Covid-19

Covid-19 cases jump as Omicron spreads; a matter of time for most countries

Number of patients in UK hospitals vs. on ventilators

Sources: Macrobond
Geopolitical Risks (1/3)

**Russia-Ukraine tensions priced into credit markets**

![Graph showing Russia-EM IG and Ukraine-EM HY indices from Feb-21 to Nov-21.](image)

**Fig. 1: Four scenarios and our subjective probabilities**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Prob.</th>
<th>Implication</th>
<th>Risk signals</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Full-blown’ conflict between Russia and Ukraine</td>
<td>10%</td>
<td>Broad sanctions on Russia, energy supply risks to Europe</td>
<td>Russia abandons talks</td>
</tr>
<tr>
<td>‘Minor incursion’: Limited help to separatists</td>
<td>15%</td>
<td>Broad sanctions on Russia, higher energy prices</td>
<td>Action from autonomous regions</td>
</tr>
<tr>
<td>‘Slow burn’: No conflict, but tensions continue</td>
<td>50%</td>
<td>Limited sanctions on Russia, higher energy prices</td>
<td>Talks continue but troops remain stationed</td>
</tr>
<tr>
<td>‘Happy ending(ish)’: No conflict, some agreement</td>
<td>25%</td>
<td>No further sanctions</td>
<td>Upbeat wrapping up of US/Russia talks</td>
</tr>
</tbody>
</table>

*Source: BNP Paribas.*
Geopolitical Risks (2/3)
Geopolitical Risks (3/3)

- Eurozone HICP scenarios (% y/y)
  - Peak at around 6% in April
  - Sources: Eurostat, Macrobond, BNP Paribas

- Food and gas inflation (% y/y)
  - Food HICP (rhs)
  - Gas HICP 3m lag (lhs)
  - Sources: Eurostat, Macrobond, BNP Paribas

- EM inflation expectations are already on the rise
  - EM core CPI, rhs
  - 12-month ahead inflation expectations, lhs
  - 12mma, lhs
  - Source: National central banks, IMF, Macrobond, BNP Paribas

- Higher food prices correlated with EM inflation strength
  - EM Inflation Strength (z-score, lhs), lhs
  - Food price index (FAO), rhs
  - Sources: S&P Platts, Bloomberg, Macrobond, BNP Paribas
Inflation: A change in mind-set

**US wage growth (% y/y) vs. private quits rate (%)**

- Private quits rate, rhs
- Atlanta Fed median wage growth - job stayers (3mma)
- Atlanta Fed median wage growth - job switchers (3mma)

**Negotiated wages respond to realised inflation with a lag of around three quarters**

- Negotiated wages (% y/y), rhs
- EZ HICP (% y/y, 9m lag), lns

Sources: BLS, Atlanta Fed, Macrobond, BNP Paribas

Sources: Eurostat, ECB, European Commission, Macrobond, BNP Paribas
Central Banks: Policy Normalisation

CB Rates trajectory from early 2021 to expected peak

<table>
<thead>
<tr>
<th>Region</th>
<th>Position in Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>1%</td>
</tr>
<tr>
<td>Eurozone</td>
<td>-1%</td>
</tr>
<tr>
<td>UK</td>
<td>21%</td>
</tr>
<tr>
<td>Korea</td>
<td>43%</td>
</tr>
<tr>
<td>India</td>
<td>19%</td>
</tr>
<tr>
<td>China</td>
<td>-80%</td>
</tr>
<tr>
<td>South Africa</td>
<td>12%</td>
</tr>
<tr>
<td>CEE</td>
<td>76%</td>
</tr>
<tr>
<td>Russia</td>
<td>81%</td>
</tr>
<tr>
<td>Mexico</td>
<td>41%</td>
</tr>
<tr>
<td>Brazil</td>
<td>84%</td>
</tr>
</tbody>
</table>

Early 2021
Current
Expected Peak
**FX: USD trend**

Fed lift-off to re-establish USD yield advantage

![Graph showing US 2-year swap rate less weighted TWI swap rate, US TWI (Advanced Economies), and 260d correlation of weekly changes. Sources: Macrobond, Bloomberg]
FX: The USD during Fed tightening cycles

Historical DXY pattern during first rate hike

USD vs high beta FX during first rate hike

Sources: BNP Paribas, Bloomberg *Rebased over latest available data point.
FX performance in tightening regimes

Rolling logged monthly returns by tightening regime**

<table>
<thead>
<tr>
<th>Currency</th>
<th>Expectations</th>
<th>Delivery</th>
<th>Carry</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDUSD</td>
<td>1.52%</td>
<td>0.75%</td>
<td>0.90%</td>
</tr>
<tr>
<td>GBPUSD</td>
<td>0.50%</td>
<td>0.36%</td>
<td>0.11%</td>
</tr>
<tr>
<td>NZDUSD</td>
<td>0.54%</td>
<td>0.50%</td>
<td>0.10%</td>
</tr>
<tr>
<td>NOKUSD</td>
<td>0.40%</td>
<td>0.40%</td>
<td>0.01%</td>
</tr>
<tr>
<td>CADUSD</td>
<td>0.09%</td>
<td>0.66%</td>
<td>**</td>
</tr>
<tr>
<td>USDEUR</td>
<td>0.19%</td>
<td>-0.10%</td>
<td>-0.19%</td>
</tr>
<tr>
<td>USDJPY</td>
<td>0.10%</td>
<td>0.16%</td>
<td>-0.01%</td>
</tr>
<tr>
<td>USDCAD</td>
<td>0.28%</td>
<td>0.01%</td>
<td>-0.13%</td>
</tr>
</tbody>
</table>

Sources: BNP Paribas, Bloomberg  **Insufficient number of observations

High beta G10 FX performance throughout tightening

Average of rolling logged monthly returns (GBP, AUD, NZD, NOK and CAD vs. the USD) across regimes

USD vs low beta FX during Fed tightening

Average rolling logged monthly returns split by regime (USD vs. EUR, JPY, CHF)*


1) Expectations: This is the pricing in of rate hikes and in our analysis, we define this as the average rolling logged monthly returns in FX in the 6m leading up to the first hike of a cycle provided 2y swap rates are rising in favour of the respective currency.

2) Delivery: This is when a central bank delivers rate hikes and in our analysis, this is defined as the average of the rolling logged monthly returns in FX when both the base rate and 3m FX implied yields are rising month-on-month.

3) Carry: This regime aims to capture the end of the cycle when carry peaks. It is defined as the average rolling logged monthly returns in FX in the 3m before and 3m after the final hike, when carry peaks.

Sources: BNP Paribas, Bloomberg

*Positive % implies USD is strengthening
FX: USD positioning & EZ Flows

BNP Paribas FX Positioning Analysis

<table>
<thead>
<tr>
<th>Currency</th>
<th>SHORT</th>
<th>LONG</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>-43</td>
<td>36</td>
</tr>
<tr>
<td>GBP</td>
<td>-34</td>
<td>7</td>
</tr>
<tr>
<td>CHF</td>
<td>-3</td>
<td>2</td>
</tr>
<tr>
<td>CAD</td>
<td>-2</td>
<td></td>
</tr>
<tr>
<td>NOK</td>
<td>-13</td>
<td>-3</td>
</tr>
<tr>
<td>JPY</td>
<td>-3</td>
<td></td>
</tr>
<tr>
<td>EUR</td>
<td>-34</td>
<td></td>
</tr>
<tr>
<td>AUD</td>
<td>-34</td>
<td></td>
</tr>
<tr>
<td>NZD</td>
<td>-34</td>
<td></td>
</tr>
<tr>
<td>SEK</td>
<td>-43</td>
<td></td>
</tr>
</tbody>
</table>

Sources: BNP Paribas, Macrobond, Bloomberg, BNP Paribas

Eurozone NIIP

Source: BNP Paribas, Macrobond, ECB

Eurozone accumulated portfolio flows since Q4 2014

Source: BNP Paribas, Macrobond, ECB
Realised volatility to rise

G10 monetary policy divergence and average 3m implied Vol

Vols have scope to catch up to higher event risk premium

Sources: Bloomberg, BNP Paribas
FX: Realised Volatility

EURUSD 1m Realised Vol

November FOMC
FX: Implied Volatility
FX Liquidity
RMB: Onshore Development

OVERVIEW OF CHINA FX MARKET

Market size

China’s onshore FX market was the 8th in the world in terms of average daily turnover in 2019, and the 4th largest in Asia, after Singapore, Hong Kong SAR and Japan.

Trading volume in the interbank FX market stood at RMB 206 trillion in 2020, a 3% rise compared to the previous year.

Trading Volume (2020)

Types of tradable instruments

<table>
<thead>
<tr>
<th>FX spot</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 currency pairs.</td>
</tr>
<tr>
<td>USD/CNY accounts for over 90% of all trades</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FX Derivatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>FX Forwards</td>
</tr>
<tr>
<td>24 currency pairs</td>
</tr>
<tr>
<td>FX Swaps</td>
</tr>
<tr>
<td>24 currency pairs</td>
</tr>
<tr>
<td>Cross Currency Swaps (CCS)</td>
</tr>
<tr>
<td>6 currency pairs (USD/CNY, JPY/CNY, HKD/CNY, GBP/CNY, AUD/CNY)</td>
</tr>
<tr>
<td>FX Options</td>
</tr>
<tr>
<td>5 currency pairs (USD/CNY, JPY/CNY, HKD/CNY, GBP/CNY)</td>
</tr>
</tbody>
</table>

Membership

<table>
<thead>
<tr>
<th>Membership</th>
<th>Number of Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMBFX Market Makers</td>
<td>25</td>
</tr>
<tr>
<td>RMBFX Spot Market Members</td>
<td>721</td>
</tr>
<tr>
<td>RMBFX Forward Market Members</td>
<td>255</td>
</tr>
<tr>
<td>RMBFX Swap Market Members</td>
<td>251</td>
</tr>
<tr>
<td>RMBFX Cross Currency Swap Market Members</td>
<td>207</td>
</tr>
<tr>
<td>RMBFX Options Market Members</td>
<td>159</td>
</tr>
</tbody>
</table>
RMB: Global Volumes

Global foreign exchange market turnover
Net-net basis
Daily averages, in millions of US dollars

Average RMB daily transaction volume
USD bn

RMB offshore vs onshore trading and CNH-CNY spread
USD bn
Basis points

For more data see the BIS Statistics Explorer.
RMB Trend

Sources: BNP Paribas, Bloomberg

Sources: China Customs Statistics Information Center (CCS), BNP
RMB: Index vs Trade Balance

China: Export market share and the currency

Source: World Bank, China Foreign Exchange Trade System (National Interbank Funding Center), E

CFETS RMB index versus China trade balance

Sources: BNP Paribas, Bloomberg
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