of course, central banks can and do try to influence market rates in other ways with so-called unconventional measures, like forward guidance or quantitative easing.

In addition to the interest-rate channel monetary policy affects the real economy through exchange rates. When monetary policy becomes more expansive, the exchange rate of the respective country typically depreciates, inducing higher export demand. In the current situation, however, the exchange-rate channel of monetary policy is not very helpful in reviving the economy as most major countries are in a similar situation. Therefore all of them would need to, but could not, depreciate against one another.

Nevertheless, other channels of monetary transmission still operate. This is particularly true for the asset-price channel. Though the link between monetary policy actions and the stock market is generally weak, lower interest rates tend to boost the value of assets because the discount factor decreases. Higher asset prices increase consumption through a wealth effect and investment through *Tobin's q* Tobin (1969). Higher asset prices also facilitate borrowing and spending because the value of collateral increases.

In addition, a risk-taking channel of monetary policy has been identified (Borio and Zhu, 2012). Greater risk taking leads to higher loan demand and to higher leverage in the banking sector. This behaviour assures that the central bank is able to influence all rates of return in the economy, not only those that are close to short-term money market rates. By lowering the yield of safe assets, investors are driven towards riskier investments, which is known as "search for yield".

Monetary transmission thus also works when interest rates are at the lower bound. But even though being expansive, monetary policy has not been able to generate satisfactory real growth. One reason is that in many countries agents found themselves overleveraged. Despite low interest rates, private agents are unwilling to borrow. Instead, they reduce their debt. This

[2] *Low interest rates increase consumption and investment spending because banks use newly created central bank money to grant credit to private agents. The interest-rate channel thus relies on a well-functioning banking sector.*

behaviour is caused by a reassessment of assets and liabilities on part of the private sector, triggered in many countries by a collapse in house prices. Housing constitutes a major asset for many households. When property prices drop and households' liabilities do not decrease accordingly, low interest rates will not be sufficient to change the desire to deleverage. Moreover, reducing debt out of the current income may take a considerable time because low interest rates also reduce the incentive to save.

Next, I will review the evidence for unintended side effects of monetary policy and then turn to the question of financial stability.

3 What Unintended Consequences Have Materialised so Far?

Critics of low interest rates argue that the expansive monetary policy has not helped to revive the economy whereas it has serious adverse side effects. The main objections are that the expansive monetary policy leads to risks for long-term price stability. In addition, a prolonged phase of low interest rates may induce resource misallocation and encourage moral hazard on the part of indebted governments and banks. Nevertheless, despite interest rates at practically zero for several years now, I will argue that at the moment there is little evidence that such unintended consequences necessitate a quick shift in the monetary policy stance.[3]

Risks to long-term price stability do not seem imminent. During the acute phase of the financial crisis, inflation dropped in many countries, often becoming negative. Though inflation rates recovered somewhat, they have remained low and have recently begun to slow again, corroborating that the sizable increase in the monetary base has little direct effect on inflation. Moreover, the inflation outlook is subdued. Most countries still operate well below their production potential. Unemployment is high and exerts downward pressure on wages. Small open economies like Switzerland have been facing significant appreciation, which also contributed to low inflation. From a price-stability perspective, thus, there is little justification for an increase in interest rates.

The evolution of government debt does also not call for a quick increase in interest rates. Driven by the recession and the cost of bailing out struggling banks, government deficits have increased considerably in many countries. Especially in the euro area, some governments have experienced funding problems. Low interest rates help to service the debt. But it is feared that the longer central banks keep interest rates low, the longer governments will wait to correct their fiscal positions. The data, as shown in chart 1 in the Annex, do not confirm this view. Except for Japan, government deficits were reduced after their large increase during the crisis and are projected to improve further. Low interest rates thus do not seem to have systematically distorted fiscal policy decisions.

The argument that a prolonged phase of low interest rates may lead to a misallocation of resources rests on the idea that the long-term interest rate influences the cost of capital and determines which projects are profitable and which are not. If interest rates remain too low for too long, projects will be undertaken that would not be profit-

[3] *There is considerable heterogeneity among countries. In discussing the evidence for unintended side effect, I will base my observations on data for the USA, the euro area, Japan, the UK and Switzerland.*

able under normal interest rate conditions. Once the interest rate rises, these projects will fail, implying that resources have been wasted. If resource misallocation was taking place, however, we should observe a credit-fuelled boom, not sluggish growth. Such a boom is currently not going on. One piece of evidence, for example, is gross fixed capital formation as share of GDP, shown in chart 2. In most economies this ratio is lower than before the crisis and even below its lowest level during the 10 years before the crisis. The worry that agents are engaging in an investment boom and that many of these investments will turn out to be unprofitable does not seem to be confirmed by the data.[4]

Many worries about the long phase of low interest rates thus seem to be overdone. Nevertheless, the most important concern is the question of financial stability and the role of monetary policy in ensuring financial stability.

4 Financial Instability

Does the expansive monetary policy entail risks for financial stability? The current low interest rates may indeed lead to higher asset price volatility. Asset prices generally are seen to reflect the discounted stream of expected future revenues. If lower discount rates persist, revenues further out in the future will become more important because they are discounted less strongly. Since these future revenues are subject to uncertainty, an adjustment of expectations may impact more on asset prices and make them more volatile than in the past (Kocherlakota, 2013).

Equity prices, however, have always shown high volatility. Despite frequent strong declines in the stock market, these generally have not triggered a recession like the current one. One reason is that investments in the equity market are usually not financed by credit. Thus, large declines in equity markets, which potentially could affect loan quality and collateral, do not have a large effect on commercial banks (see also Mishkin, 2013). By contrast, price volatility of credit-financed assets has a strong impact on the balance sheets of the financial sector and thus has the potential to set off a financial crisis.

In that respect, property prices are highly important. Real estate is typically financed with bank credit. This may give rise to feedback loops that induce persistent deviations from equilibrium. Rising property prices will increase the collateral value of the house and at the same time lead to higher credit demand. Thus, a surge in property prices can increase both the demand for and the supply of credit, which can make it difficult to dampen such a credit-financed property boom.

What is the evidence for asset-price bubbles that might be developing because of expansive monetary policy? Equity prices have risen strongly since their downturn in the financial crisis and were near or above their pre-crisis peak levels for the USA, the UK and Switzerland in May 2013. As the outlook for the real economy has not improved very much, this increase is possibly related to the expansive monetary policy.

By contrast, since the financial crisis house prices have decreased in the UK and in the USA, while they have stagnated in the euro area (chart 3). But given their strong increase prior to the crisis, it is difficult to assess whether the house-price adjustment has been suffi-

[4] *Low interest rates help to keep past investments profitable. While this facilitates the adjustment, it may prevent capital to quickly move to the most profitable employment.*

cient. In Switzerland, house prices have risen steadily during the past ten years.

At this point, it might be useful to reflect on why households became overleveraged. A debt overhang normally results from expectations that turned out to be overoptimistic. Either agents have overestimated future asset-price increases, or they expected their future income to be higher, or they underestimated their future liquidity needs. When these expectations need to be adjusted, a debt overhang results. Though monetary policy can play a role in such adjustments to expectations, it may not be the only factor that leads to a reassessment.

Expansive monetary policy is currently alleviating through different channels the costly deleveraging of over-indebted households and the balance sheet adjustments in the financial sector. Low interest rates will bolster house prices, keeping balance sheets of households and banks sound, so that a self-enforcing spiral of over-indebtedness and house sales can be avoided. Low interest rates also lower the interest-rate burden of households, which has a positive effect on consumption. When growth and income finally will increase in response to this supportive policy, households will find it easier to pay off their debts.[5]

Looking forward, the question of an exit from the expansive policy stance will become important. A tightening of monetary policy could lead to an abrupt reassessment of asset values and induce a new crisis. The timing of the exit thus will be critical. On the one hand agents need time to deleverage, on the other hand a build-up of unsustainable developments needs to be avoided. It is difficult to assess whether equity and property prices are out of line with their fundamental equilibrium values. Though indicators like the price-earnings ratios for equities are above their historical averages in some countries, they do not seem exceptionally high.

In any case, it is important that private agents enhance their resilience to withstand adverse economic shocks. In this context, policy makers should focus on providing the right incentives. Besides enacting new regulations, existing incentive problems should also be reconsidered, such as, for example, the bias against equity induced by the tax code or moral hazard problems related to the deposit insurance. In addition, pro-cyclical effects of regulation should be addressed.

When setting monetary policy, central banks need to take financial stability into account. Since detrimental developments are closely related to excessive credit creation, central banks should focus more on the development of money

[5] *Azariades et al. (2013) argue that lowering interest rates to reduce a debt overhang might not raise welfare. The reason is that lower interest rates hurt savers and slow the elimination of the debt overhang. This result, however, is obtained in a model in which only real debt exists and there is no role of monetary policy for business cycle stabilisation.*

and credit aggregates. The current practice of using an interest rate to characterise monetary policy is only admissible as long as no persistent deviations from equilibrium develop. In times when financial sector instability is building up, money and credit developments give important additional information about the stance of monetary policy.

Central banks in several countries have recently adopted new macroprudential instruments. These instruments widen the range of opportunities for the central bank to influence unwelcome developments in credit and asset prices. But their effectiveness is largely untested. Unlike changes in the policy rate, which affect all rates of return in the economy, macroprudential instruments are generally more targeted, i.e. they are designed to change incentives mainly

for banks. Their success remains to be seen, as does their damage to resource allocation and market efficiency.

5 The Swiss Case

Let me now say a few words about the Swiss experience. Switzerland has performed relatively well through the global financial crisis. Though one of the major Swiss banks had to be supported, the economy did not experience a wide-spread banking crisis. Switzerland went through a recession in 2009 with real GDP growth of –1.9%. From the third quarter of 2009 onwards, real GDP growth generally has been positive at an average annual rate of 1.7%.

After the collapse of Lehman Brothers the Schweizerische Nationalbank (SNB) quickly lowered its policy rate to basically zero. At the same time, the Swiss franc appreciated strongly, leading to an unwanted tightening of monetary conditions that could not be addressed with further interest rate cuts. Since September 2011, the SNB has maintained a floor of 1.20 Swiss francs to the euro. Despite the exchange-rate floor, inflation slowed in the wake of the strong appreciation and has remained negative since October 2011.

While monetary conditions are tight for the export oriented sector, the non-traded goods sector benefits from favourable conditions. Credit creation by the domestically oriented banks remains strong. The unemployment rate stands at 3.2% and immigration of foreign workers has been increasing since 2009. These factors contribute to rapid house-price growth. In February 2013 the SNB thus decided to employ a newly obtained macroprudential instrument, namely the sectoral Countercyclical Capital Buffer (CCB). This buffer requires banks to hold more capital against their risk-weighted residential mortgages in Switzerland. The CCB has been set to a level of 1% of associated risk-weighted positions but it can be increased up to 2.5%. The deadline for compliance with the CCB is 30 September 2013.

It is still too early to assess the effects of the CCB. Given its limited size, it will possibly have only a negligible impact on real estate price developments. While the CCB makes mortgage loans less attractive for banks, its

quantitative impact on credit growth remains to be seen. In any event, it will make banks' balance sheets more resilient should a correction in real estate prices occur. From that perspective, the capital buffer is an element that will dampen the pro-cyclical effects of bank lending on the economy.

6 Conclusions

Monetary policy is providing an important contribution to overcoming the effects of the financial crisis and the subsequent recession. Nevertheless, interest rates that are kept too low for too long can have several undesirable consequences. At the moment, however, there is little evidence that these undesirable consequences have started to materialise. Monetary policy thus is still able to buy time for the necessary adjustments.

As long as this remains the case, there is no need to expect that the exit from the accommodative monetary policy will become more difficult over time. Even so an exit from the supportive monetary policy will be a major challenge. Uncertainties are enormous. Unsecured interbank lending remains tight. Bank regulation has changed significantly. These developments will affect monetary transmission and thus complicate the tasks of central banks when designing the exit.

In the wake of the financial crisis, central banks engaged in crisis management and took decisions with far-reaching implications. The flexibility shown by central banks in the crisis was necessary to prevent a downward spiral. When returning to normalcy, however, central banks should focus mainly on price stability. Giving too many tasks to the central bank may overburden it, threatens a clear and effective monetary policy and risks a loss of credibility. For monetary policy, it remains essential that price stability be ensured.

References

Azariadis, C., J. B. Bullard, A. Singh and J. Suda. 2013. Debt Overhang and Monetary Policy. Mimeo. Federal Reserve Bank of St. Louis.

Borio, C. and H. Zhu. 2012. Capital Regulation, Risk-Taking and Monetary Policy: A Missing Link in the Transmission Mechanism? In: Journal of Financial Stability 8(4). 236–251.

Kocherlakota, N. 2013. Low Real Interest Rates. Speech given at the 22nd Annual Hyman P. Minsky Conference. Levy Economics Institute of Bard College. New York. April 18. Federal Reserve Bank of Minneapolis.

Mishkin, F. S. 2013. Exit to What? Paper prepared for the 15th Geneva Conference on the World Economy. May 3. Geneva. Columbia University.

Tobin, J. 1969. A General Equilibrium Approach to Monetary Theory. In: Journal of Money, Credit and Banking 1(1). 15–29.

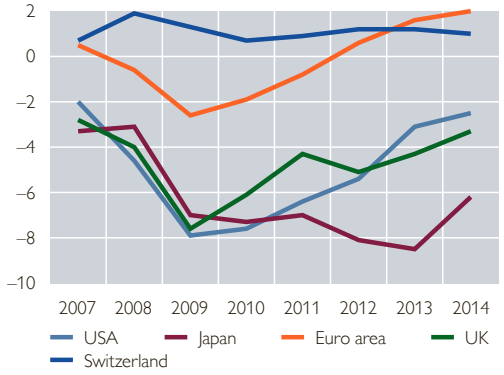
White, W. R. 2012. Ultra Easy Monetary Policy and the Law of Unintended Consequences. Working Paper 126. Federal Reserve Bank of Dallas.

Annex

Chart 1

General Government Underlying Primary Balances

% of potential GDP

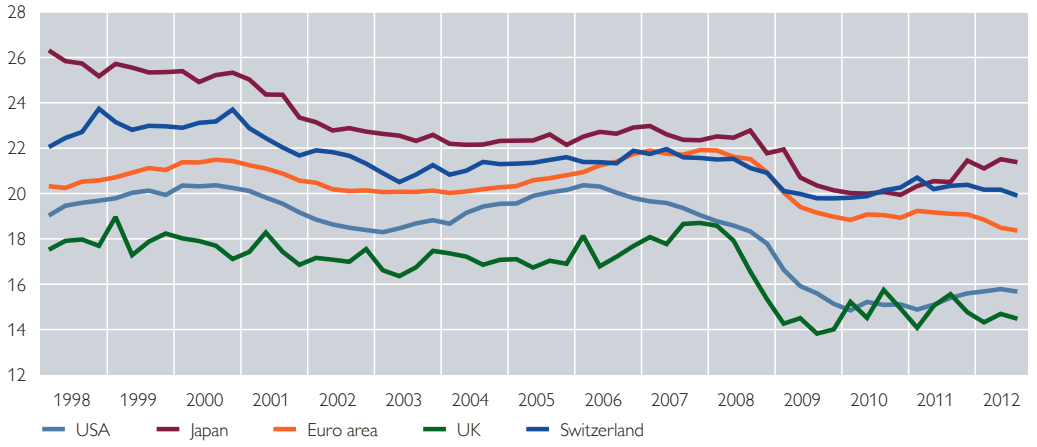


Source: OECD Economic Outlook 93 database.

Chart 2

Gross Fixed Capital Formation

% of GDP

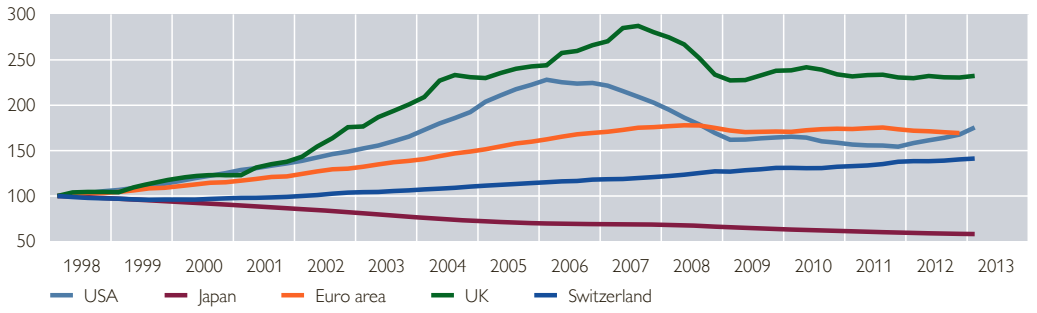


Source: International Financial Statistics.

Chart 3

Residential Property Prices

Index, 1998 = 100



Source: BIS.