Macro Keys
EUR/USD: Currency conundrum

Economics & Macro Strategy

Global

Global Macro Team

Larry Hatheway
Economist
larry.hatheway@ubs.com
+44-20-7568 4053

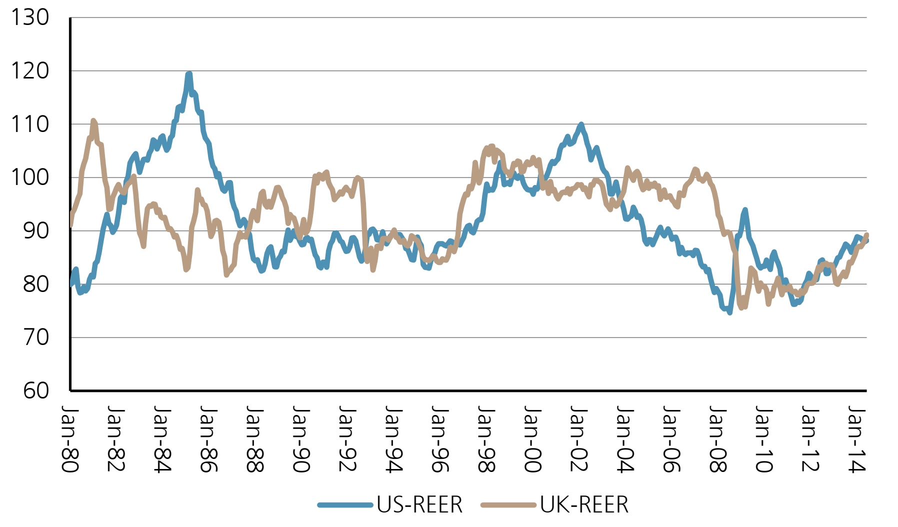
Next to declining Treasury yields, a stubbornly weak US dollar (or strong euro) has been perhaps the most frustrating outcome for investors thus far in 2014. The dollar's steadfast refusal to appreciate against the euro defies not only our and consensus expectations, it also runs contrary to textbook theories about exchange rates. After all, countries with superior growth, increasingly positive interest differentials and the prospects for tighter monetary policies are supposed to enjoy appreciating currencies. Making matters worse is the fact that the pound sterling has behaved just as theory would suggest, recently making multi-year highs against the dollar, euro and yen.

So why is the pound behaving normally but not the dollar? In what follows, we consider various arguments put forward to explain the discrepancy. None is fully convincing. We're left with the frustrating conclusion the dollar will eventually appreciate—we'll just have to be patient for the fundamentals to work their magic.

Valuations

We begin with valuations. To be sure, measures of currency valuation abound, from bilateral (e.g., purchasing power parity) to multi-lateral (e.g., fundamental equilibrium exchange rates). For simplicity, it's worth considering the real trade-weighted value of the dollar (depicted in Figure 1 alongside the same for sterling).

Figure 1: Real traded weighted exchange rates (2000 = 100)



Source: Haver, JPMorgan, UBS estimates REER stands for real effective (trade-weighted) exchange rate.

Having declined to multi-year lows by 2011, the dollar has, in fact, staged a modest recovery over the past three years, courtesy of strength against the yen, various emerging and commodity currencies. Still, at present levels it remains below its long-term average.

On a bilateral basis it is also worth noting that the spot EUR/USD exchange rate sits more than ten percent above our measures of purchasing power parity (PPP). To be sure, PPP is a 'weak attractor' in the short- and intermediate-term. Nevertheless, in real effective or PPP terms valuation is not an obstacle to dollar appreciation.

Growth and interest differentials

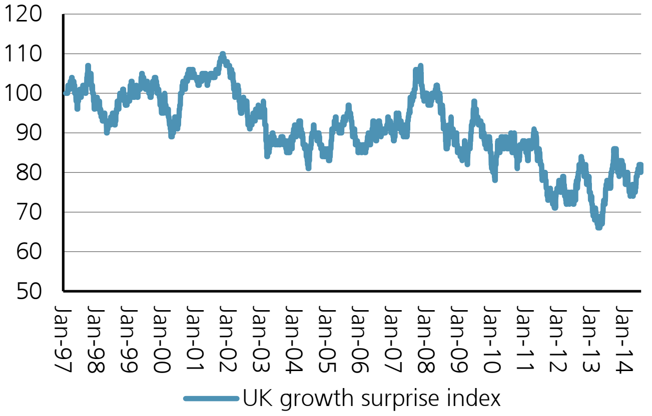
Stronger growth should result in a stronger currency. The logic is straightforward—higher growth should lead to greater profitability, higher interest rates and rising asset values, all of which should induce capital inflows from lower growth regions, pushing up the exchange rate of the high-growth country. More precisely, unanticipated economic strength should matter, insofar as expected outcomes ought to be reflected in prevailing asset prices and exchange rates.

Here's where the recent dollar and sterling trajectories are perhaps most puzzling. Take a look at the following two charts, which plot our measures of growth surprises for the US and the UK, respectively. Relative to consensus expectations, the US economy has delivered more or less continuous positive growth surprises since 2009. On the other hand, despite its status as the fastest growing G7 economy, the UK has roughly performed as the consensus of forecasters predicted. Yet over the past year sterling has soared, while the dollar has languished.

Figure 2: US growth surprise index

Source: Bloomberg, UBS estimates

Figure 3: UK growth surprise index



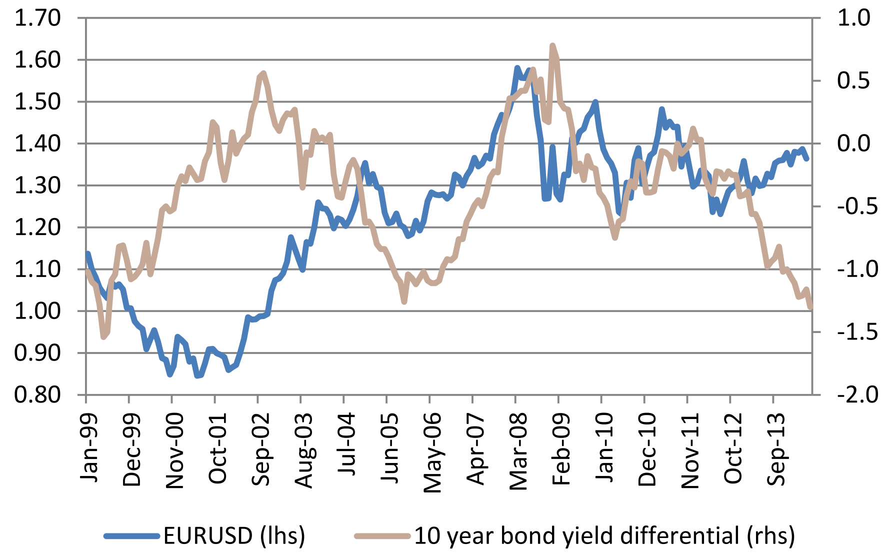
Source: Bloomberg, UBS estimates

To be sure, US growth clearly disappointed in Q1 of this year, while the UK economy powered ahead of expectations. But the dollar's inability to generate much momentum as an improved US growth story has re-emerged in Q2 remains a bugbear for dollar bulls.

The picture is equally puzzling when looking at interest differentials (Figure 4 overleaf). Notwithstanding this year's decline in US Treasury yields, bond yield differentials between Treasuries and Bunds have been steadily widening since 2011. Yet in contrast to the broad contours of the past, EUR/USD has not followed suit. Meanwhile, sterling has appreciated against the dollar, despite no discernable widening of the Gilt-Treasury ten-year yield differential (Figure 5, overleaf).

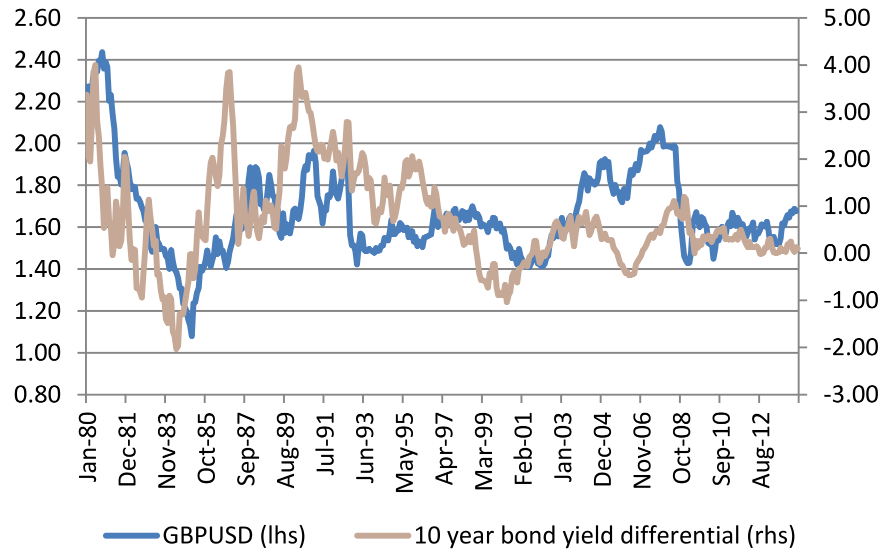
Perhaps in a low volatility world accompanied by increased home country bias (see below), interest differentials should matter less. But at some point the relative cost of carry ought to impact currency shifts. Perhaps that traditional relationship will become more apparent when, as we expect, US Treasury yields resume their rise later this year and as market volatility also picks up.

Figure 4: EUR/USD and ten-year bond yield differentials (Bunds less Treasuries)



Source: Haver, UBS estimates

Figure 5: GBP/USD and ten-year yield differential (UK less US)

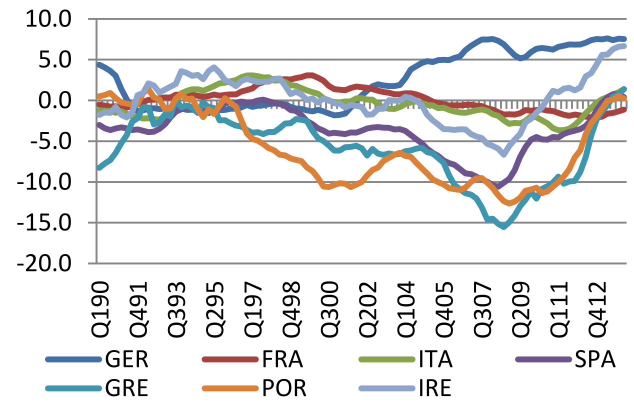


Source: Haver, UBS estimates

Current account balances

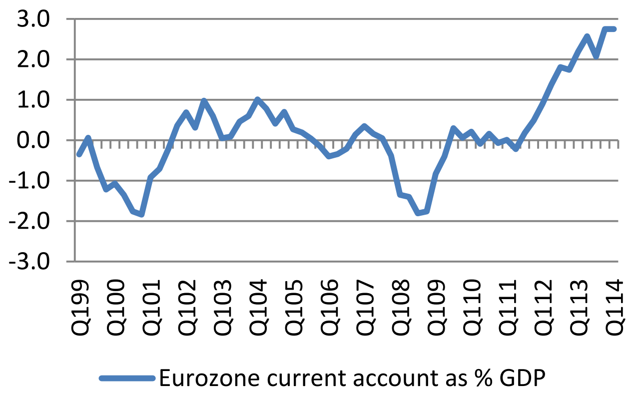
The most commonly heard argument put forward for euro strength against the dollar is the relative current account positions of each economic region. Specifically, owing to the significant contraction of current account deficits in the Eurozone periphery—without a corresponding decline in Germany's massive surplus—the Eurozone as a whole has moved into significant surplus (Figures 6-7, overleaf). The US, in contrast, remains a chronic current account deficit country, notwithstanding the sharp improvement in the US energy trade balance. Still, declines in the US net energy import bill, together with a weak recovery, have narrowed the overall US deficit to around 3% of GDP (Figure 8).

Figure 6: Eurozone current account balances, % GDP



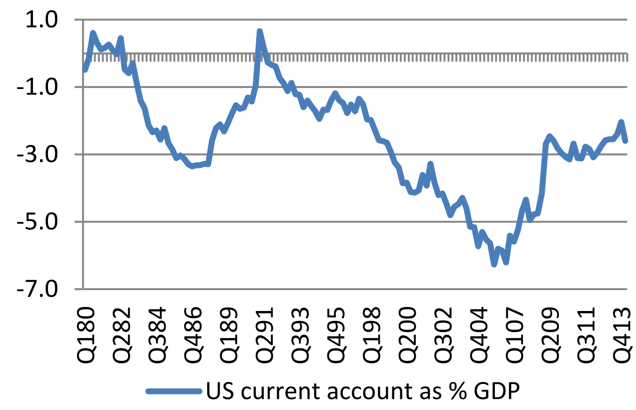
Source: Haver, UBS estimates

Figure 7: Eurozone current account balance, % GDP



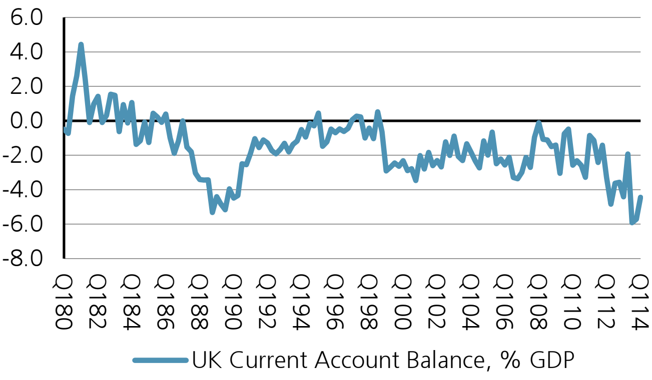
Source: Haver, UBS estimates

Figure 8: US current account balance, % GDP



Source: Haver, UBS estimates

Figure 9: UK current account balance, % GDP



Source: Haver, UBS estimates

But as Figure 9 (above) suggests, the current account explanation becomes a bit shaky when considering the UK. After all, in the past several years the UK has moved ever deeper into external deficit, now in excess of 5% of UK GDP. Yet that outcome has not prevented a sharp appreciation of the pound. In short, the conundrum continues—why should external account balances matter for the euro and the dollar but not for the pound?

Other factors

Frustration over the inability of the EUR/USD exchange rate to perform in textbook fashion has resulted in a cottage industry of alternative explanations for its behaviour. Below, we review some of the ones we most frequently encounter.

One view is that the advent of current account surpluses in the Eurozone has coincided with reduced (net) demand for foreign assets by Eurozone banks and individuals. Specifically, following the financial crisis Eurozone banks have had to pare back their balance sheets, including via the liquidation of foreign assets. The result has been a diminished capital outflow. Similarly, a rise in 'home country bias' due to increased risk aversion has reduced Eurozone investor appetite for foreign assets. Accordingly, the Eurozone is unable to generate a sufficient net capital outflow to offset its current account surplus, putting upward pressure on the euro.

To be sure, we find this argument compelling, even if capital repatriation and 'home country bias' are difficult to measure with precision. Still, if these factors are now dominant for cross-border capital flows (and recall that Europe is not the only region likely to be impacted by these developments), how is it that the UK is able to attract such strong capital flows to both finance is growing external deficit and push up sterling significantly? In short, the argument that surplus regions are unable to completely recycle their capital flows probably has some merit, but it alone cannot explain the conundrum of a weak dollar and strong pound.

[Admittedly, in terms of investment inflows, the UK has clearly benefitted from strong investor interest in its property sector. It also benefits disproportionately (relative to the US) from inflows from emerging economies.]

A second line of reasoning for the strong euro/weak dollar outcome is relative central bank balance sheet growth. Notwithstanding the Fed's taper, the US central bank balance sheet continues to grow, with a corresponding increase in US base money. In contrast, the ECB's balance sheet has contracted in recent years, as Eurozone banks have reduced their demand for ECB finance from crisis-era peaks. Hence, relative (base) money growth explains euro resilience and dollar weakness.

This argument sits less well. After all, the vast majority of base money created by QE has resided idle on central bank balance sheets in the form of excess reserves. Why should idle balances affect asset prices, including exchange rates? Moreover, the relative increase in the Fed's balance sheet has not prevented a widening of interest differentials, a relative surge in US corporate profitability and a strong multi-year outperformance of US asset prices (equities and property), all of which should have prompted inflows and dollar appreciation.

Other potential explanations are equally head-scratching. Relative labour, capital and total factor productivity growth have shifted in favour of the US versus Europe. Innovations in energy production and information technology have been US-led phenomena. Relative productivity gains ought to favour a stronger dollar.

The final explanation for dollar weakness is the weight of consensus positions. Indeed, over certain intervals positioning can be problematic. Yet the positioning argument fails to be fully convincing. If, after all, relative growth, interest differentials, profitability and asset return fundamentals have favoured the dollar for several years and yet the currency has failed to appreciate then, surely, investors would have lightened up on long dollar holdings. Simply put, frustration with price action should have washed out positions. Investor positioning can help explain short-term reversals against consensus views, but over the lengthy period of dollar 'misalignment' investor positioning is left wanting.

Conclusions

In summary, the EUR/USD exchange rate remains a puzzle. Perhaps the most compelling argument for its odd behaviour (relative to the fundamentals) is reduced European appetite for foreign assets. Still, as US growth improves, yield differentials widen, market volatility picks up, and the Fed concludes QE (while the ECB remains highly accommodative) the dollar ought to find its footing. Yes, it is frustrating, but we remain convinced that the fundamentals will eventually carry the day.

Required Disclosures

This report has been prepared by UBS Limited, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

For information on the ways in which UBS manages conflicts and maintains independence of its research product; historical performance information; and certain additional disclosures concerning UBS research recommendations, please visit www.ubs.com/disclosures. The figures contained in performance charts refer to the past; past performance is not a reliable indicator of future results. Additional information will be made available upon request. UBS Securities Co. Limited is licensed to conduct securities investment consultancy businesses by the China Securities Regulatory Commission.

Analyst Certification: Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers and were prepared in an independent manner, including with respect to UBS, and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

Global Disclaimer

This document has been prepared by UBS Limited, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

This document is for distribution only as may be permitted by law. It is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or would subject UBS to any registration or licensing requirement within such jurisdiction. It is published solely for information purposes; it is not an advertisement nor is it a solicitation or an offer to buy or sell any financial instruments or to participate in any particular trading strategy. No representation or warranty, either express or implied, is provided in relation to the accuracy, completeness or reliability of the information contained in this document ('the Information'), except with respect to Information concerning UBS. The Information is not intended to be a complete statement or summary of the securities, markets or developments referred to in the document. UBS does not undertake to update or keep current the Information. Any opinions expressed in this document may change without notice and may differ or be contrary to opinions expressed by other business areas or groups of UBS. Any statements contained in this report attributed to a third party represent UBS's interpretation of the data, information and/or opinions provided by that third party either publicly or through a subscription service, and such use and interpretation have not been reviewed by the third party.

Nothing in this document constitutes a representation that any investment strategy or recommendation is suitable or appropriate to an investor's individual circumstances or otherwise constitutes a personal recommendation. Investments involve risks, and investors should exercise prudence and their own judgement in making their investment decisions. The financial instruments described in the document may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates or other market conditions. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument referred to in the document. For investment advice, trade execution or other enquiries, clients should contact their local sales representative.

The value of any investment or income may go down as well as up, and investors may not get back the full amount invested. Past performance is not necessarily a guide to future performance. Neither UBS nor any of its directors, employees or agents accepts any liability for any loss (including investment loss) or damage arising out of the use of all or any of the Information.

Any prices stated in this document are for information purposes only and do not represent valuations for individual securities or other financial instruments. There is no representation that any transaction can or could have been effected at those prices, and any prices do not necessarily reflect UBS's internal books and records or theoretical model-based valuations and may be based on certain assumptions. Different assumptions by UBS or any other source may yield substantially different results.

Research will initiate, update and cease coverage solely at the discretion of UBS Investment Bank Research Management. The analysis contained in this document is based on numerous assumptions. Different assumptions could result in materially different results. The analyst(s) responsible for the preparation of this document may interact with trading desk personnel, sales personnel and other parties for the purpose of gathering, applying and interpreting market information. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this document is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues; however, compensation may relate to the revenues of UBS Investment Bank as a whole, of which investment banking, sales and trading are a part.

For financial instruments admitted to trading on an EU regulated market: UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms in the UK) in the financial instruments of the issuer save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this document. For financial instruments admitted to trading on a non-EU regulated market: UBS may act as a market maker save that where this activity is carried out in the US in accordance with the definition given to it by the relevant laws and regulations, such activity will be specifically disclosed in this document. UBS may have issued a warrant the value of which is based on one or more of the financial instruments referred to in the document. UBS and its affiliates and employees may have long or short positions, trade as principal and buy and sell in instruments or derivatives identified herein; such transactions or positions may be inconsistent with the opinions expressed in this document.

United Kingdom and the rest of Europe: Except as otherwise specified herein, this material is distributed by UBS Limited to persons who are eligible counterparties or professional clients. UBS Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. **France:** Prepared by UBS Limited and distributed by UBS Limited and UBS Securities France S.A. UBS Securities France S.A. is regulated by the ACP (Autorité de Contrôle Prudentiel) and the Autorité des Marchés Financiers (AMF). Where an analyst of UBS Securities France S.A. has contributed to this document, the document is also deemed to have been prepared by UBS Securities France S.A. **Germany:** Prepared by UBS Limited and distributed by UBS Limited and UBS Deutschland AG. UBS Deutschland AG is regulated by the Bundesanstalt fur Finanzdienstleistungsaufsicht (BaFin). **Spain:** Prepared by UBS Limited and distributed by UBS Limited and UBS Securities España SV, SA. UBS Securities España SV, SA is regulated by the Comisión Nacional del Mercado de Valores (CNMV). **Turkey:** Distributed by UBS Limited. No information in this document is provided for the purpose of offering, marketing and sale by any means of any capital market instruments and services in the Republic of Turkey. Therefore, this document may not be considered as an offer made or to be made to residents of the Republic of Turkey. UBS AG is not licensed by the Turkish Capital Market Board under the provisions of the Capital Market Law (Law No. 6362). Accordingly, neither this document nor any other offering material related to the instruments/services may be utilized in connection with providing any capital market services to persons within the Republic of Turkey without the prior approval of the Capital Market Board. However, according to article 15 (d) (ii) of the Decree No. 32, there is no restriction on the purchase or sale of the securities abroad by residents of the Republic of Turkey. **Poland:** Distributed by UBS Limited (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce. **Russia:** Prepared and distributed by UBS Securities CJSC. **Switzerland:** Distributed by UBS AG to persons who are institutional investors only. **Italy:** Prepared by UBS Limited and distributed by UBS Limited and UBS Italia Sim S.p.A. UBS Italia Sim S.p.A. is regulated by the Bank of Italy and by the Commissione Nazionale per le Società e la Borsa (CONSOB). Where an analyst of UBS Italia Sim S.p.A. has contributed to this document, the document is also deemed to have been prepared by UBS Italia Sim S.p.A. **South Africa:** Distributed by UBS South Africa (Pty) Limited, an authorised user of the JSE and an authorised Financial Services Provider. **Israel:** This material is distributed by UBS Limited. UBS Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. UBS Securities Israel Ltd is a licensed Investment Marketer that is supervised by the Israel Securities Authority (ISA). UBS Limited and its affiliates incorporated outside Israel are not licensed under the Israeli Advisory Law. This Material is being issued only to and/or is directed only at persons who are Qualified Investors within the meaning of the Israeli Advisory Law, and this material must not be relied on or acted upon by any other persons. **Saudi Arabia:** This document has been issued by UBS AG (and/or any of its subsidiaries, branches or affiliates), a public company limited by shares, incorporated in Switzerland with its registered offices at Aeschenvorstadt 1, CH-4051 Basel and Bahnhofstrasse 45, CH-8001 Zurich. This publication has been approved by UBS Saudi Arabia (a subsidiary of UBS AG), a Saudi closed joint stock company incorporated in the Kingdom of Saudi Arabia under commercial register number 1010257812 having its registered office at Tatweer Towers, P.O. Box 75724, Riyadh 11588, Kingdom of Saudi Arabia. UBS Saudi Arabia is authorized and regulated by the Capital Market Authority to conduct securities business under license number 08113-37. **United States:** Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG; or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a **'non-US affiliate'**) to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a document prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this document must be effected through UBS Securities LLC or UBS Financial Services Inc., and not through a non-US affiliate. **Canada:** Distributed by UBS Securities Canada Inc., a registered investment dealer in Canada and a Member-Canadian Investor Protection Fund, or by another affiliate of UBS AG that is registered to conduct business in Canada or is otherwise exempt from registration. **Brazil:** Except as otherwise specified herein, this material is prepared by UBS Brasil CCTVM S.A. to persons who are eligible investors residing in Brazil, which are considered to be: (i) financial institutions, (ii) insurance firms and investment capital companies, (iii) supplementary pension entities, (iv) entities that hold financial investments higher than R$300,000.00 and that confirm the status of qualified investors in written, (v) investment funds, (vi) securities portfolio managers and securities consultants duly authorized by Comissão de Valores Mobiliários (CVM), regarding their own investments, and (vii) social security systems created by the Federal Government, States, and Municipalities. **Hong Kong:** Distributed by UBS Securities Asia Limited and/or UBS AG, Hong Kong Branch. **Singapore:** Distributed by UBS Securities Pte. Ltd. [mica (p) 107/09/2013 and Co. Reg. No.: 198500648C] or UBS AG, Singapore Branch. Please contact UBS Securities Pte. Ltd., an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110); or UBS AG, Singapore Branch, an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110) and a wholesale bank licensed under the Singapore Banking Act (Cap. 19) regulated by the Monetary Authority of Singapore, in respect of any matters arising from, or in connection with, the analysis or document. The recipients of this document represent and warrant that they are accredited and institutional investors as defined in the Securities and Futures Act (Cap. 289). **Japan:** Distributed by UBS Securities Japan Co., Ltd. to institutional investors only. Where this document has been prepared by UBS Securities Japan Co., Ltd., UBS Securities Japan Co., Ltd. is the author, publisher and distributor of the document. Distributed by UBS AG, Tokyo Branch to Professional Investors (except as otherwise permitted) in relation to foreign exchange and other banking businesses when relevant. **Australia:** Clients of UBS AG: Distributed by UBS AG (Holder of Australian Financial Services License No. 231087). Clients of UBS Securities Australia Ltd: Distributed by UBS Securities Australia Ltd (Holder of Australian Financial Services License No. 231098). Clients of UBS Wealth Management Australia Ltd: Distributed by UBS Wealth Management Australia Ltd (Holder of Australian Financial Services Licence No. 231127). This Document contains general information and/or general advice only and does not constitute personal financial product advice. As such, the Information in this document has been prepared without taking into account any investor's objectives, financial situation or needs, and investors should, before acting on the Information, consider the appropriateness of the Information, having regard to their objectives, financial situation and needs. If the Information contained in this document relates to the acquisition, or potential acquisition of a particular financial product by a 'Retail' client as defined by section 761G of the Corporations Act 2001 where a Product Disclosure Statement would be required, the retail client should obtain and consider the Product Disclosure Statement relating to the product before making any decision about whether to acquire the product. **New Zealand:** Distributed by UBS New Zealand Ltd. The information and recommendations in this publication are provided for general information purposes only. To the extent that any such information or recommendations constitute financial advice, they do not take into account any person's particular financial situation or goals. We recommend that recipients seek advice specific to their circumstances from their financial advisor. **Dubai:** The research distributed by UBS AG Dubai Branch is intended for Professional Clients only and is not for further distribution within the United Arab Emirates. **Korea:** Distributed in Korea by UBS Securities Pte. Ltd., Seoul Branch. This document may have been edited or contributed to from time to time by affiliates of UBS Securities Pte. Ltd., Seoul Branch. **Malaysia:** This material is authorized to be distributed in Malaysia by UBS Securities Malaysia Sdn. Bhd (253825-x). **India:** Prepared by UBS Securities India Private Ltd. (Corporate Identity Number U67120MH1996PTC097299) 2/F, 2 North Avenue, Maker Maxity, Bandra Kurla Complex, Bandra (East), Mumbai (India) 400051. Phone: +912261556000 SEBI Registration Numbers: NSE (Capital Market Segment): INB230951431, NSE (F&O Segment) INF230951431, BSE (Capital Market Segment) INB010951437.

The disclosures contained in research documents produced by UBS Limited shall be governed by and construed in accordance with English law.

UBS