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The risks of an appreciation of the euro

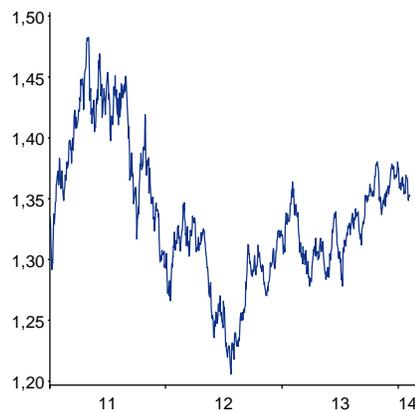
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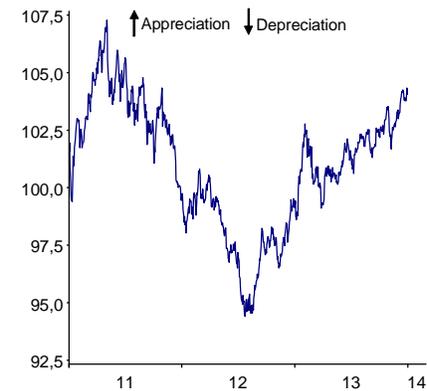
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THE RISKS OF AN APPRECIATION OF THE EURO

Where is the euro headed on the currency markets? Since mid-2012, our currency has gained no less than around 9% against the currencies of our 20 biggest trading partners - something that has raised a few eyebrows among forecasters given the lackluster growth in the euro zone and the ongoing debt crisis. It would appear that the market's trust in the future of the single currency has not evaporated after all. This is a very positive thing in principle. But the strong euro does not just have positive macroeconomic implications. To begin with the positive things nevertheless: appreciation makes imports from abroad cheaper. The drop in import prices that we are currently witnessing in the euro area is keeping a damper on general consumer price inflation, boosting income purchasing power. The fact that inflation was sitting at under 1% as against the previous year prompted the ECB to cut interest rates again in November 2013. But the other side of the appreciation coin is that it eats away at exporters' competitiveness and, in doing so, poses a particular risk to the progress made in the southern European countries as a result of cost savings. For companies that have set up production facilities abroad, this effect does not materialize. But for these companies, the depreciation of the national currencies in question translates into lower revenues and profits in their euro-based accounts.

USD/EUR**EUR, nominal effective exchange rate**

against 20 trading partners, 1999Q1 = 100



Sources: EcoWin, own forecast.

The appreciation of the euro over the past year and a half is presumably to be interpreted as a recovery after the crisis. Fears regarding the disintegration of the euro zone started to subside later on in 2012 and 2013 and investors are now seizing the opportunities that have arisen as a result of high returns and low stock valuations in the crisis years. It is, however, questionable how long the inflow of capital into the euro zone will last. Valuations on the financial markets have already bounced to a much higher level and the fundamental data in the euro zone - in particular the growth differential compared with the US - would tend to point more to a return to a stronger dollar. The approach that the US Fed has decided to take also points in this direction, with the Fed signaling that it will be taking clearer steps than the European Central Bank to break away from its expansive monetary policy. But as we know: exchange rate forecasts are very unreliable, especially in times of monetary policy change. As a result, it makes sense to consider a number of different scenarios.

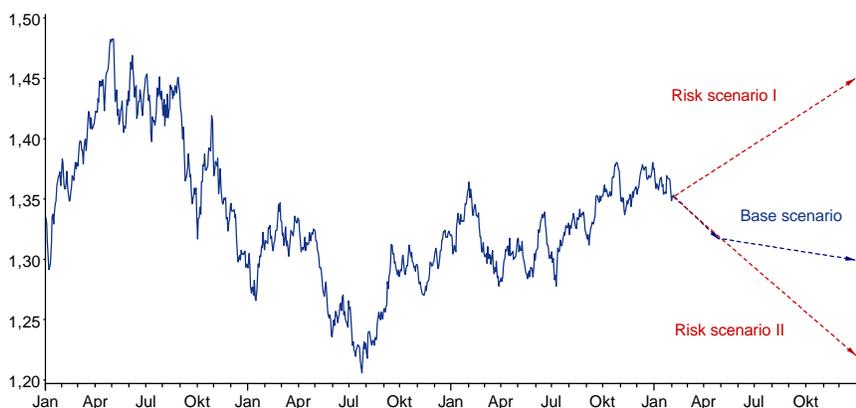
1. Scenarios for currency development

In addition to our base scenario of only moderate changes in the external value of the euro, which we have assigned a 60% probability, we believe that both the marked depreciation, and the marked appreciation, of the euro present risks. We have calculated a probability of 20% for both risk scenarios.

Base scenario: The Fed will make a cautious exit from its bond-purchasing program. The first rate hike will not materialize any time before 2015. The ECB will continue to hand out unlimited liquidity, with the first rate increase on the cards for the end of 2014/beginning of 2015. Given the relatively careful move away from the ultra-loose monetary policy on both sides of the Atlantic, the markets will be spared any major exchange rate turbulence. Thanks to the US economic lead over Europe, the value of the dollar will increase moderately against the euro (end of 2014: USD 1.30/EUR).

Exchange rate scenarios

USD/EUR



Sources: EcoWin, own forecast.

Risk scenario I: The markets become increasingly confident that the European debt crisis can be overcome and that Europe is on the brink of a sustained upswing after years of crisis. Driven by the hunt for returns, more and more international capital starts to flow into the former EMU crisis countries, lured by the fact that financial market valuations in these countries remain relatively attractive. More foreign investment is ploughed into Germany, too, thanks to the rosy economic outlook. The currencies of a number of emerging markets are hit by capital outflows and come under pressure against the US dollar, but even more so against the euro. As a result, the euro edges closer to the highs it reached in 2008 and 2009. This would imply a further increase in the trade-weighted external value of the euro to the tune of 8-9%.

Risk scenario II: The US economy becomes stronger than expected. As a result, the Fed is resolute in its decision to break ties with the bond-purchasing program and the markets anticipate a rate hike earlier than they had originally imagined. The ECB, on the other hand, continues to cling to its very expansive course. In this sort of environment, the dollar could make slight gains against the euro of more than 10%. In this scenario, weaker emerging market currencies come under additional pressure against the dollar.

2. How exchange rate changes work

Exchange rate changes have a considerable impact on open economies: from a producer's point of view, they change the global competitive landscape and the appeal of investments and production facilities abroad. As a result, three channels of influence are particularly significant to the corporate sector: trade flows (sales markets: price competitiveness, procurement markets: costs), investment flows and profit development (reflecting exchange rate changes in prices, accounting).

2.1 Trade flows: competitiveness and production costs

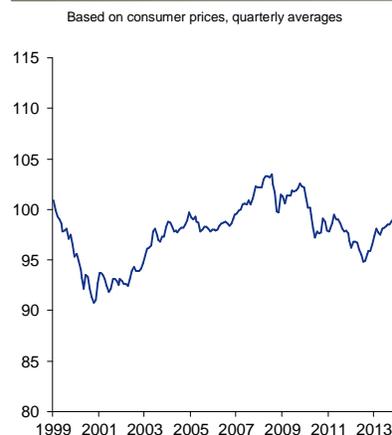
The real appreciation of the euro, which is what we have been observing for a year and a half, impacts the price competitiveness of domestic exporters on the global sales markets - it reduces the "ability to sell" of companies that have not shifted their production sites to their sales markets. In the short term, when prices remain unchanged, nominal exchange rate changes - e.g. changes in the dollar/euro exchange rate - tend to be directly associated with changes in the real exchange rate (exchange rate-price relationship). Numerous empirical studies at country and sector level highlight the significant impact of the real external value on export volumes. Rising exchange rates put a damper on the demand for domestic goods and vice versa.

Real effective exchange rate of the euro



1) A decline in the reading indicates an increase in competitiveness.

Germany: Price competitiveness indicator¹⁾



Sources: EcoWin; Deutsche Bundesbank.

There is often talk of an exchange rate "pain threshold" which, when surpassed, places a real burden on export performance. Since, however, this threshold is likely to vary considerably from company to company, exchange rate changes can be assumed to have a fairly steady effect on exports. Our estimates put the elasticity of export demand in relation to the real exchange rate (export price elasticity) at around 0.3 for the euro zone. This means that - all other conditions remaining as they are - every 1% increase in the real effective exchange rate (based on unit wage costs) slices a total of 0.3% off the real exports of the EMU countries (incl. trading between EMU countries) within a period of five quarters (see Allianz Economic Research 2013).

These effects can vary from country to country, e.g. due to differences in the structure of export goods. As far as Germany is concerned, we have used our own estimates to calculate a high level of elasticity of export demand in relation to the indicator of price competitiveness calculated by the German Bundesbank (0.8). Other analyses show that the

French economy reacts more sensitively to appreciation than its German counterpart (see Rey 2011).

At sector level, too, the sensitivity to exchange rate changes would appear to vary. The export activities of German industrial sectors such as vehicle manufacturing and clothing are hit harder by appreciation than sectors like electrical engineering and chemicals (see Lucke 2004). The German, French and British automotive and engineering sectors saw their export volume slide significantly after their currencies appreciated (see Leuwer/Süssmuth 2013). Companies with international operations, however, can shift their production sites to partly compensate for the impact of exchange rate changes. SMEs with predominantly domestic production locations are less able to do so, making them the most vulnerable to exchange rate influences. They end up specializing in order to escape competitive price pressure (see Lucke 2004).

If a country's currency depreciates in real terms, this makes by-products from this country cheaper for producers. These cost effects have become amplified over time, because multinational companies are increasingly shifting parts of the value creation chain to other countries, reducing the domestic contribution to value creation. Exchange rates have a bearing on the relative production costs (see Krugman et.al. 2012). Sectors that use a large proportion of intermediate goods, in particular, can partly compensate for a gloomier outlook on their sales markets caused by exchange rates by benefiting from lower production costs as a result of cheaper imported intermediate goods (see Belke et al. 2009).

It is not just for industry, but also for a number of service sectors that exchange rate changes have a significant effect on the export growth rate (e.g. tourism, logistics, IT and communications technology) (see Eichengreen/Gupta 2013 and Cheung/Sengupta 2013).

2.2 Investment flows: exchange rates as a potential factor in selecting locations

In addition to other location-specific factors such as infrastructure resources, wage costs or the extent of market regulation, exchange rates play a key role when it comes to selecting destinations for investments, because they have a real impact on the costs of the production factors. In this respect, companies making decisions on where to set up locations are interested not only in the current exchange rates, but also in long-term exchange rate expectations. It is, however, important to remember that, while expectations of a low currency valuation (in the long term) make direct investments in that particular country appear attractive in terms of costs, they also mean lower expected profit repatriation for investors (measured in terms of the local currency) (in this respect, see also section 2.3.). This is compounded by the fact that a currency with a low valuation in the longer term is often a symptom of unstable overall economic conditions, tarnishing the appeal of the investment location. As the example of Switzerland shows, a high exchange rate level in the long run does not necessarily make a particular location unattractive. The relationships between exchange rates and a location's appeal are complex.

One thing that can be considered more or less certain, however, is that a more volatile external value, i.e. increased uncertainty regarding investment returns, hinders productive cross-border capital flows (see Campa 1993 and Krugman et.al. 2012).

2.3 Profit development based on exchange rates: export earnings and accounting

Exchange rate movements affect corporate export earnings not only via the export volume, but also via export prices, depending on whether the exporting companies include the exchange rate changes in their prices in full, i.e. pass them on to their customers. If, for example, a company is worried about hanging on to its market share, it is unlikely to translate a 10% drop in the value of the foreign currency into a 10% increase in prices abroad. If at all, it would likely increase its prices by much less than 10%. The company would first of all be prepared to accept a drop in income from foreign sales in terms of its own national currency. Empirical studies have shown that, in the first year after the depreciation of the dollar, the prices of many import goods in the US tend to increase by only around half the depreciation rate. Whereas a long-term change in the nominal exchange rate is almost fully absorbed by import prices in the long run, this situation can be very different in the short term (see Krugman et.al. 2012).

Larger companies conduct their foreign business not only via direct exports and imports, but also via their own branch offices or subsidiaries in the target country. Consequently, exchange rates play an important role for multinational companies not least as part of their group accounting processes, which convert the single-entity financial statements of foreign subsidiaries, which are drawn up in the national currency, into the domestic currency. Gross written premiums depending on exchange rates are one example here. Exchange rate-induced inflation and economic effects also have an impact on premium income.

3. Conclusions

In the scenario that we believe will materialize, 2014 will not be a quiet year on the currency markets. Although we do not expect to see any pronounced shifts in the euro and dollar exchange rates in our base scenario, there are risks hanging over the currency structure that are set out in the alternative scenarios. The instability of some emerging markets means that unexpected monetary policy corrections, for example, could exert further downward pressure on their currencies. Combined with improved macroeconomic development in the euro zone, capital inflows could come to a halt and fuel a marked appreciation of the euro.

This risk scenario, which entails a further significant appreciation of the euro, would have a considerable impact on the euro zone and its internationally oriented companies. If, for example, the euro were to climb back to the highs touched upon in 2008 and 2009 - i.e. by 8 - 9% compared with the current level - this would pose a threat to the price competitiveness of a large number of exporters. Euro-zone exports could be slashed - in line with the elasticities calculated by us - by 2.5 - 3 percentage points. This would translate into virtually zero export growth, removing a key source of impetus for the continued economic recovery. In spite of cheaper imports, we would be likely to see a dwindling domestic investment and employment volume. A good 0.5 percentage points would be shaved off real GDP growth and nominal GDP growth would slide by up to 1 percentage point, with visions of the long-term stabilization on the labor market becoming something of a pipe dream. Generally speaking, profits are much more volatile than other macroeconomic parameters during the course of economic cycles. GDP growth that is 1 percentage point lower tends to send profits down to a much more pronounced extent.

In the corporate sector, this sort of appreciation scenario would hit exporting industrial companies particularly hard, with profit losses that could run just into the double-digit percentage range. But service companies, too, would be confronted with weaker domes-

tic demand. Companies with operations outside of the euro area would also be hit by depreciation losses on the revenue and profits they generate abroad. Consequently, profit losses at internationally active service companies (compared with the base scenario) of 5 – 10% would certainly be expected in this risk scenario due to valuation and economic effects. The situation is, however, likely to vary considerably from company to company.

In our second scenario of a strong depreciation of the euro, the opposite effects would tend to occur. This scenario would have a positive impact on the economy and corporate profits. It is, however, important to bear in mind that currency fluctuations generally fuel uncertainty that puts a damper on the economy, meaning that the negative effects in the appreciation scenario would likely be more pronounced than the positive effects of the depreciation scenario.

List of references

Allianz Economic Research (2013). "Economic forecast 2013/2014." Allianz Working Paper, No. 162.

Belke, Ansgar; Goecke, Matthias and Martin Guenther (2009). "When Does It Hurt?: The Exchange Rate "Pain Threshold" for German Exports." Ruhr Economic Paper, No.148.

Campa, Jose Manuel, (1993). "Entry by foreign firms in the United States under exchange rate uncertainty." The Review of Economics and Statistics, 75(4), 614-622.

Cheung, Yin-Wong; Sengupta, Rajeswari, (2013). "Impact of Exchange Rate Movements on Exports: An Analysis of Indian Non-Financial Sector Firms", CESifo Working Paper, No. 4214.

Eichengreen, Barry; Gupta, Poonam, (2013). "The Real Exchange Rate and Export Growth.", Policy Research Working Paper. Washington, DC: The World Bank., No. 6629.

Krugman, Paul; Obstfeld, Maurice and Marc Melitz, (2012). "Internationale Wirtschaft", Pearson Studium, München.

Leuwer, David; Süssmuth, Bernd, (2013). "The Exchange Rate Susceptibility of Some European Core Industries and the Currency Union", CESifo Working Paper, No. 4253.

Lucke, Dorothea, (2004). "Sektoraler Auslandsabsatz reagiert unterschiedlich auf Wechselkursveränderungen", Wochenbericht des DIW Berlin, No. 39/2004.

Rey, Serge, (2011). "Exchange rate fluctuations and extra-eurozone exports: A comparison of Germany and France", Economics Bulletin, 31(2), 1131-1150

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