FX Viewpoint

No change in the EUR long-term equilibrium

19 March 2024

G10 FX Strategy
Global

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4 conflicting narratives about the long-term EUR outlook

We discuss four popular narratives about the EUR and EURUSD long-term outlook: USD debasement, US exceptionalism, ECB positive rates and Eurozone negative shocks. They have conflicting implications, and we find no evidence of a change in the long-term EURUSD equilibrium, which remains somewhat above 1.20.

The EUR is not weak, the USD is strong

EURUSD has been on average well below its equilibrium in the last 10 years, but FX can deviate for long periods from such estimates. Moreover, this reflects USD strength, rather than EUR weakness. The EUR is not weak in trade weighted terms, while EURUSD is consistent with rate differentials.

Mixed fundamentals

Trends in key fundamentals show a mixed picture for EURUSD. Inflation credibility is strong for both the ECB and the Fed. The current account and government debt trends are positive for EURUSD. However, terms of trade and productivity trends are negative for EURUSD.

Equilibrium estimates show no change

We look at EUR long-term equilibrium estimates using three methodologies: our own Behavioural Equilibrium Exchange Rate (BEER) model, the IMF Real Effective Exchange Rate model (REER), and PPP (Purchasing Power Parity) estimates. They all suggest a EURUSD equilibrium somewhat above 1.20, which has not changed in the last decade, or more recently.

Refer to important disclosures on page 9 to 10.
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Timestamp: 19 March 2024 02:00AM EDT

Four narratives about the long-term EUR outlook

We often hear four narratives about the EUR long-term outlook. Two are about the EUR and two are about the USD. Two are positive for EURUSD and two are negative for EURUSD. They all have some merit but taking them together they have conflicting implications.

Beyond the theoretical merits of these four narratives, we do not find a change in the estimated EUR equilibrium in this report. Alternative models show a stable EUR equilibrium and suggest that EURUSD is undervalued today. The EURUSD long-term equilibrium estimates remain somewhat above 1.20—the average since the introduction of the EUR has been 1.19.

USD debasement

One of the most popular narratives is one of USD debasement, with the USD losing its role as the "global currency," which in turn would suggest a stronger EUR in the long term. This is motivated by the declining share of USD central bank reserves, the deteriorating US fiscal position and recent "weaponization" of the USD in sanctions.

We addressed these issues recently and found that reports of USD replacement were greatly exaggerated (see Reports of USD replacement greatly exaggerated 02 May 2023). The evidence suggests that the global role of the USD is not in any way under threat. In some cases, the USD has lost share but from very high levels, over decades, and consistent with diversification during convergence. There is no clear alternative, as the EUR has not risen to the challenge so far, while the CNY internationalization is slow and uneven. Digital assets also are not a threat so far. Having said all that, the fast-deteriorating US debt dynamics, particularly compared with that of the Eurozone, do raise concerns and could justify a stronger EURUSD long-term equilibrium.

US exceptionalism

At the other extreme is the narrative of US exceptionalism. To the extent that this is based on recent progress in artificial intelligence, it is way too early to see it in the data. However, as we discuss in detail below, overall US productivity has been higher compared with Eurozone productivity in the last decade, which has coincided with EURUSD weakness. US growth has also been much higher in the post-pandemic years and continues being so. Such trends would indeed justify a lower EURUSD long-term equilibrium if they were to continue. What we can say for now is that it is early to know, and we also see other offsetting forces, particularly in the deteriorating US fiscal fundamentals, as we discuss below.

ECB positive rates

Turning to the EUR, the consensus was expecting ECB positive rates to attract strong flows, supporting the currency. The argument was that the EUR was set to compete with the USD as a global currency, but the global financial crisis, the Eurozone crisis and negative ECB policy rates prevented the EUR from doing so. With these crises behind and positive rates, the EUR could claim its rightful place.

Valid points, but we have not found such evidence yet. In a recent report, we looked at various flows, including EPFR private flows, BIS foreign bank claims, BoP data, retail flows and IMF data (see ECB positive rates: mixed flows so far 01 November 2023). The evidence is mixed, with some positive flows in some cases, but far below expectations so far.

Eurozone negative shocks

The fourth narrative is that recent negative shocks, from energy and geopolitics, suggest a lower EUR long-term equilibrium. This is based on two key and related arguments. First, Europe has been enjoying a peace dividend since the end of the cold war, which is not the case anymore following the war in Ukraine. Second, Europe was relying on cheap energy imports from Russia, while now must find alternative and more expensive sources of energy, which puts it at a disadvantage compared with the US that is energy independent. Both are permanent shocks and in theory would suggest a lower EUR equilibrium.

However, as we find below, the impact of these shocks seems to have faded up to an extent since they started in 2022 and in any case it is too early to see it in the equilibrium estimates. Moreover, one could also argue that investment to address the implications from these shocks, such as in defense and energy independence, and closer European cooperation could lead to a higher EUR equilibrium. The verdict is still out.

The EUR is not weak, the USD is strong

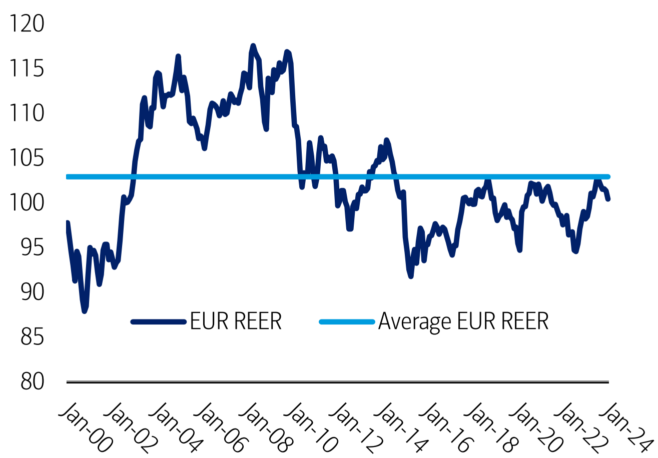
The narrative for a weaker EUR long-term equilibrium is often based on the fact that EURUSD has been historically weak since 2014. Being weak for the last 10 years does raise questions whether the equilibrium has actually changed. The EURUSD average in the last 10 years has been at 1.12. However, the average in the previous 10 years was 1.34. The average in the last 20 years is 1.23, consistent with equilibrium estimates.

FX can deviate for long periods from long-term equilibrium model estimates. This has been the case for example for JPY, NOK and SEK, which appear substantially undervalued, or CHF, which appears substantially overvalued. Equilibrium models may reflect a change in the equilibrium well after the actual change has taken place, so we would be cautious. One would have to assess the main FX drivers to determine whether there has been a structural change from the past, which may take time to affect the time series in the models. This was the case after Brexit for example, which resulted in a lower GBP equilibrium, which the models could not capture immediately.

Beyond these considerations, we would emphasize that the EUR is not weak with respect to non-USD currencies. This suggest that the USD has been strong, instead of the EUR being weak.

Indeed, the EUR is not weak in trade weighted terms. In real effective terms, the EUR is only slightly below its historic average, by 2.5% (Exhibit 1). In nominal effective terms, the EUR is at an all-time-high (Exhibit 2). The difference between the two has to do with historically lower Eurozone inflation compared with its trading partners.

Exhibit 1: EUR REER
EUR only slightly below historic average in real effective terms



Source: BIS

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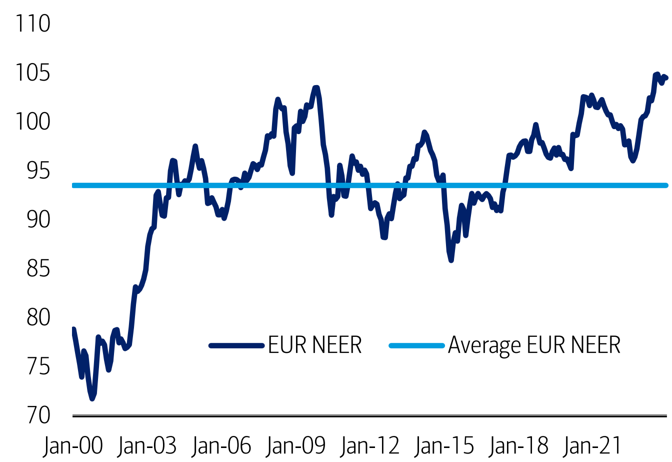
Exhibit 2: EUR NEER
EUR at all-time high in nominal effective terms



Source: BIS

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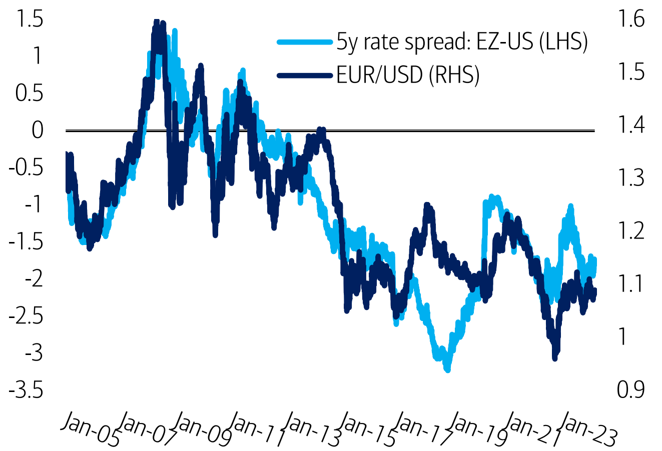
This evidence suggests that if the EURUSD long-term equilibrium has changed, one should try to find the reasons on why the USD equilibrium may be higher. The overall EUR equilibrium does not seem to have changed.

At the same time, EURUSD is consistent with rate differentials (Exhibit 3 and Exhibit 4). Rate differentials declined sharply after the global financial crisis, but do not show a clear trend, despite being volatile, since 2015. They are now consistent with EURUSD somewhat above 1.10, but at times during recent years were also consistent with EURUSD above 1.20. This most likely suggests that current EURUSD weakness compared with historic values is most likely cyclical, not structural.

Exhibit 3: EURUSD and 5-year rate differentials
EURUSD consistent with 5-year rate differentials



Source: Bloomberg and BofA Global Research.

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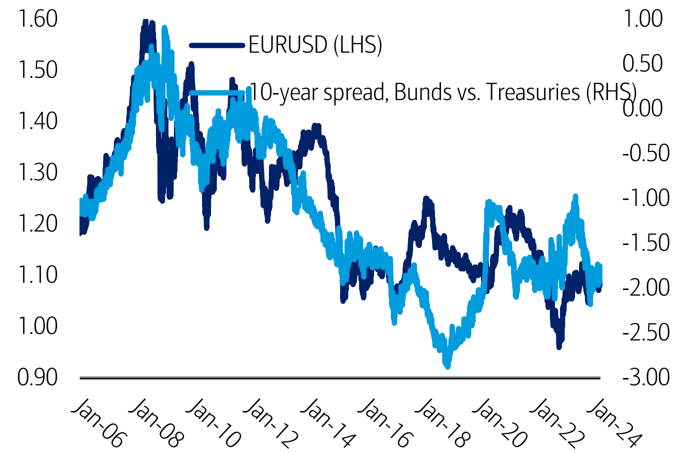
Exhibit 4: EURUSD and 10-year rate differentials
EURUSD consistent with 10-year rate differentials



Source: Bloomberg and BofA Global Research.

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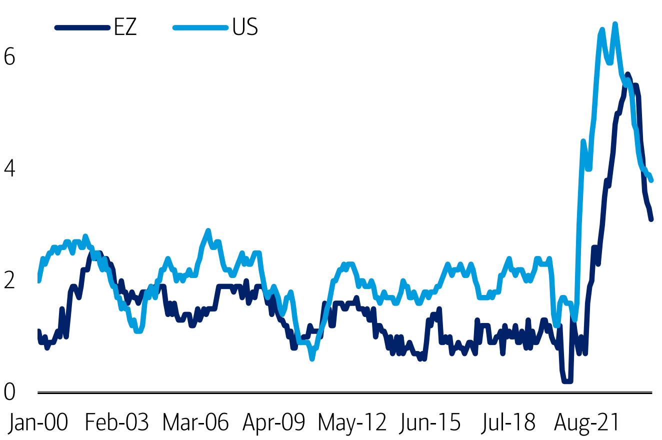
Mixed fundamentals

Trends in key fundamentals show a mixed picture for EURUSD. Inflation credibility is strong for both central banks, suggesting no direct EURUSD implications beyond the current cycle. The current account and government debt are positive for EURUSD. However, terms of trade and productivity trends are negative for EURUSD.

Following the inflation surge after the pandemic, both the ECB and the Fed have successfully defended their inflation credibility. The Fed initially did not respond to what they mistakenly thought to be transitory inflation. The ECB took even longer. However, they both did the right thing at the end, hiking by as much as they thought was necessary to bring inflation down. Although inflation remains above the target in both and has been stickier recently, it has been falling (Exhibit 5). Inflation expectations have also started coming down (Exhibit 6). Otherwise, loss of central banks' credibility and permanently higher inflation would have suggested a lower FX equilibrium.

Exhibit 5: Eurozone vs. US core inflation rate
Monetary policy tightening bringing inflation down in both Eurozone and US



Source: Bloomberg and BofA Global Research.
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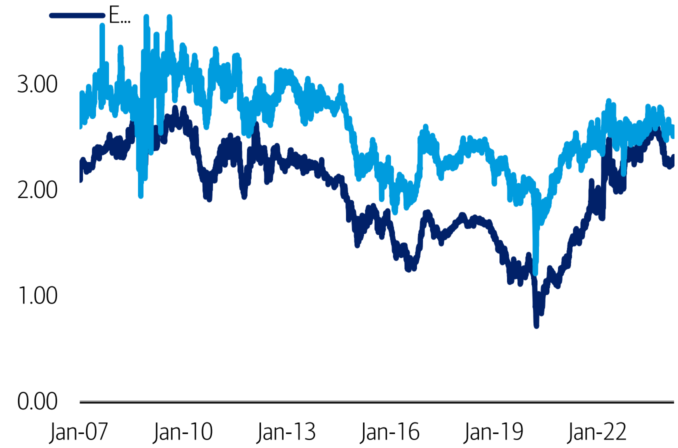
Exhibit 6: 5y5y inflation swap rate
Inflation expectations well anchored after recent inflation surge.



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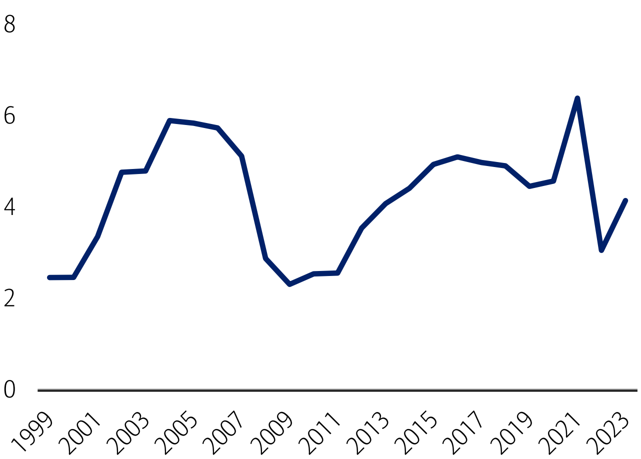
The Eurozone's current account balance is consistently better than that of the US, with surplus vs. a deficit (Exhibit 7). The different has been fluctuating over the years but has not changed. It is today very close to its historic average.

The Eurozone's terms of trade have deteriorated compared with that of the US (Exhibit 8). The Eurozone terms of trade deteriorated vs. that of the US after the global financial crisis and again since 2015. They deteriorated again in 2022, after the energy price shocks following the war in Ukraine, but have mostly recovered since then.

Exhibit 7: Eurozone-US current account balance/GDP
Eurozone current account balance consistently better than that of the US



Source: IMF, BofA Global Research.
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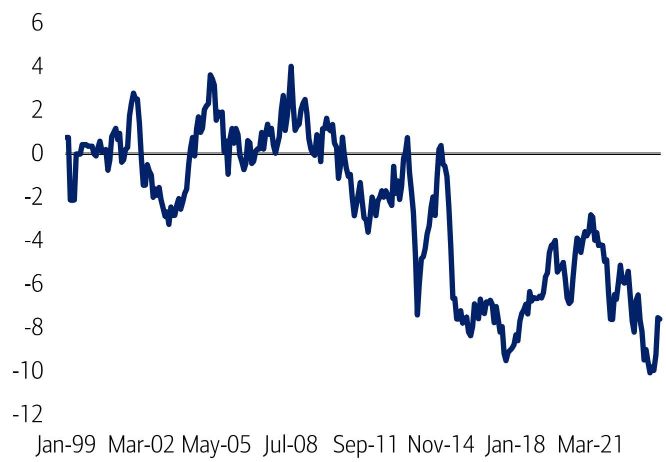
Exhibit 8: Eurozone – US terms of trade
Eurozone terms of trade deteriorated vs. US after global financial crisis and again since 2015



Source: Bloomberg , BofA Global Research.
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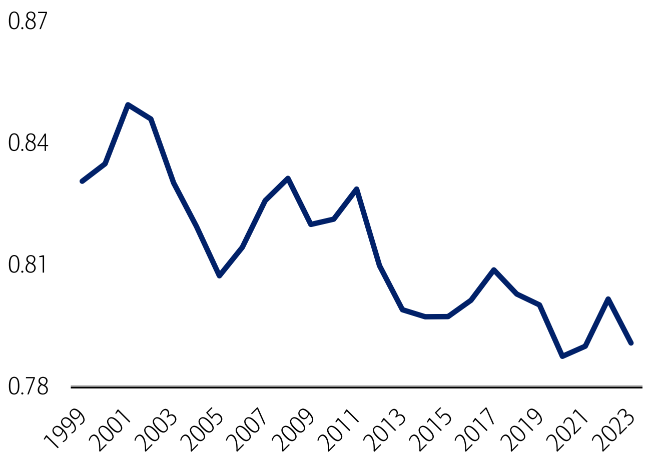
The Eurozone has a lower per capita GDP, which is diverging further from the US, reflecting lower productivity. Looking at constant prices and PPP-adjusted (Purchasing Power Parity), the Eurozone's per capita GDP has dropped from 84% of that of the US when the currency was introduced, to 79% today (Exhibit 9). OECD multifactor productivity estimates have been volatile, but the difference is negative for the Eurozone on average (Exhibit 10). This may be because the US consistently spends more on research and development than the Eurozone (Exhibit 11). However, it is early to argue that recent new technological progress has resulted in overall higher productivity growth (see [Faster trend productivity growth? Think again 14 February 2024]() and [USD and technological progress 28 June 2023]()).

Exhibit 9: Eurozone/US per capita GDP (constant prices, Purchasing power parity; 2017 international dollar)
The Eurozone has been diverging from the US



Source: MF, BofA Global Research.

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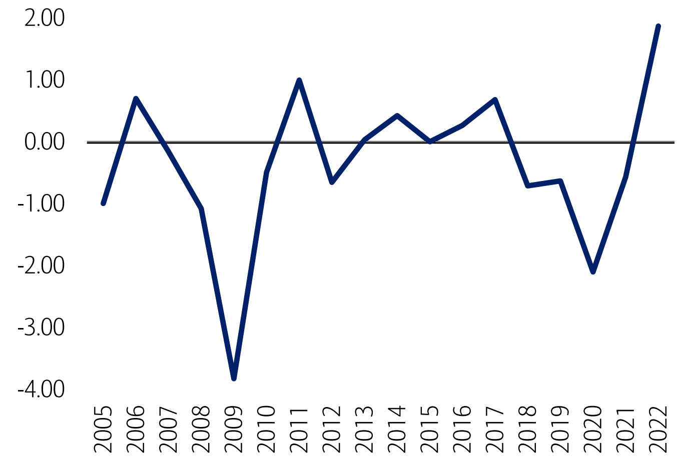
Exhibit 10: Eurozone-US multifactor productivity growth
Small and volatile productivity differences between Eurozone and US, but negative for the Eurozone on average



Source: OECD, BofA Global Research.

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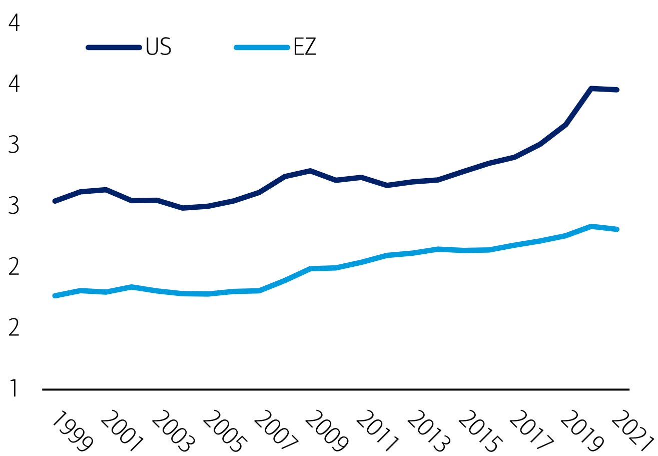
The Eurozone's government debt dynamics are much better than that of the US (Exhibit 12). Looking at IMF forecasts, the Eurozone's average government debt-to-GDP ratio is on a declining trend. However, the trend in the US is clearly upwards, going to levels that could raise sustainability concerns. The two are diverging fast in the long run.

Exhibit 11: Research and development spending/GDP
The US has been consistently spending more on research and development than the Eurozone, with the gap increasing recently



Source: World Bank, BofA Global Research.

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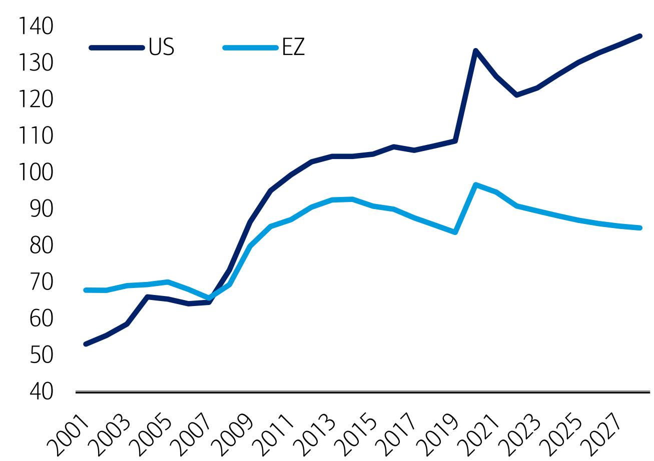
Exhibit 12: Eurozone and US general government debt/GDP, history and IMF forecasts
US government debt dynamics much worse than that of Eurozone



Source: MF, BofA Global Research.

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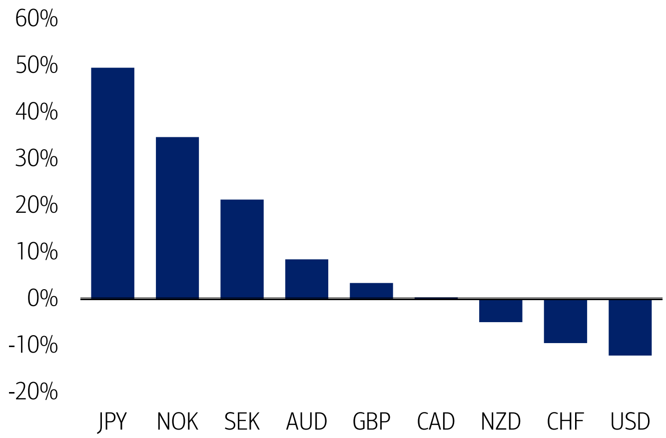
Equilibrium estimates show no change

We look at EUR long-term equilibrium estimates using three methodologies (for details, please see [A primer on G10 equilibrium exchange rates 29 August 2019]()). First, our own Behavioural Equilibrium Exchange Rate (BEER) model, using a panel Dynamic OLS (DOLS) cointegrating regression. Second, the IMF Real Effective Exchange Rate model (REER), with Bloomberg estimates using a panel regression for 40 economies with fixed effects. Finally, PPP (Purchasing Power Parity) estimates from Bloomberg.

According to our BEER model, the EUR is currently overvalued against JPY and the Scandies and undervalued against the CHF and the USD (Exhibit 13). Our estimates suggest EURUSD is undervalued by about 12%, implying an equilibrium of 1.22. Looking at the time series for EURUSD, the equilibrium does not seem to have changed in recent years—if anything, it may have actually increased since the early years of the EUR (Exhibit 14).

Exhibit 13: EUR misalignment from equilibrium (BofA BEER model)
EUR overvalued vs. JPY and Scandies, undervalued vs. CHF and USD



Source: BofA Global Research.

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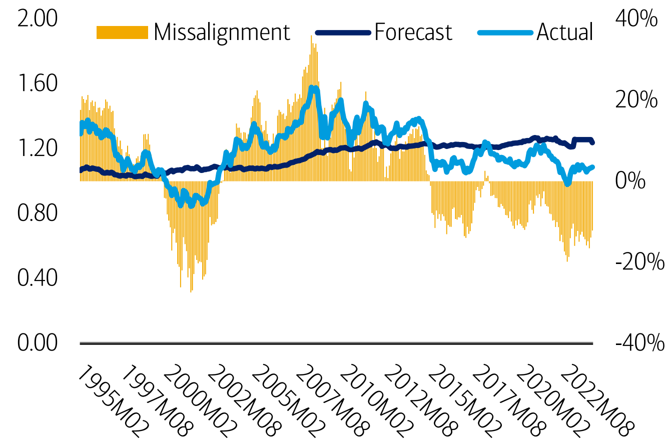
Exhibit 14: EURUSD vs. equilibrium
EURUSD equilibrium has not declined in recent years



Source: BofA Global Research.

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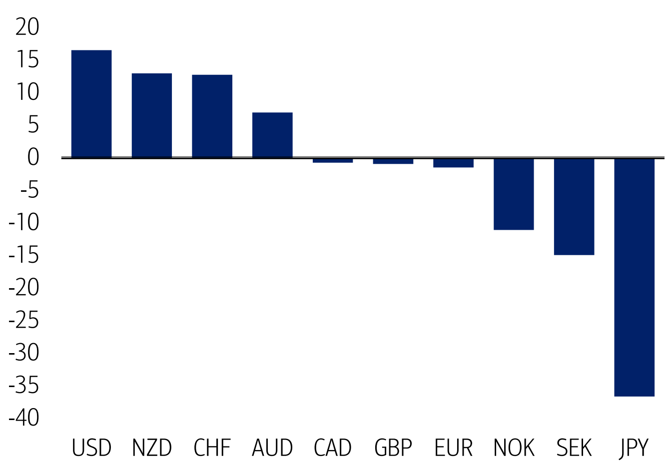
The IMF REER model leads to similar results, even suggesting EURUSD is more undervalued (Exhibit 15). These estimates suggest that the EUR REER is very close to its equilibrium, undervalued by only 1.5%. However, the USD REER is overvalued by 16.5%. Taken together, the EUR REER is undervalued against the USD REER by 18%. This in turn suggests that the EURUSD weakness in recent years is cyclical and that EURUSD eventually should strengthen, consistent with fundamentals, but mostly through USD weakness.

Exhibit 15: G10 misalignment from equilibrium (IMF REER model)
EUR undervalued vs. USD, overvalued vs. JPY



Source: IMF, Bloomberg, BofA Global Research.

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Exhibit 16: EURUSD misalignment from equilibrium (IMF REER model)
EURUSD undervalued by 18%

Source: IMF, Bloomberg, BofA Global Research.

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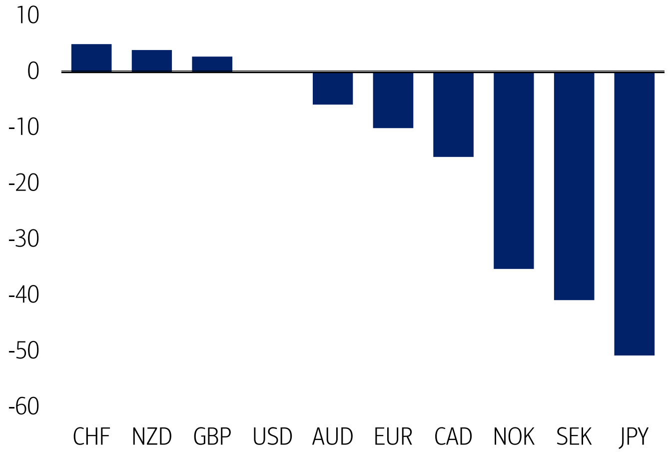
PPP estimates for USD crosses also confirm that EURUSD is undervalued. We look at point estimates, but also compared with their historic average. The point estimates suggest that EURUSD is undervalued by 10% (Exhibit 17). The estimates based on the deviation from historic average suggest that EURUSD is undervalued by 15%. Taken together, they suggest a EURUSD long-term equilibrium between 1.20 to 1.25, consistent with the estimates from the other two models.

Exhibit 17: G10 deviation from equilibrium PPP
EURUSD undervalued by 10%



Source: Bloomberg, BofA Global Research.

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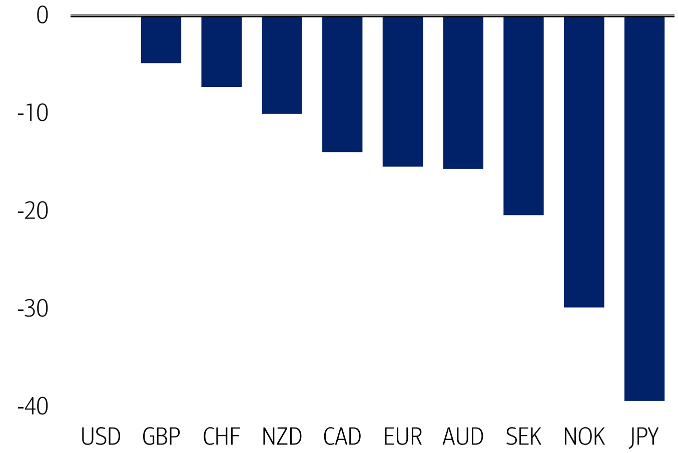
Exhibit 18: G10 deviation from historic average equilibrium PPP
EURUSD undervalued by 15%



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