

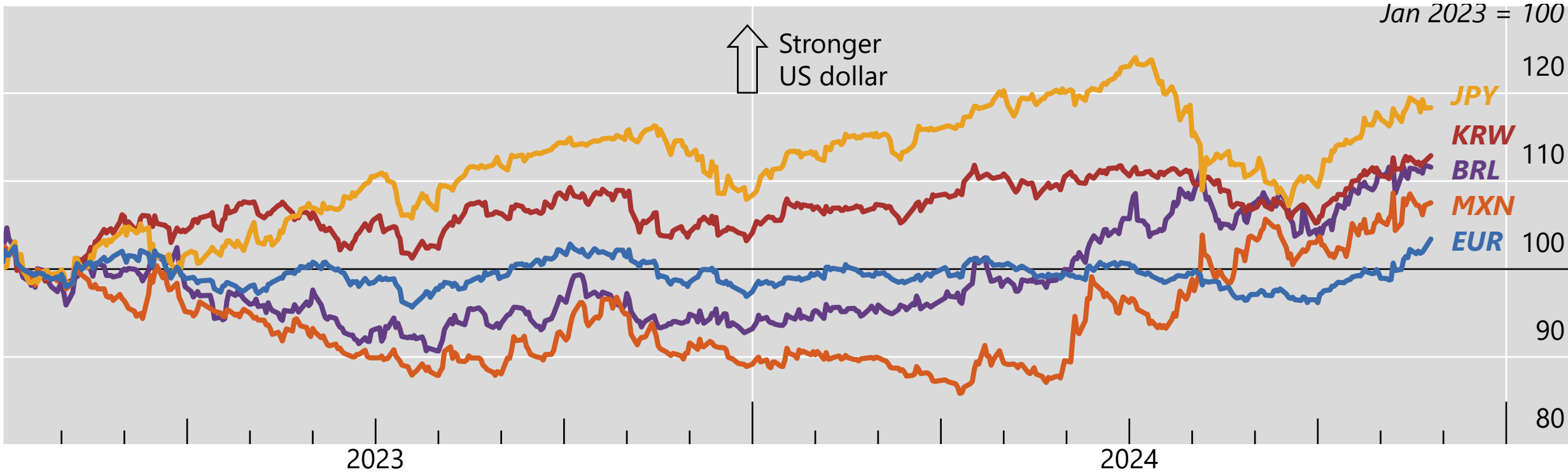


Linchpin role of FX swaps in connecting global bond and foreign exchange markets

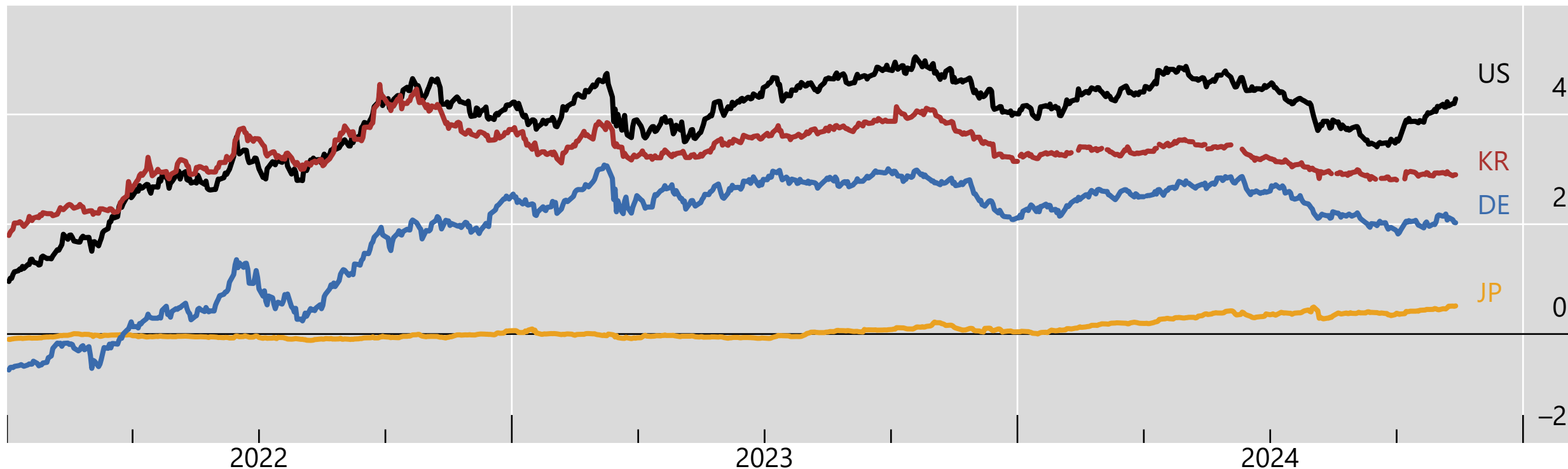
Hyun Song Shin, Economic Adviser and Head of Research

Ministry of Economy and Finance KTB conference, Seoul, Korea, 3 December 2024

Bilateral exchange rates against the US dollar diverged during the inflation surge, but have converged more recently

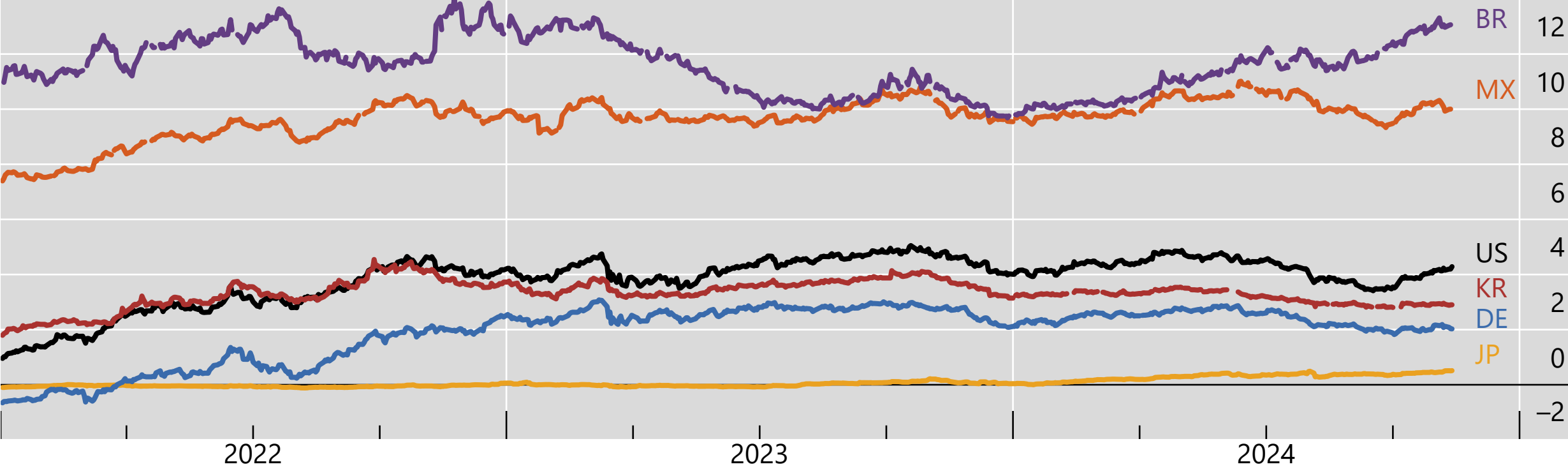


Three-year government bond yields have moved much less than policy rates;
US treasury yield has rebounded



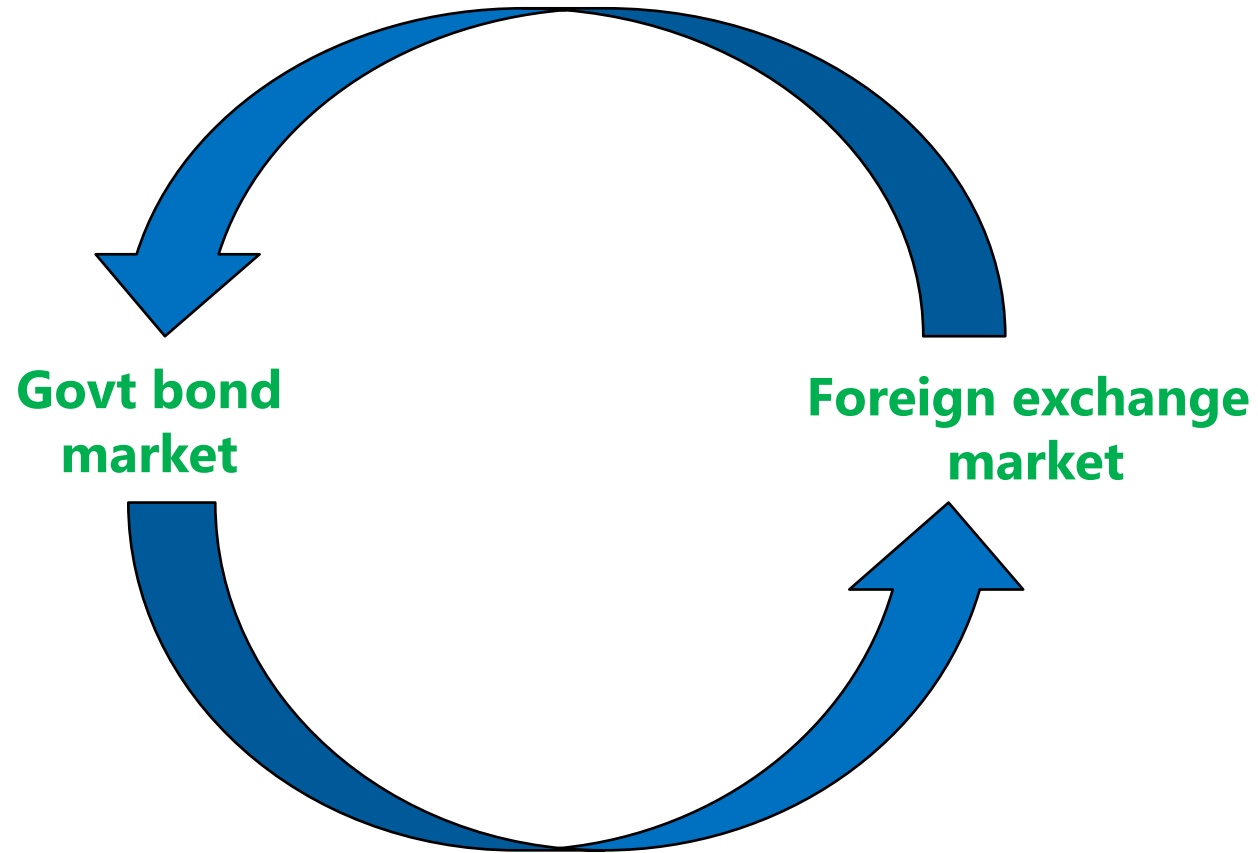
Source: Bloomberg.

Three-year yields have even wider range when including emerging market economies

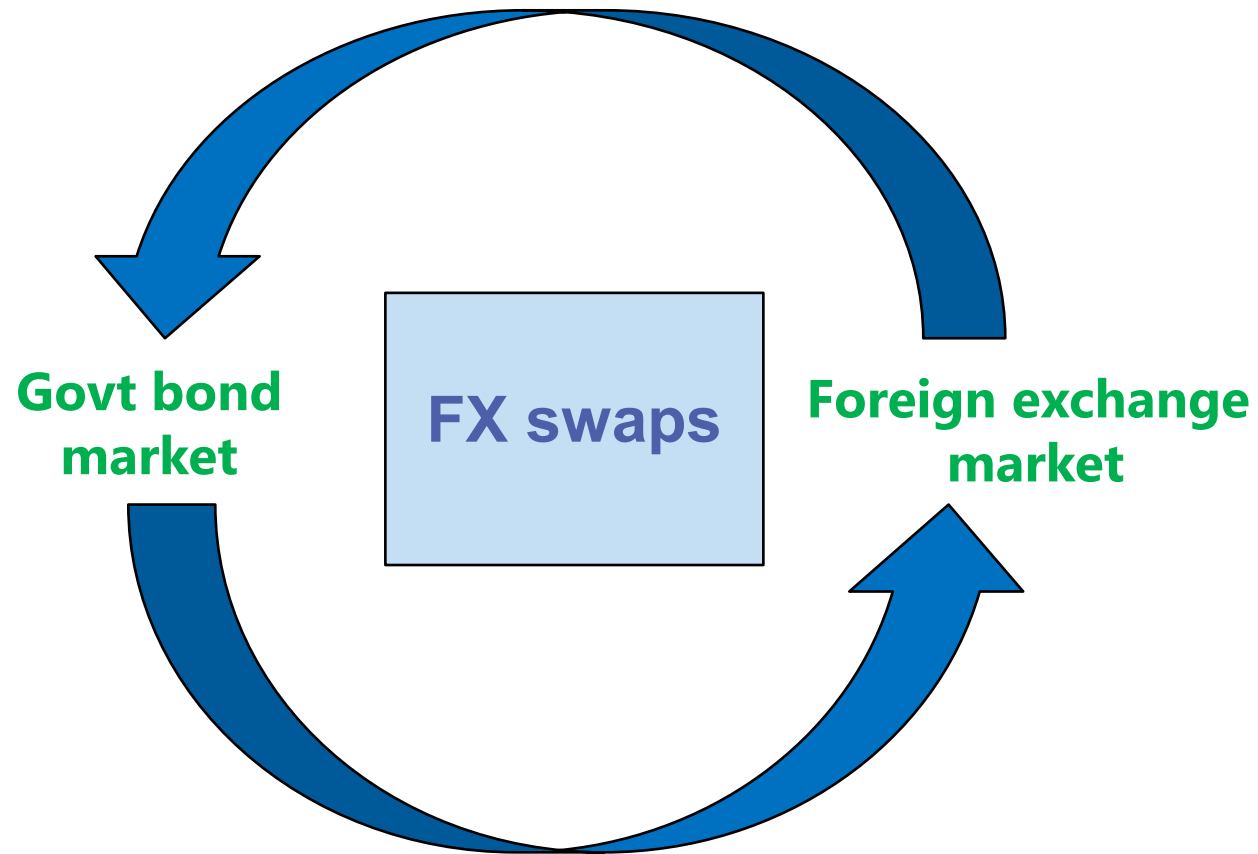


Source: Bloomberg.

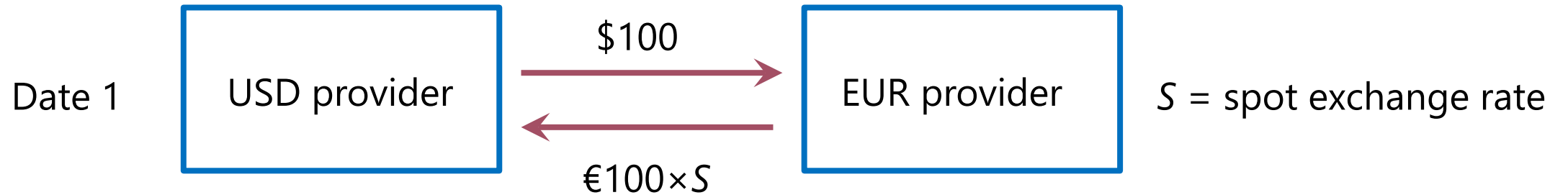
Government bond and foreign exchange markets are closely intertwined



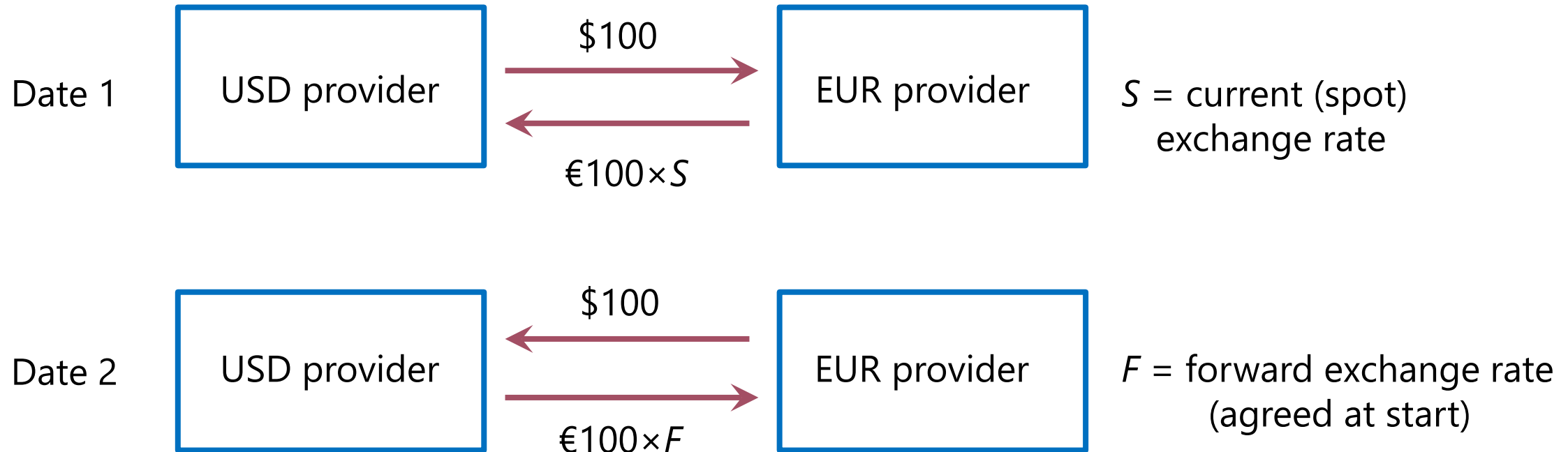
FX swaps market is the linchpin that connects the government bond and foreign exchange markets



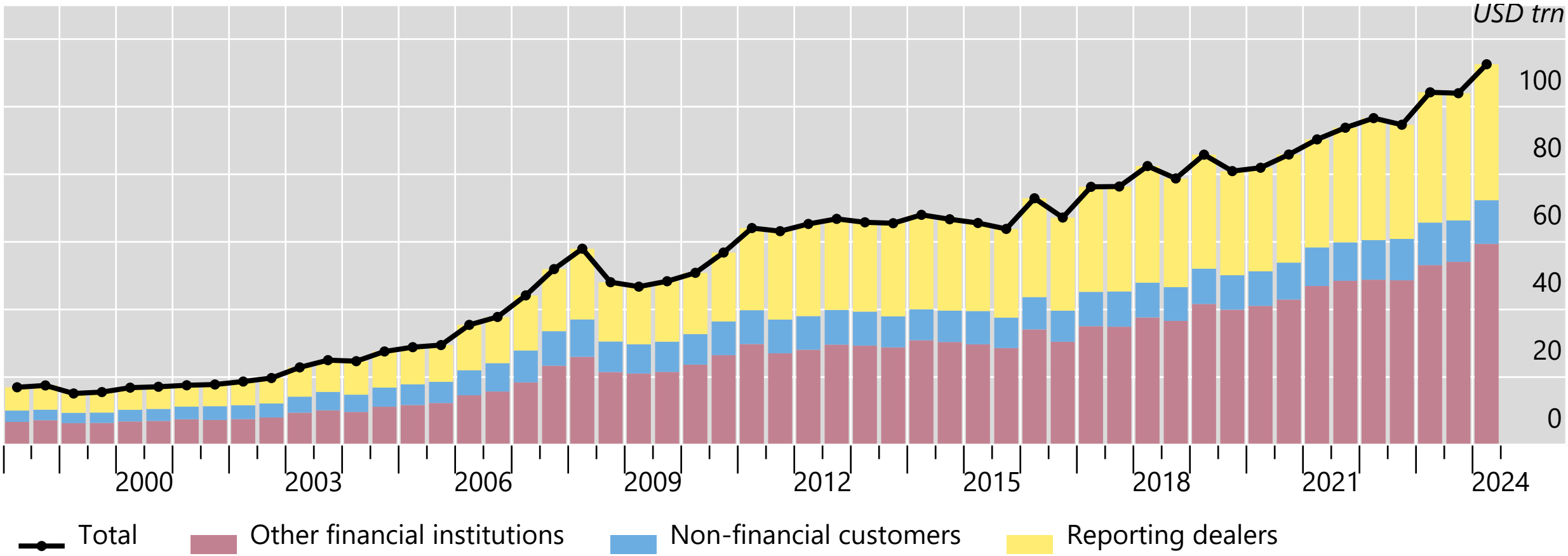
At the contacting date of the FX swap, one party provides one currency in return for another at the current spot exchange rate ...



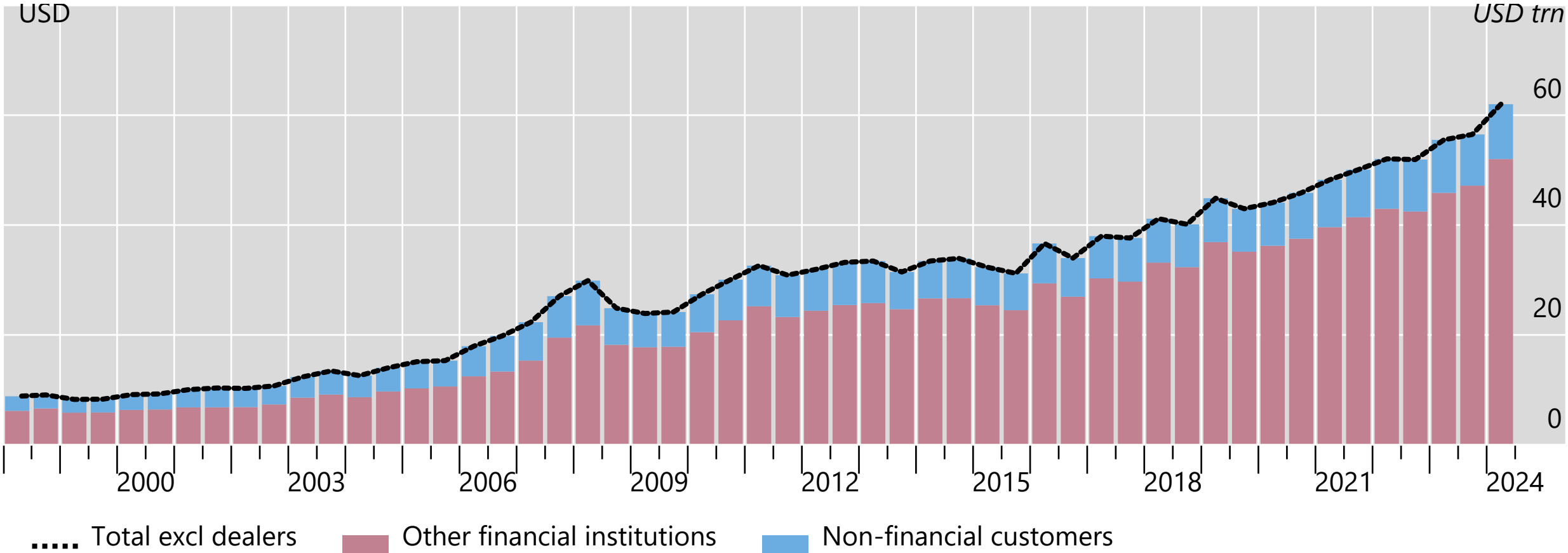
... together with the promise to repay the full notional amounts at an agreed date in the future and at an agreed exchange rate (the *forward rate*)



Outstanding swaps in all currencies stood at 113 trillion dollars in June 2024



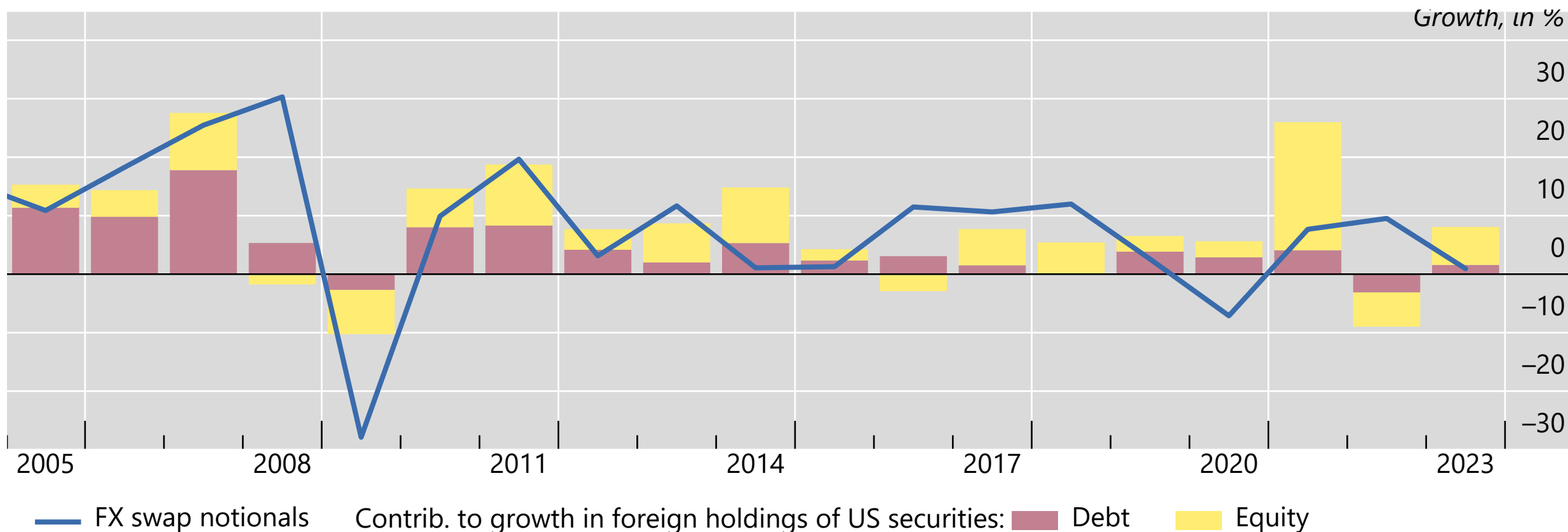
US dollar swaps account for most of the outstanding customer total



FX swaps shed light on portfolio capital flows into the United States

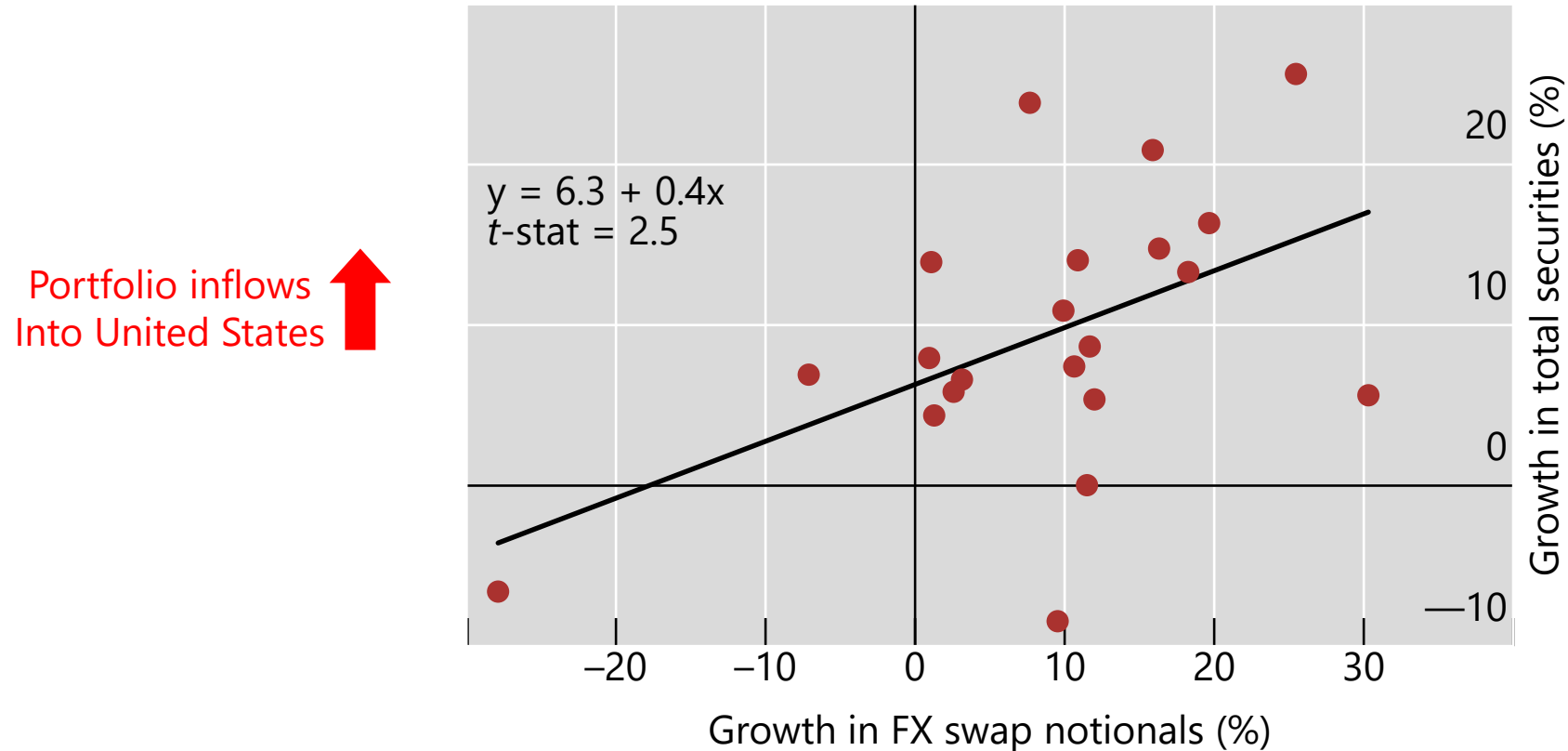


There is a positive relationship between the annual growth rate of FX swaps and portfolio flows into the United States



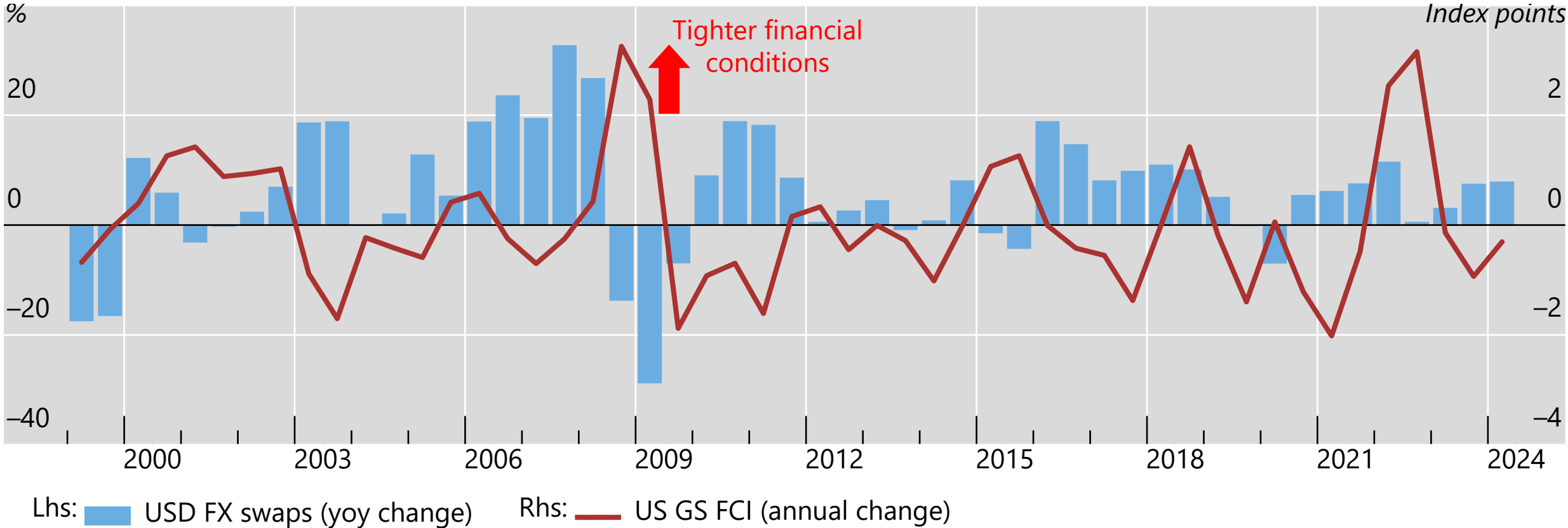
Source: US Treasury TIC dataset, BIS FX swaps data

There is a positive relationship between the annual growth rate of FX swaps and portfolio flows into the United States



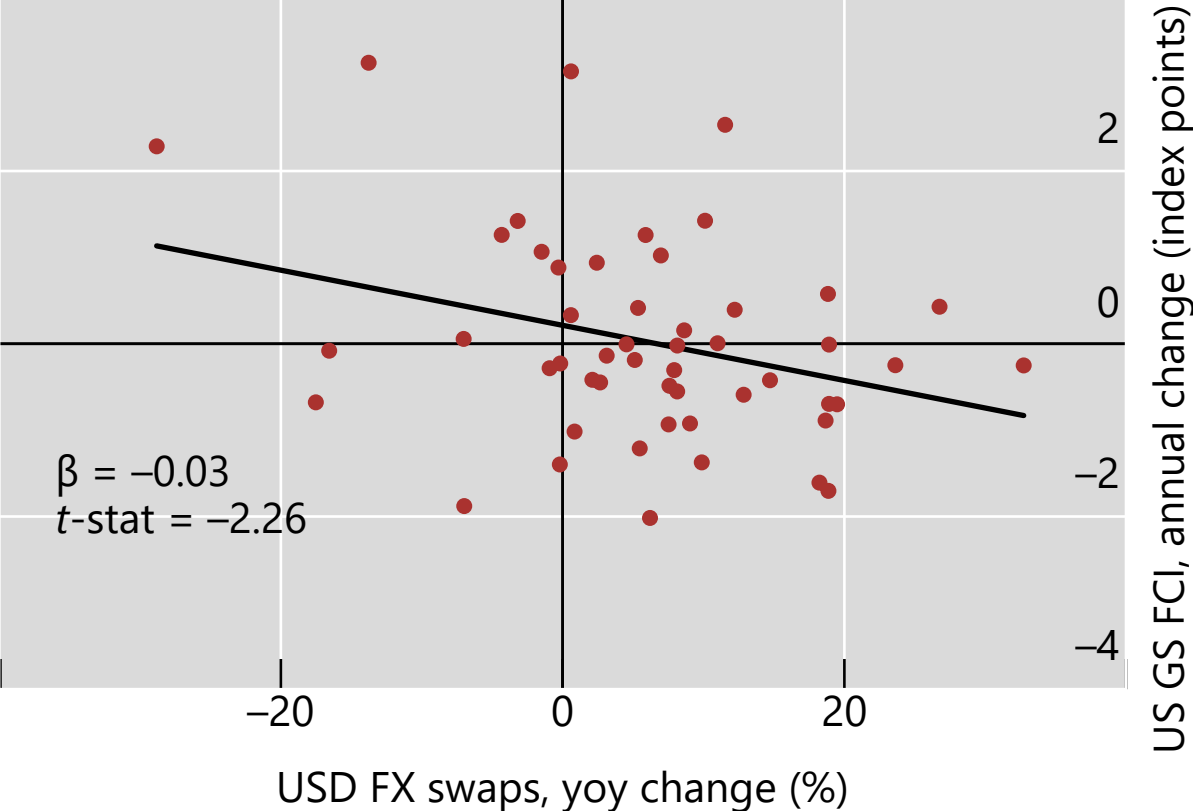
Source: US Treasury TIC dataset, BIS FX swaps data

Through the impact on portfolio flows, the annual growth of FX swaps tends to loosen US financial conditions, as measured by the GS financial conditions index



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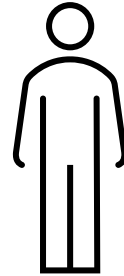
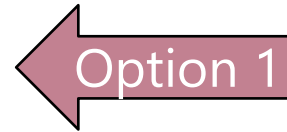
Tighter financial conditions 



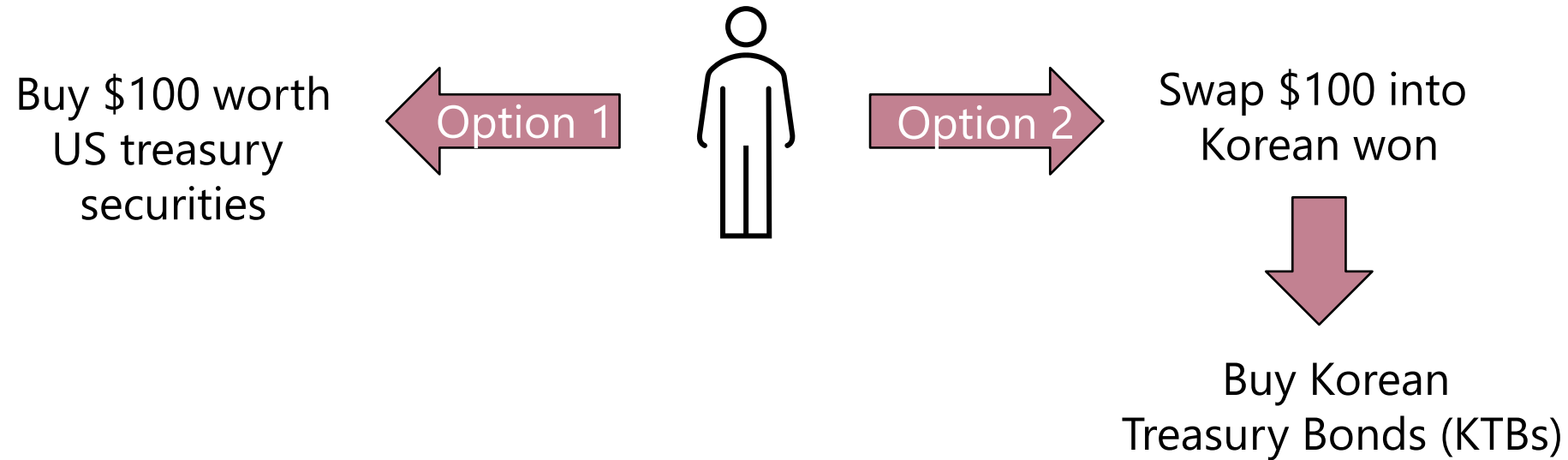
Risk-taking channel of exchange rates
in global government bond markets

Two options for a US dollar-based investor to invest in government bonds

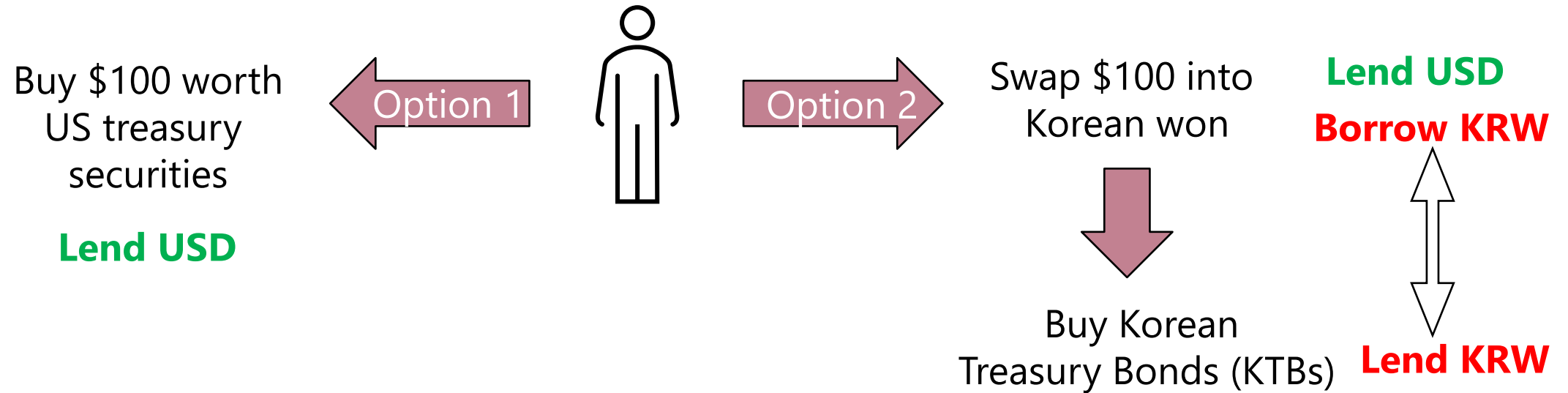
Buy \$100 worth
US treasury
securities



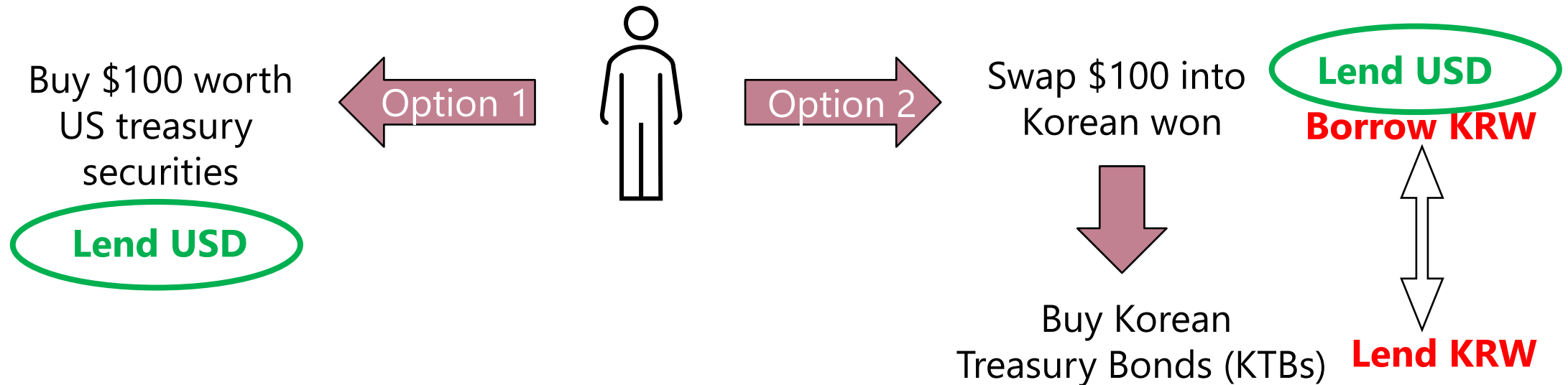
Two options for a US dollar-based investor to invest in government bonds



Textbook "Covered Interest Parity" (CIP) implies equal yield to both investments

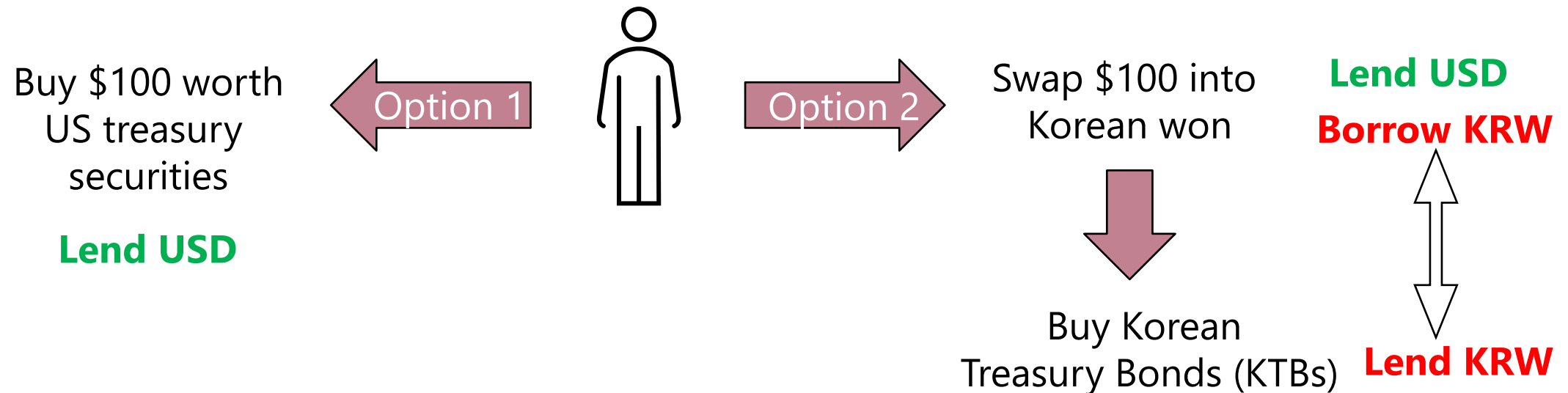


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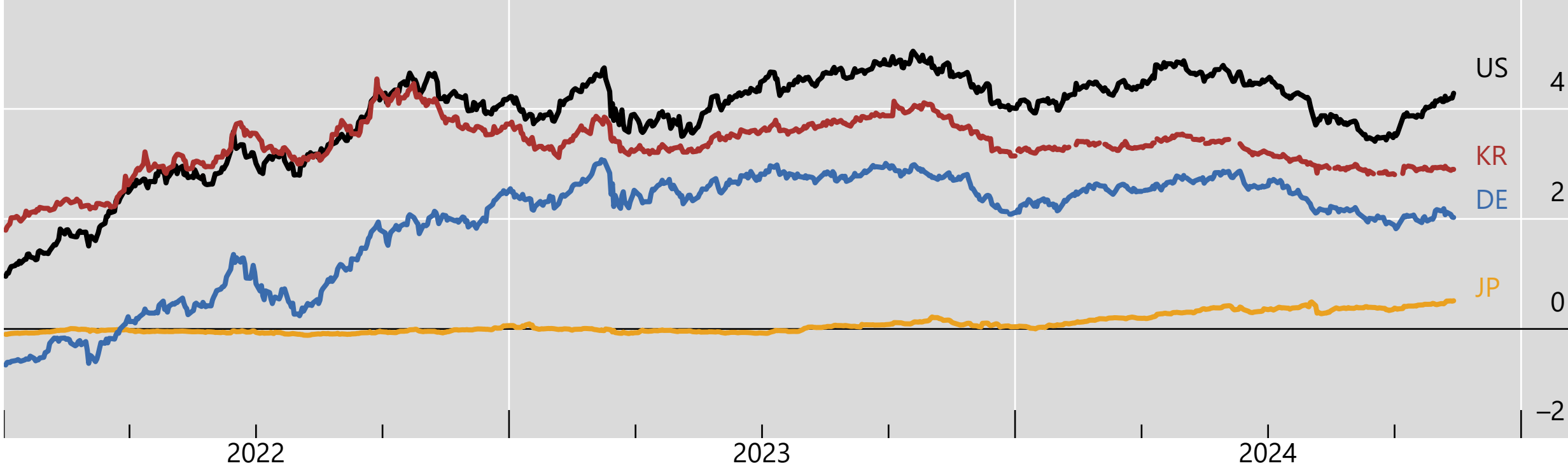
- Textbook CIP implies KTB-UST yield differential is exactly offset by hedging cost of FX swap
- In practice, Option 1 and Option 2 result in different yields
- Du and Schreger (Journal of Finance, 2016); Du, Im and Schreger (Journal of International Economics 2018)

In practice, CIP fails to hold; yields diverge due to fluctuations in global financial conditions and fiscal strength of borrowing governments



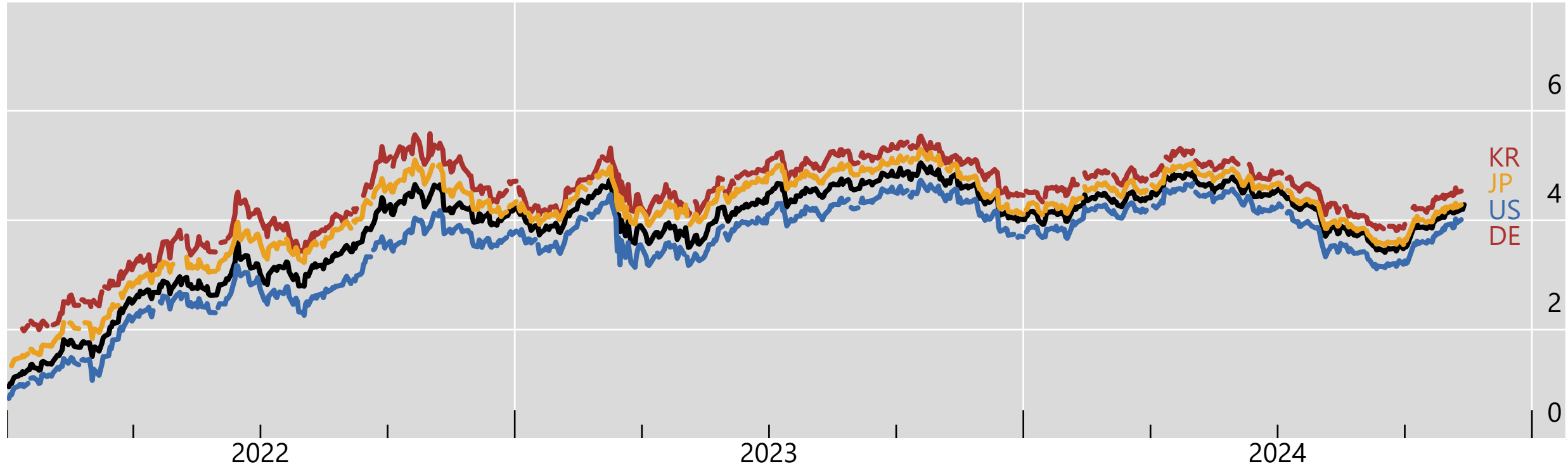
- **UST yield** has risen above secured lending rates (BIS Quarterly Review, Dec 2024)
- **Stronger dollar** tightens dollar funding conditions and raise dollar rate in FX swaps
- Both **global financial conditions** and **local fiscal strength** matter

Three-year government bond yields in local currency show an apparent wide range

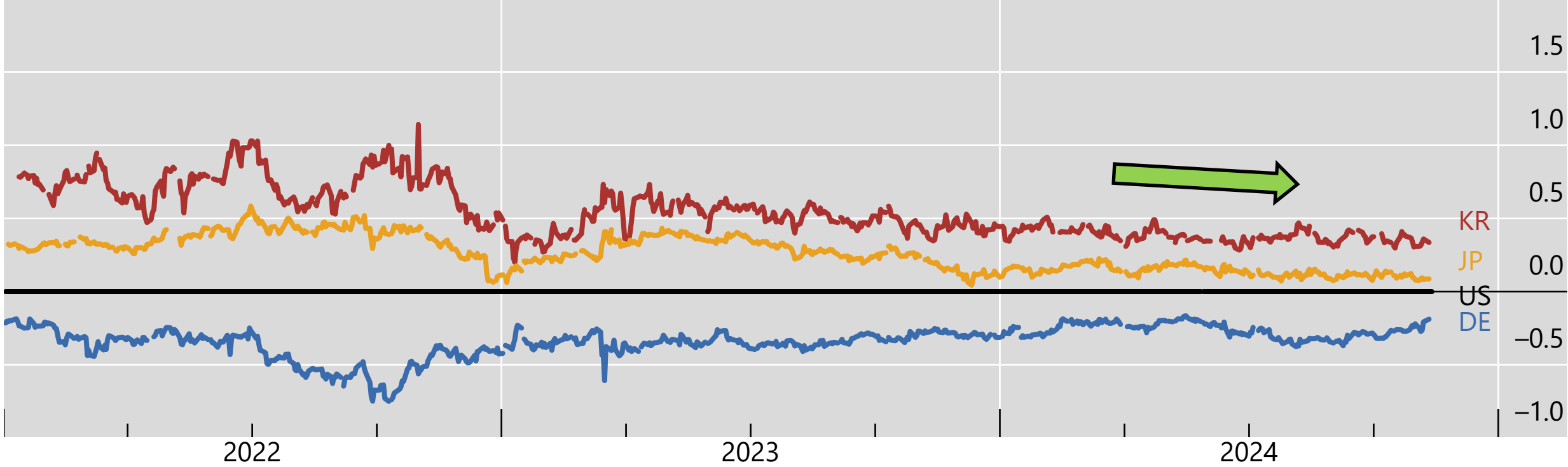


Source: Bloomberg.

But 3-yr yields in USD terms using FX swaps are much more closely bunched together as suggested by CIP; yet they are not exactly equalised

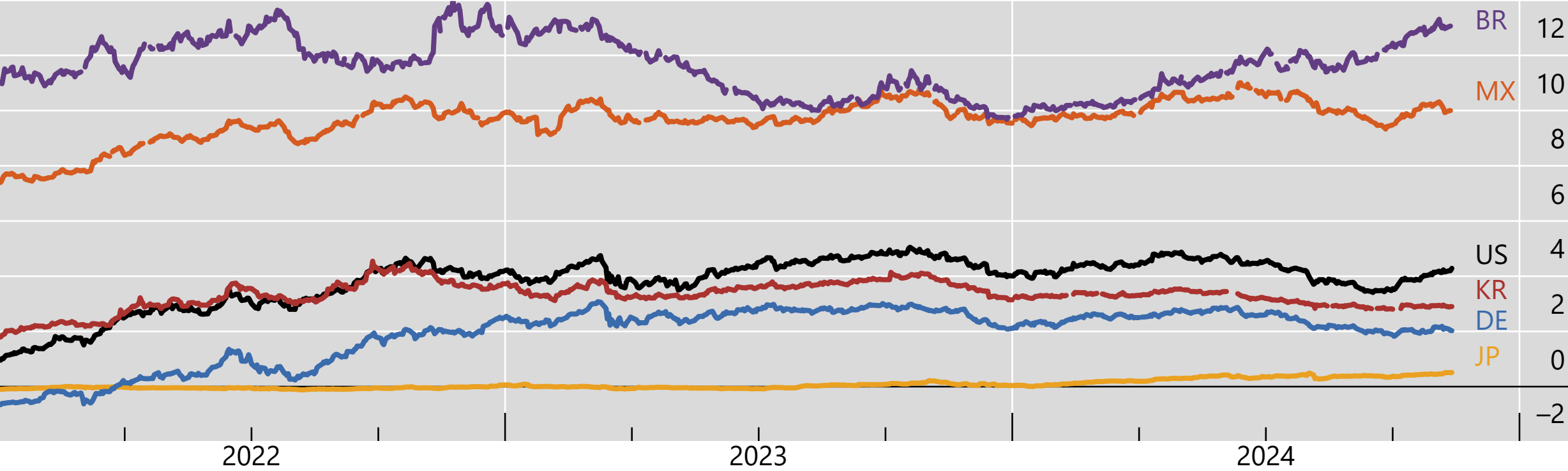


Deviations from CIP provide key indicator of risk premium; KTBs and JGBs provide additional yield relative to US treasuries but they have remained contained; German bunds yield less than US treasuries, but are trending up



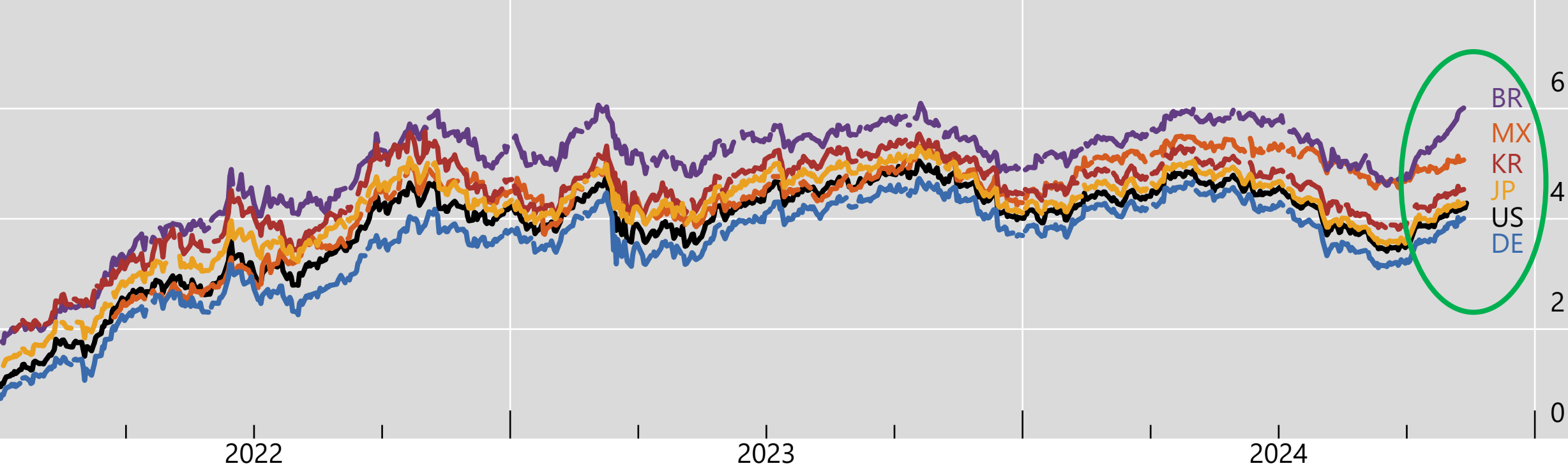
Sources: Du and Schreger (2016); Du et al (2018); Bloomberg; BIS calculations.

Three-year gov't bond yields including Brazil and Mexico show wide range of local currency yields



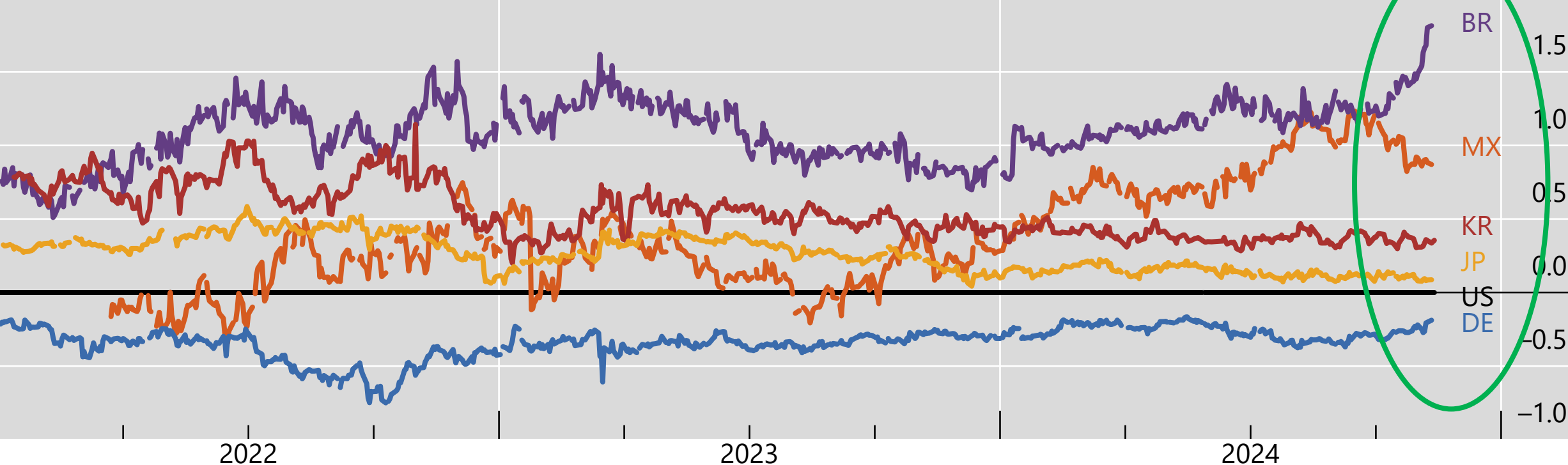
Source: Bloomberg.

3-year yield in dollar terms using FX swaps show greater divergence from CIP, especially in recent weeks



Sources: Du and Schreger (2016); Du et al (2018); Bloomberg; BIS calculations.

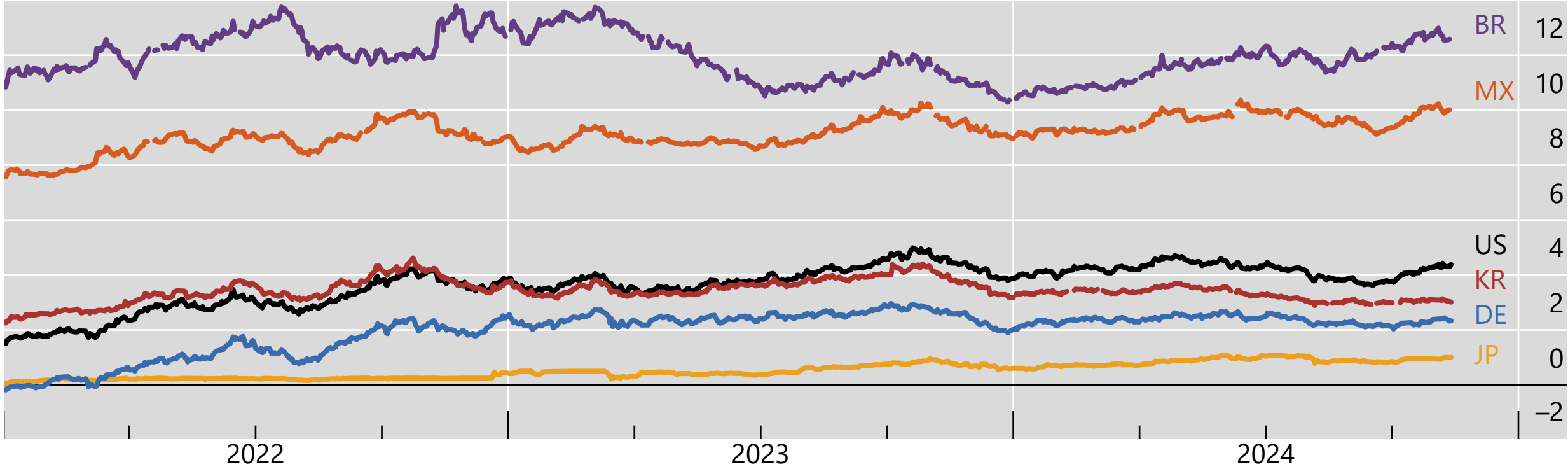
Recent increased deviations from CIP reflect greater role for risk factors, both global factors and local factors



Sources: Du and Schreger (2016); Du et al (2018); Bloomberg; BIS calculations.

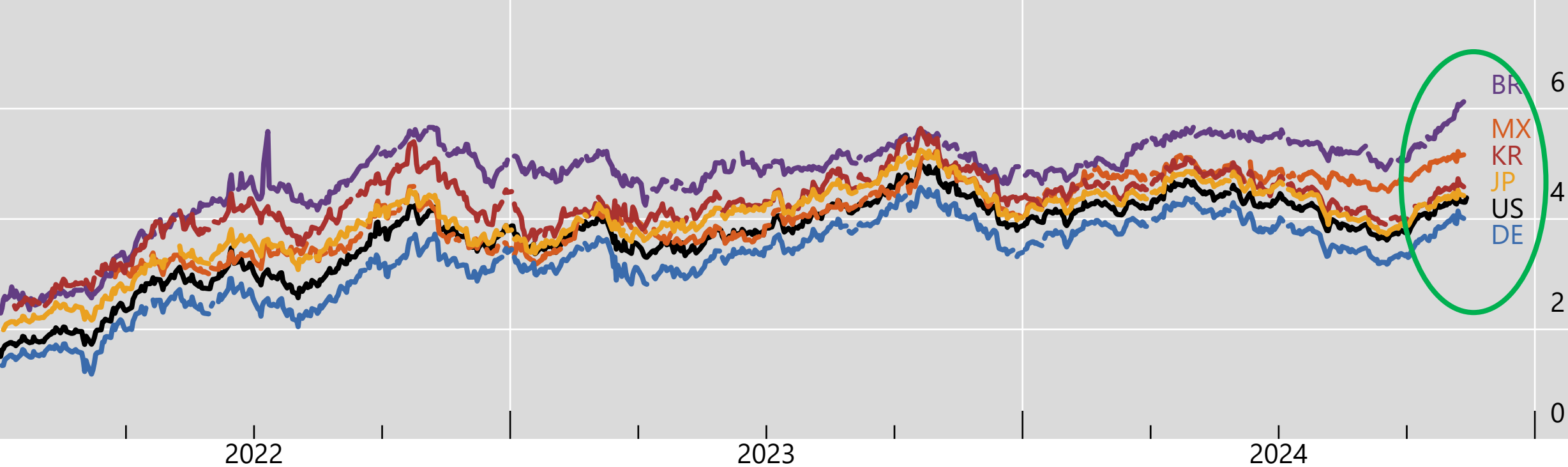
Ten-year maturity

Ten-year government bond yields in local currency show wide range



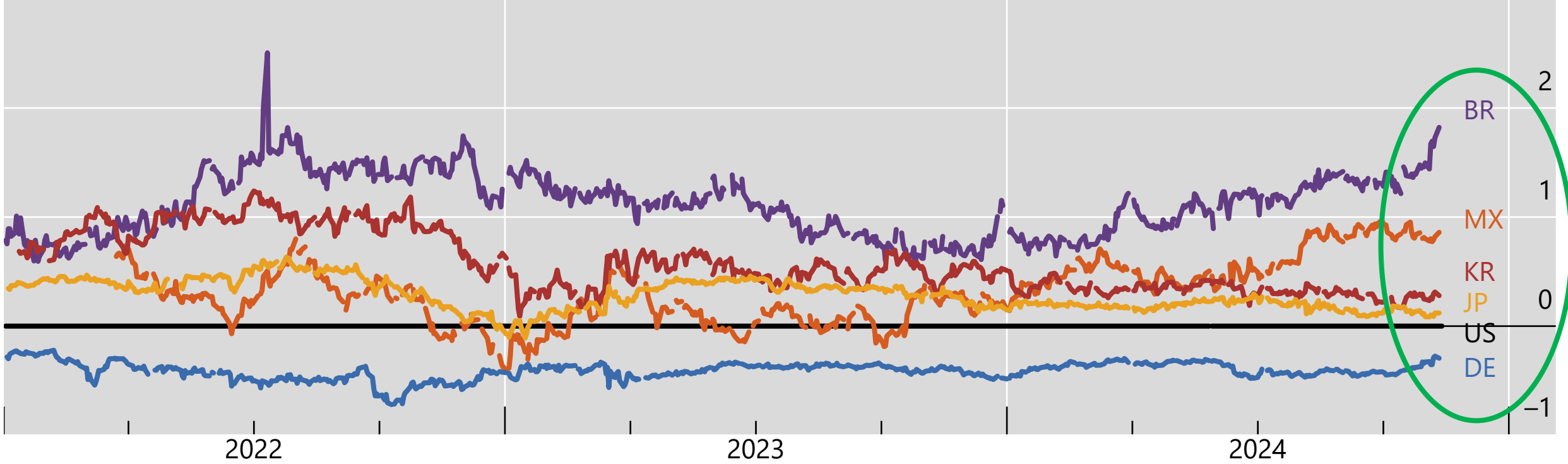
Source: Bloomberg.

Ten year yields in dollar terms using FX swaps are bunched closer together but do not coincide exactly, in violation of CIP



Sources: Du and Schreger (2016); Du et al (2018); Bloomberg; BIS calculations.

Deviations from CIP have increased recently for swap-embedded 10-yr rates in dollar terms, reflecting greater risk premium, especially for emerging market yields



Sources: Du and Schreger (2016); Du et al (2018); Bloomberg; BIS calculations.

FX swaps are the linchpin that connects global bond and foreign exchange markets

- Growth of FX swaps is an indicator of **global portfolio flows** and **financial conditions**
 - Rapid growth of FX swaps are associated with **easier financial conditions** and **stronger global real economic activity**, especially manufacturing and industrial production
- **Risk premium** in government bond markets are due both to **local** and **global** factors:
 - Concerns for **fiscal sustainability** have raised government bond yields above secured lending rates (UST yields > secured lending rates); BIS Quarterly Review, Dec 2024
 - **Stronger dollar** increases dollar funding costs and risk premium

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 - **Stronger dollar** increases dollar funding costs and risk premium
 - **Both factors are important themes in global capital markets in 2025**