THIS MONTH'S TOPIC
The euro's appreciation: causes, outlook and consequences

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The essential

The euro remains undervalued according to the majority of valuation models and is boosted by a domestic economy that has strengthened considerably since the beginning of the year. It is not the euro's value that is a surprise, but the speed at which the currency has appreciated since early May. Even though it is clear that the euro's recent rise is due to factors outside the Eurozone (widespread weakness of the US dollar and sterling, in particular), we believe that the increase we have seen year-to-date is in large part due to the improvement in eurozone fundamentals and its basic balance surplus. The upside pressure on the single currency is therefore likely to continue, even though the recent rise has been exceedingly quick and so a short-term correction remains a possibility. We do not believe that the euro's rise is sufficiently strong to jeopardise the ongoing recovery. Nonetheless, the ECB will have to ensure that it avoids a euro overshooting. If it is able to achieve this, corporate earnings may well suffer from the euro's appreciation between now and the end of the year, but we believe that, ultimately, the cyclical trend will end up winning out. The catch-up potential for medium-term eurozone corporate earnings remains significant.

Introduction

The euro has appreciated sharply since the beginning of the year (its effective exchange has risen 7.4%; 14% against the dollar), breaking through the symbolic $1.20 threshold for the first time since early 2015. The recent acceleration in the euro's rise caught the markets off guard and is a concern for the ECB.

However, the single currency remains (1) undervalued based on the majority of valuation models, and (2) boosted by a domestic economy that has strengthened considerably since the beginning of the year. As such, it is not the euro's value that is a surprise, but the speed at which the currency has appreciated since early May. Even though it is clear that the euro's recent rise is due to factors outside the eurozone (widespread weakness of the US dollar and sterling, in particular), we believe that the increase we have seen year-to-date is in large part due to the improvement in eurozone fundamentals and its large basic balance surplus. The upside pressure on the single currency is therefore likely to continue, even though the recent rise has been exceedingly quick and so a short-term correction remains a possibility.

> **"The single currency remains undervalued based on the majority of valuation models."**

In this article, we will analyse in greater detail all of the questions that have arisen: what are the causes of the rise? Is the recent "shock" sustainable? What is the outlook for the currency? And, finally, what will the consequences be for the economy, monetary policy and corporate earnings?

1. The euro exchange rate: reasons behind the rise, and the outlook

The recent trend in the euro has been closely linked to the narrowing of long rate spreads.

The euro, taken in effective terms, remained quite stable throughout 2016 and early 2017. Only in April did an appreciating trend emerge. This has not been a straight-line appreciation, and three events have «boosted» the euro directly:

- The dismissal of FBI Director James Comey on 9 May, and the start of a special investigation directed by Robert Mueller on 17 May: US long-term rates fell, while German rates remained stable.

- Mario Draghi's speech at Sintra on 27 June («Accompanying the recovery») during which he was more optimistic on the inflation outlook and spoke of adjusting monetary policy parameters.
- The Governing Council meeting of 20 July during which Mario Draghi explained that a recalibration of monetary policy would be discussed in the autumn.

The first two of these three events caused the 10-year rate spread between the US and Germany to narrow from 200bp in early May to less than 180bp in late July, which pushed the euro upward against the dollar. **On the other hand, the euro's appreciation since late July is different, because the euro's trade weighted exchange rate has increased despite a slight narrowing of the US/Germany rate spread.**

> **"The euro's trade weighted exchange rate has increased despite a slight narrowing of the US/Germany rate spread."**

The EUR/USD exchange rate has risen slightly since the Governing Council met on 20 July, particularly with the threats from Russia and Saudi Arabia on 24 July over implementing oil production cuts causing a spike in prices, **but the top contributor to the rise in the euro's effective exchange rate was the pound's precipitous drop:** the EUR/GBP exchange rate reached 0.92, which is now very close to historic highs, due to economic numbers, which continue to disappoint, and a lack of clarity over the UK's Brexit strategy. The Swiss franc's sudden depreciation should also be highlighted, with the EUR/CHF exchange rate moving from 1.10 in late June to 1.14 today.

As we have just seen, several factors - not necessarily related to one another, and some of which could play in the other direction shortly - are behind the euro's climb since April, but the most important one is still the long-term rate spread.

German long-term rates remain too low, because breakeven inflation is still exceedingly weak. **The upcoming announcement of a reduction in sovereign bond purchases should help to raise rates, and over the next several months, the long-term spread between the US and Germany is likely to continue to close, slowly but surely, which would drive EUR/USD upward.**

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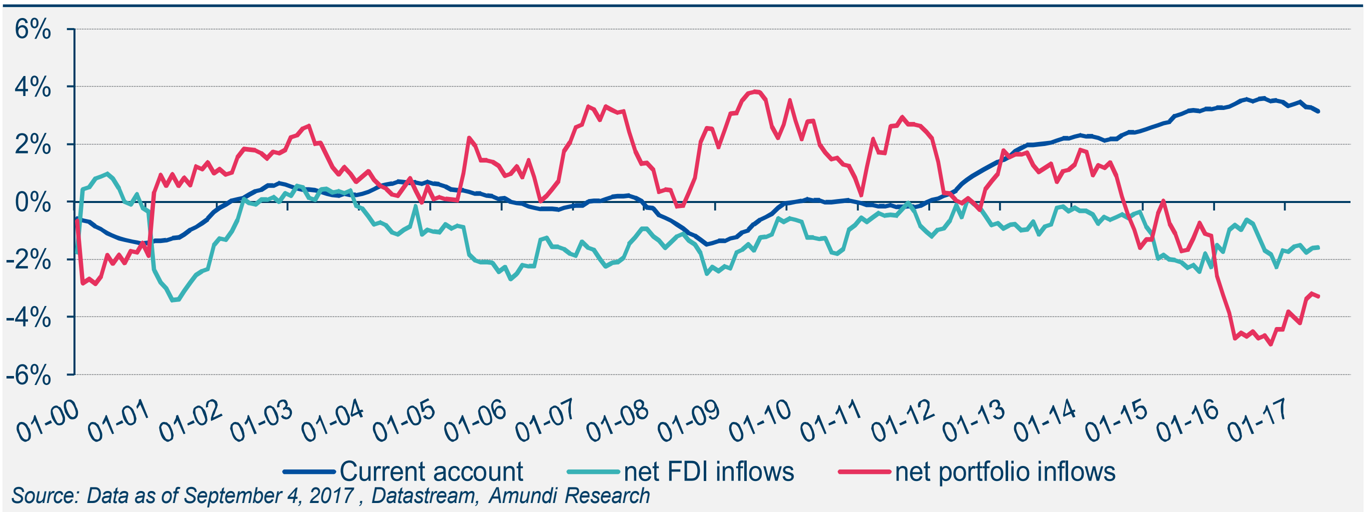
Portfolio rebalancing has explained the euro's trend since 2014

While the ECB will soon announce a reduction in its asset purchases, it is useful to reiterate the impact that the central bank has had on the euro over the last four years, especially through portfolio rebalancing.

At the beginning of 2014, the EUR/USD exchange rate was still close to 1.40. Deposit facility rates that turned negative in June 2014, coupled with expectations that a QE programme would be announced (during the conference at Jackson Hole in

Eurozone: LT inflows as % of GDP



Source: Data as of September 4, 2017 , Datastream, Amundi Research

August 2014, Mario Draghi indicated that the *"risks of doing too little" outweigh those of "doing too much"*, which led the markets to price in the announcement of a QE programme) caused European bond yields to plunge and widened the interest rate spread between the United States and Germany.

Negative or excessively low European bond yields triggered portfolio outflows on an unprecedented scale: 1) investors outside Europe sold off huge amounts of European bonds; 2) European investors sought out better yields beyond Europe's borders (in particular by buying up US Treasuries on a massive scale). **As a result, net portfolio flows, which had been very positive during the 2001-2014 period, turned extremely negative and the scale of outflows from portfolios more than offset the eurozone's substantial current account surplus. This coincided with a very sharp depreciation in the euro.** The continuation of portfolio outflows coincided with the euro staying low: the EUR/USD exchange rate remained between 1.05 and 1.15 virtually the entire time from early 2015 to June 2017.

Over the last year or so, we have seen portfolio outflows lose their intensity a little. A rise in European bond yields (and a further narrowing of the long rate spread between the United States and Germany) would likely make portfolio investment flows less negative and even turn them around into positive territory. Against a backdrop of the eurozone's substantial current account surplus (€340bn for the last 12 months), future portfolio rebalancing is likely to be to the euro's advantage. **As a result, it is very likely that the euro's upward trajectory will continue over the coming quarters. The macroeconomic outlook corroborates this.** We have revised our 12-month euro-dollar forecast from 1.20 to 1.25 and we are pricing in an increase in the effective exchange rate of the same magnitude.

"Over the last year or so, we have seen portfolio outflows lose their intensity a little."

2. How should we measure the impact of a stronger euro? What impact will this have on monetary policy?

An increase in the exchange rate is tantamount to a tightening of monetary conditions which, depending on the state of the economy and inflation levels, may or may not be welcome. The transmission channels through which an exchange rate "shock" impacts growth and inflation are complex and operate with varying intensity depending on the country involved and its economy's position in the cycle. In addition, how permanent a currency shock is depends on its valuation level, among other things. As such, even the excessively quick appreciation of an undervalued currency should be viewed more as a necessary rebalancing (and therefore permanent) rather than a temporary shock.

What are the transmission channels?

The impact of exchange rates on an economy involves several mechanisms, the evaluation of which requires the use of a multinational macroeconomic model.

Contrary to popular belief, the effects on the economy of an increase in the exchange rate are not all negative:

- On the one hand, deteriorating competitiveness (ex ante) in a country whose currency is appreciating reduces exports and increases imports (in real terms), which, all else being equal, has a negative effect on the growth of real GDP and, through this same channel, causes jobs and investments to decline.
- On the other, falling commodity prices allows businesses to rein in their production costs. And, more importantly, the appreciation of the currency gives more purchasing power to households through lower prices for goods consumed. The increase in consumption that results partially offsets the negative impact of the appreciation of the currency via trade.

"Contrary to popular belief, the effects on the economy of an increase in the exchange rate are not all negative."

According to the OECD's global macroeconometric model (Interlink), a 10% appreciation of the euro reduces eurozone growth by 0.7 pp the year following the shock. The NiGEM global macro model, used by many central banks, outputs a similar order of magnitude (-0.6pp). By contrast, according to the ECB model (2011), the impact on growth is far milder (along the lines of 0.1pp). The impact on inflation is very dramatic starting the first year, irrespective of the model used.

Several comments:

- These models are the result of estimates made mostly before the great financial crisis. It would appear that the sensitivity of trade to exchange rates has lessened since then. Some research shows that exports now tend to be less sensitive to exchange rates than in the past. Nonetheless, there are differences in sensitivity from one eurozone country to the next that are well known (as an example, the peripheral countries and France are more sensitive than Germany). We do not intend to go into country particulars any further since we would have to take the structure of trade between each of them into account. We are strictly concerned here with the impact on the eurozone on an aggregated basis.

- Turning to prices, the sensitivity of inflation to the exchange rate of the euro against the US dollar is stronger than for other currencies; moreover, this is true of all countries. This is due to the fact that commodities are traded in dollars.
- The macroeconomic models show (1) that the impact on growth dissipates rapidly and that the economy gradually returns to its potential trajectory, (2) that the impact on headline inflation is substantial but temporary the first year and very mild on core inflation. In other words, permanent shocks to the exchange rate have a temporary impact on the economy.

"The sensitivity of inflation to the exchange rate of the euro against the US dollar is stronger than for other currencies; moreover, this is true of all countries."

The strengthening of euro is taking place against a very favourable backdrop

The usual considerations must be set aside in the current context:

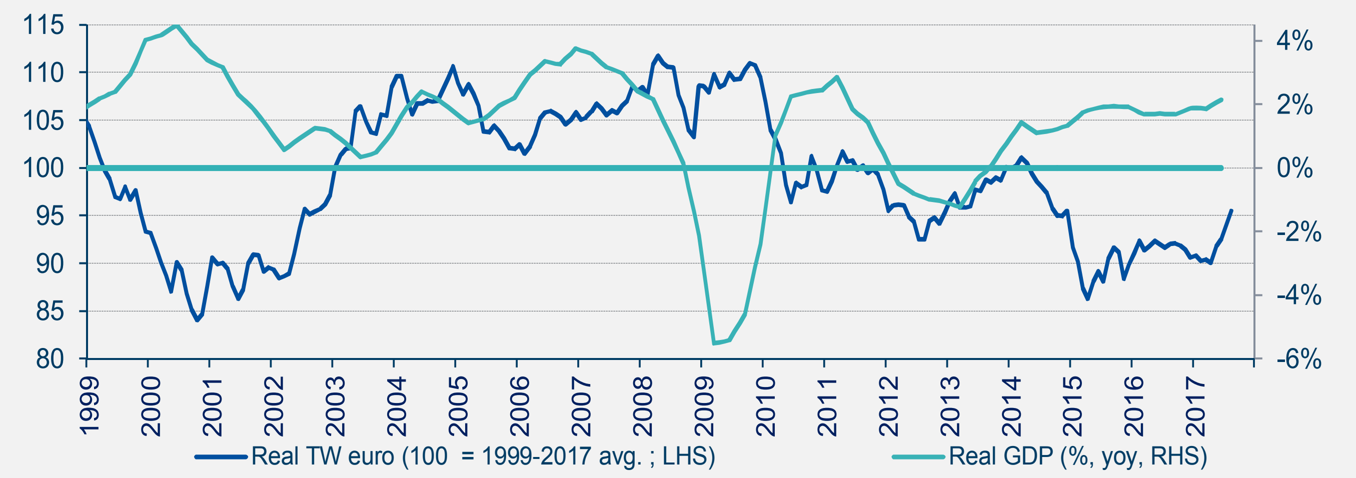
- Growth in the eurozone is being driven primarily by domestic demand (consumer spending and investment) with a virtually zero contribution from foreign trade.
- Exports continue to be supported by strong global demand, which in turn has been benefiting from the resynchronisation of the global cycle since the beginning of the year.
- Under these circumstances, we believe that the strengthening of domestic demand will outweigh the negative effects on trade. Accordingly, we have revised our eurozone growth forecast for 2017 upward, from 1.8% to 2%. Moreover, we think that growth bias will remain to the upside until 2018. The continued strengthening of the euro leads us to retain a forecast that is slightly below that of the consensus and to predict that growth will taper off next year. Finally, it is our view that core inflation will continue to rise slowly and that domestic cyclical factors (labour market recovery, higher wages) will prevail.

"We believe that the strengthening of domestic demand will outweigh the negative effects on trade."

What impact will this have on monetary policy?

According to our calculations, at current exchange rates, the technical assumptions made by the ECB in June will be revised using a higher level for the euro: 2.3% on average for 2017 and 2.3% for 2018, too (i.e. less than 5% in all). So it is not the euro's current value that is of concern to the ECB, but rather the speed at which it has appreciated recently, especially against the dollar. In fact, the ECB needs this to anchor expectations of a gradual rise in core inflation. To do so, it is crucial to avoid fuelling an overreaction.

Eurozone: GDP growth vs. real trade-weighted euro



Source: Data as of September 4, 2017, Datastream, Amundi Research

The ECB could simultaneously revise its growth forecast upwards and its headline inflation forecast downwards (for 2018) while keeping its core inflation forecast unchanged. The impact of the recent strengthening of the euro on monetary policy is therefore ambiguous. On the one hand, the economy and the buoyancy of global trade are encouraging the ECB to reduce, as expected, its accommodative monetary policy (by announcing in the near future that it intends to scale back its asset purchases starting in January 2018). On the other, it has to proceed with caution to avoid fuelling anticipations of a sudden ECB interest rate hike, which could cause an overreaction to the stronger euro and hinder the recovery. To do so, the ECB has a middle-of-the-road option available, which would consist of announcing an extension of the duration of its QE programme while lowering the monthly total of its asset purchases (from €60bn to €40bn for example). This option would allow the ECB to simultaneously cool the anticipation surrounding the first hike in its key interest rates while extolling the resiliency of the economy.

The gradual strengthening of the euro, which we have been expecting, is in line with the eurozone's fundamentals. We think that the tightening of conditions will occur though exchange rates first. In the absence of a significant rise in inflation, we continue to hold the view that the first key interest rate hike will not occur any time before 2019, with the ECB preferring to wait and see whether the risk of an overreaction to the euro can be dispelled.

> **"The ECB could simultaneously revise its growth forecast upwards and its headline inflation forecast downwards."**

3. How sensitive are eurozone earnings to fluctuations in the exchange rate?

Although the macroeconomic impact of the euro's rise should be limited, **the repercussions for corporate earnings could be more substantial.**

It will not be long before the initial effects of the rising euro begin to appear.

Even by remaining at its current level, the single currency is expected to start dragging down corporate earnings as early as this quarter (Q3 2017). The impact will be all the greater if the euro's effective exchange rate were to increase by 10% in 2018. After having generally flattered corporate earnings since mid-2014, the euro is now expected to have the opposite effect over the coming quarters.

As an example, **if the euro's effective exchange rate were to increase by an average of +10%, ceteris paribus, this would have an expected 8% negative impact on eurozone EPS. With EPS estimated at +9%** currently by the IBES consensus, this hypothesis would drag this figure down to just **+1%**. Clearly, this is just a simulation, all the more so given that a 10% rise in the euro's effective exchange rate seems somewhat far-fetched, but it gives an idea of how sensitive corporate earnings can be to exchange rates. If we use another, more (too?) conservative scenario, where the **euro's effective exchange rate** remains at **its current level** throughout 2018, its increase from 2017 would still be +3.6% and the **drop in 2018** EPS would be around -2.9% (-8% / 10% x 3.6% = -2.9%).

> **"The rise in the euro will begin to weigh on profits as soon as Q3 2017."**

Two other approaches to linking earnings and exchange rates:

As data from **national accounts** on corporate earnings are too centred on the domestic market and do not distinguish listed companies, we generally use two other approaches – an initial, mathematical approach and a second, more analytical approach.

The first approach, which is the most well-known, consists in comparing the change in two series over time; in this case EPS and the euro's effective exchange rate. The advantage of this method is that it is easy to implement. However, if you look beyond its apparent robustness, **the conclusions we can draw for the eurozone are unconvincing** because of its lack of historical depth. As this method only goes back to the year 2000 in the eurozone, compared to 1973 in the United States, the regression results are very sensitive to any anomalies. As such, first and foremost, a 10% change in the euro's effective exchange rate would cause EPS for the MSCI EMU index to shift 14% in the opposite direction. However, if we eliminate 2009 and 2010 from the data, when the shift in EPS was more due to the great financial crisis than exchange rate fluctuations, the impact falls from 14% to 9%. Furthermore, **this hides other factors of interest.** As such, since mid-2014, currencies aside, changes in earnings for the MSCI EMU index were largely due to fluctuations in oil and commodity prices.

In light of these limits, **we prefer to use another, more analytical method that has proven its worth in practical use. This method involves** determining an equity index's net exposure to foreign currencies **in the same way as one would do for a company.** The drawback of this approach, however, is the proliferation of hypotheses. This is why, beyond the apparent precision of each figure, the overriding trends and the logic of the arguments that are the most important factors.

As an example, the adjusted, cumulative **revenue** of the **MSCI EMU** index is estimated at **€4.515 trillion** at the end of 2017, with **54%** of that figure generated outside the eurozone. Using another approach, financial-sector companies account for 25% of this total revenue. As such, the revenue of non-financial companies generated outside the eurozone can be estimated at **€1.828 trillion** (€4.515 trillion x 54% x 75%). To draw an analogy with a company, this figure is basically the **gross foreign currency exposure** of the MSCI EMU index (excluding financials).

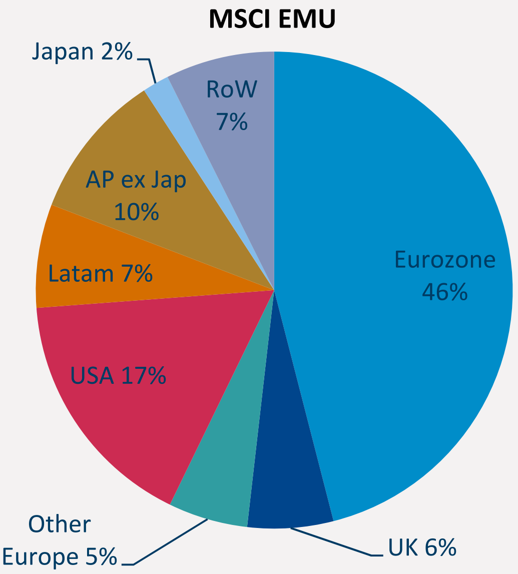
In the same way, **moving from gross to net** must take into account the percentage of overseas production and purchases made in foreign currencies. In general, companies' net exposure represents less than 50% of their gross exposure. If we use an average value of 40%, the MSCI EMU's **net foreign currency exposure** can therefore be estimated at **€731 billion** (€1.828 trillion x 40%).

If this exposure remains unchanged, a **10% full-year increase in the euro's effective exchange rate** would have a **gross negative impact of €66 billion** on the MSCI EMU's revenue (731-731/1.10). This drop in revenue is generally offset by price increases spread out over time. Supposing that during the first year, one third of this negative impact is offset by price increases, the drop in revenue would be reduced to **€44 billion before tax** (66 x 2/3) and **€33 billion after tax** (tax burden of 25%).

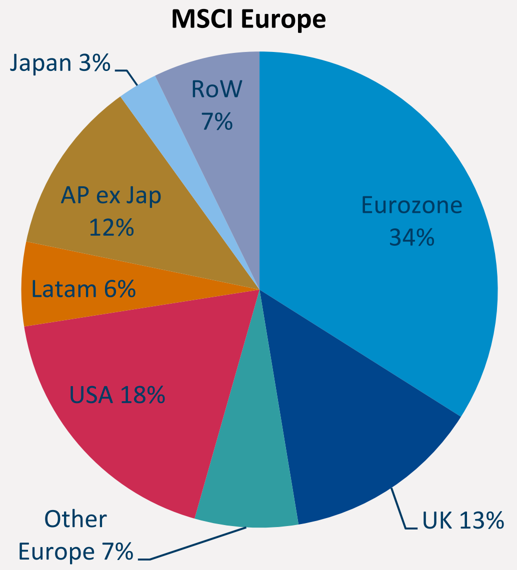
In addition to this -€33 billion foreign exchange effect, we should add **increased earnings related to an improving economic climate** and also take into account the **rebound in the banking sector in particular.** Regarding this first point, we assume in fact that the rising exchange rate is, in part, a reflection of the improving economic climate. This improvement in earnings can be estimated at **€5 billion** (1% x €4.515 trillion x 16% x 75%), i.e. the change in revenues (+1%) multiplied by EBITDA margin (16%) after a tax burden of 25%. Regarding the second point, banking-sector earnings account for 15% of the total. Supposing that their earnings are boosted by the improving economy (reduction of non-preforming loans) and an interest rate curve that is steepening further, and rise 15% in 2018 rather than the initially forecast 9%, this would generate additional profit of **€3 billion.**

"By 2018, a 10% increase in the effective exchange rate would cut MSCI Euro's earnings growth by 8%."

Breakdown of sales by region



Source: Data as of September 4, 2017, Factset, Georev, Amundi Research



Source: Data as of September 4, 2017, Factset, Georev, Amundi Research

A 10% increase in the euro's effective exchange rate would cut eurozone EPS by 8% and European EPS by 5%:

Ultimately, **taking the hypothesis that the euro's effective exchange rate increases by 10%** - between the negative foreign exchange effects (-€33 billion) and the positive effects on the economy (+€5billion) and the banks (+€3 billion) - **the MSCI EMU's cumulative earnings would be cut by €25 billion,** bringing growth down to **+1%** versus the +9% currently forecast.

If we use the same approach for the whole of Europe, we observe a lower level of sensitivity. As such, a 10% shift in the euro's effective exchange rate would only reduce the MSCI Europe's EPS by -5% compared to -8% for the MSCI EMU.

Ultimately, while the impacts of an increase in the euro on regional growth are expected to remain very moderate, **the impacts on earnings are likely to be more significant and manifest as early as the third quarter of 2017. Nonetheless, the eurozone still has a number of positive factors.** The economic recovery is becoming more widespread and this market – which is more cyclical than the average – tends to outperform when the economy is improving. Looking beyond the temporary curb on earnings, their medium-term catch-up potential is greater than in other regions. Finally, valuations remain relatively attractive and political risk has been far overestimated.

“The impacts on earnings are likely to be more significant and manifest as early as the third quarter of 2017.”

Conclusion

The economic recovery in the eurozone, which has considerably strengthened since the beginning of the year, has primarily been driven by domestic demand. Moreover, exports are benefiting from the resynchronisation of the global cycle which is underpinning foreign demand for eurozone products. Against this backdrop, we do not believe that the euro's rise is sufficiently strong to jeopardise the ongoing recovery. As such, the appreciation of the single currency is (gradually) expected to continue, in line with the region's fundamentals (undervalued currency, strengthening basic balance surplus, future recovery of long-term rates). Nonetheless, the ECB will have to ensure that it avoids an overreaction to the stronger euro. If it is able to achieve this, corporate earnings may well suffer from the euro's appreciation between now and the end of the year, but we believe that, ultimately, the cyclical trend will end up winning out. The catch-up potential for medium-term eurozone corporate earnings remains significant.

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