Monetary tightening:
can the € soften the global liquidity contraction?

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The where-are-we-now-on-monetary-tightening debate

Analysing monetary policy in terms of current inflation + demand strength + the policy rate is mistaken.

Yes, Inflation remains stubbornly high ... but ignores monetary transmission lags.

Credit (bank loans & bonds) is the vehicle of transmission … and so forward-looking.

Heavier reliance bond finance means (a) less under central bank control (b) monetary transmission takes longer.

Global liquidity

Credit in foreign currency ($, € etc) to private non-resident nonbanks
(= bank loans + debt security issuance).

OUTLINE

$ dominates international finance.

Constrained monetary independence of a single central bank.

- "World" long-term interest rate and global dimension to financial regulation rules.
- "Global liquidity": driven by foreign shocks and more volatile than domestic credit.

Great Fed tightening from 2021 -- $ global liquidity shrinks

ECB tightening – later, and € global liquidity grew in 2022 –
a valuable currency diversification buffer for global finance which needs nurturing?

International bonds indexed to a basket of currencies.

$ DOMINATES GLOBAL FINANCE

See Kamin (2023). This paper focuses on bond markets

History of yields on 10Y Treasuries: 2005 to 2023

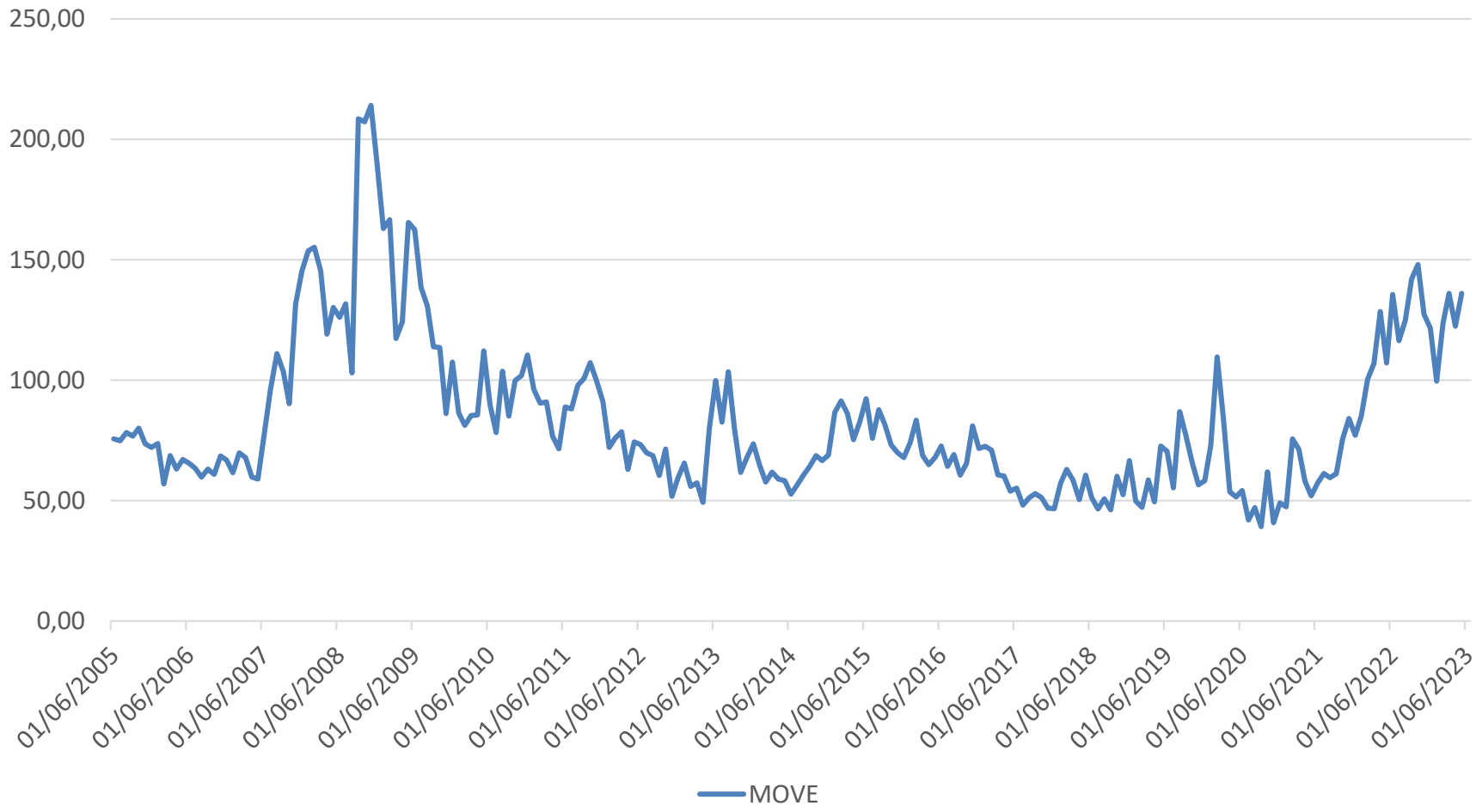
- Long post-GFC decline in nominal yields
- After 2011, the dollar term premium turns negative

QE from about 2011 reduces bond market volatility

See MOVE index on next slide.

Abrupt Fed tightening – more than ½ of which viewed as the new permanent -- reverses both trends

MOVE index



Note: Monthly closing prices in USD.
Source: Datastream.

CONSTRAINED INDEPENDENCE OF A SINGLE CENTRAL BANK

One central bank:

- own policy rate
- regulatory influence over domestic bank credit
- Lender of last resort (LOLR) in its own currency

These powers allow countercyclical monetary and regulatory policies

But the central bank not the master of:

- its long-term interest rate
- foreign currency credit raised abroad by domestic firms
- key parameters of financial regulation
- LOLR in foreign currency

TAXONOMY OF WORLD INTEREST RATE

Long-term rate = ∑E(r) + term premium

Term premium: the risk premium for holding bonds instead of rolling over short-term paper

Positive if worried that higher rates will lead to bond portfolio losses

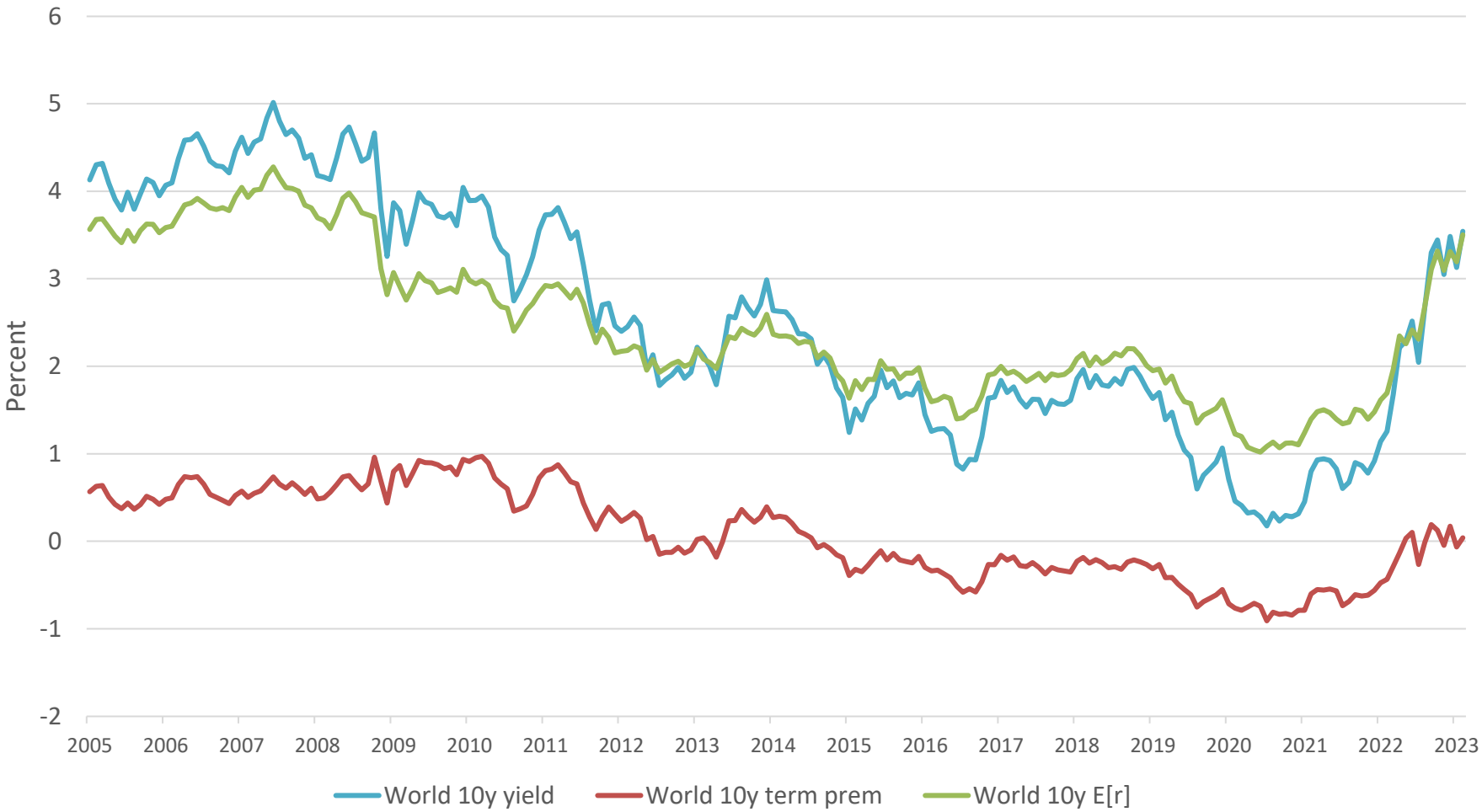
Negative if worried that lower rates will mean bond portfolio gains

Macrofinancial model developed by Peter Hördahl of the BIS

Common movements, Δ$ values usually dominate but sometimes Δ€ values key.

The expected average of r over 10 years [E(r)] shows how much of recent increases in r, the short-term interest rate, is permanent. In 2022 over 2020/21, a permanent rise of 2 to 2½%

World long-term interest rate



Source: Hördahl et al. (2016), updated

Domestic credit versus global liquidity

Icard (2023) outlines the formative role of the Palais Royal Initiative in 2011 on measuring and analysing global liquidity

BIS definition of global liquidity, first presented to the G20 in April 2013:

Credit to non-resident nonbanks

= Bank loans + debt security issuance

Global Liquidity

Year-on-year percentage changes in $ and € credit to non-bank non-residents.

Source: BIS Statistics Explorer

The decomposition of $ global liquidity

Rise in global liquidity from about $3 trillion in 2005 to over $12 trillion in 2021

Share of debt securities:

- Cyclically very sensitive (e.g., sharp drop in 2008 to below 40%)

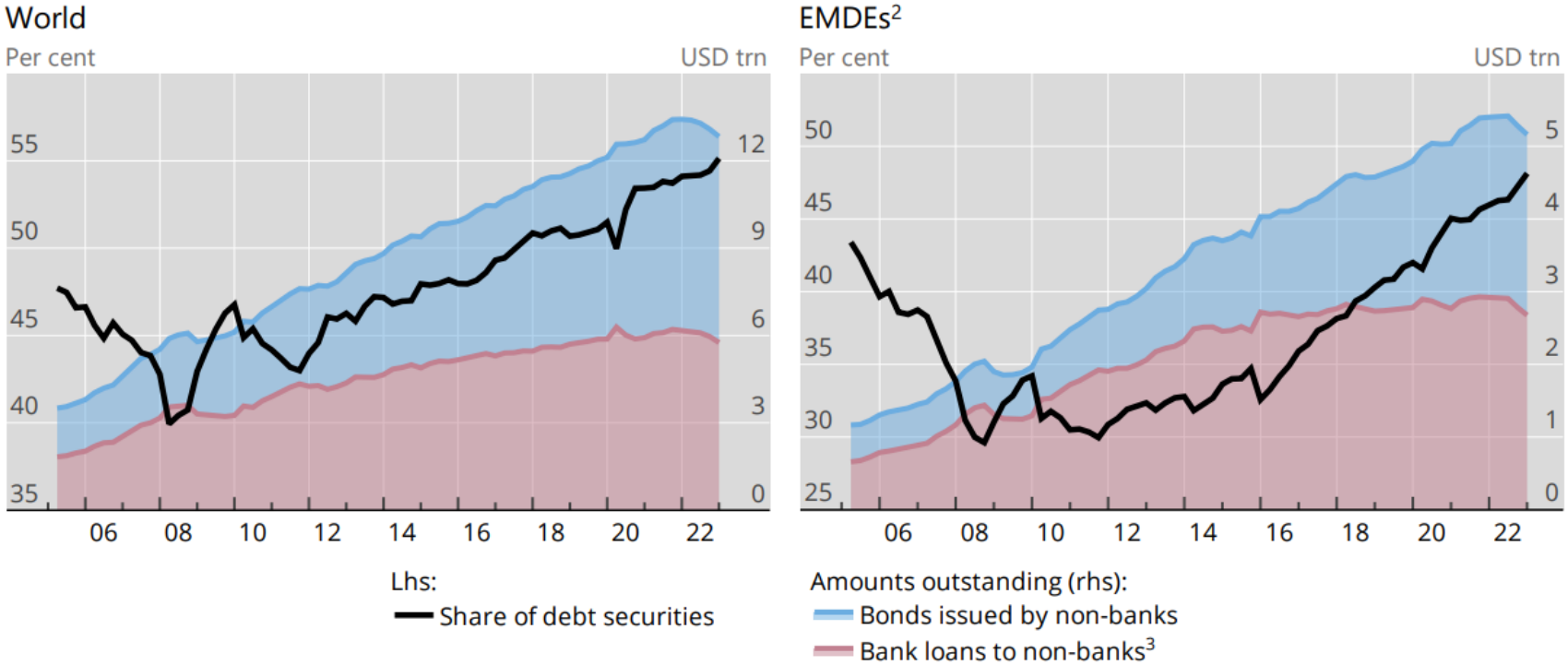
Now greater than bank loans

Implications:

- **key role of capital markets** … the creation of the Union of Capital Markets (theme of this conference) is of first order importance.
- **monetary transmission longer**

Decomposition of $ Global Liquidity

US dollar-denominated credit to non-banks outside the United States[1] Graph C.4



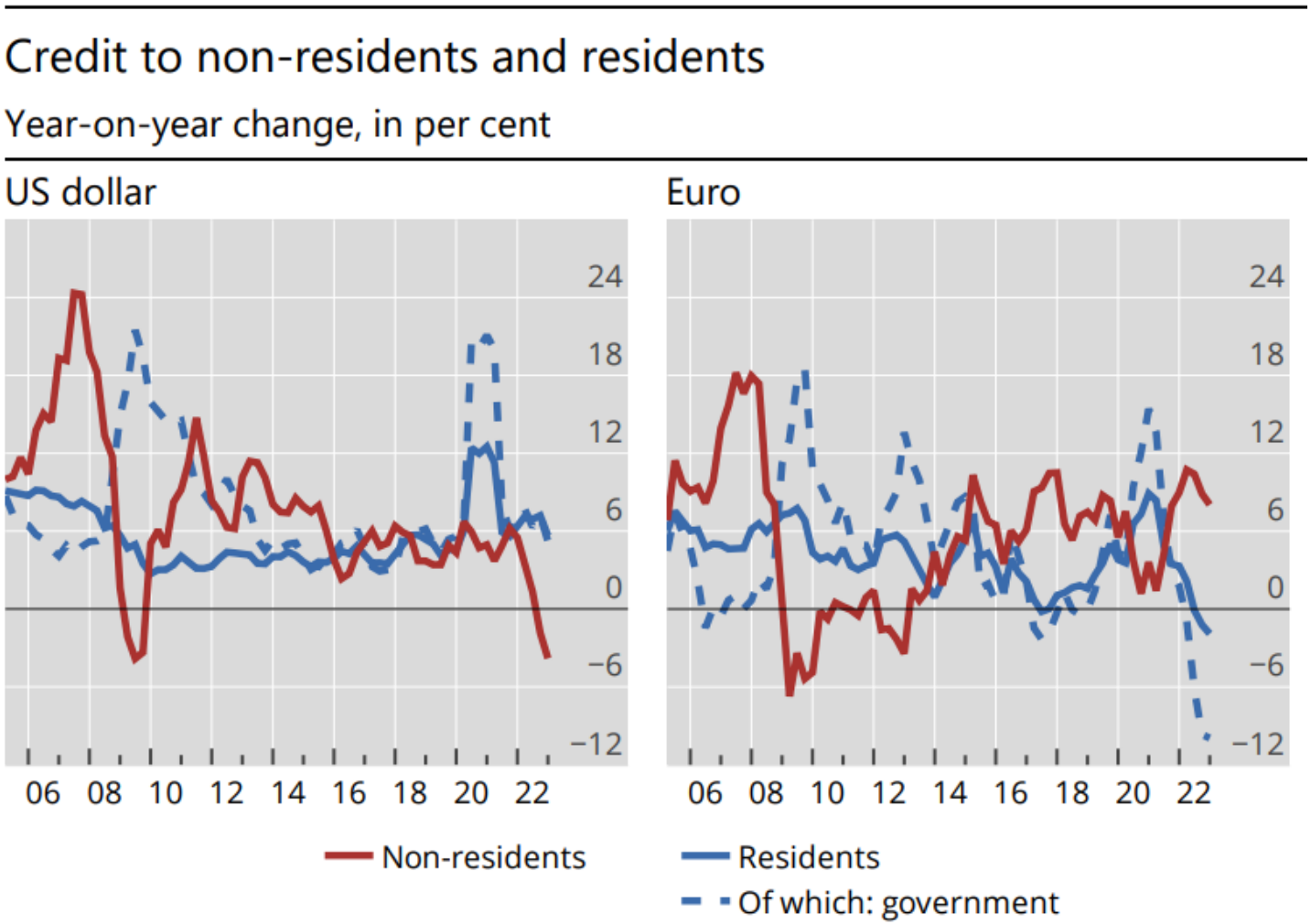
Further information on the BIS global liquidity indicators is available at www.bis.org/statistics/about_gli_stats.htm.

[1] Non-banks comprise non-bank financial entities, non-financial corporations, governments, households and international organisations. [2] From December 2022, this grouping has been aligned with the country classification in the BIS Annual Economic report, as detailed here. [3] Loans by LBS-reporting banks to non-bank borrowers, including non-bank financial entities, comprise cross-border plus local loans.

Sources: Datastream; Dealogic; Euroclear; Thomson Reuters; Xtrakter Ltd; national data; BIS locational banking statistics (LBS); BIS calculations.

Source: Statistical release of BIS international banking statistics at end-December 2022

Domestic Credit versus Global Liquidity



Credit to non-resident non-bank sector and resident non-financial sector.

Source: Statistical release of BIS international banking statistics at end-December 2022

Domestic credit versus global liquidity

Global liquidity is procyclical: liquidity shrinks when global financial conditions tighten (Kamin).

A central bank cannot control foreign currency credit raised abroad by domestic firms.

Global financial conditions a leading indicator for domestic credit.
Large firms "return home" for finance, draw down wholesale bank deposits and may activate contingent credit lines. This can squeeze out other borrowers.

The world term premium is the price dual of global liquidity which is a quantity measure (RTI (2019)) … examine both.

GLOBAL LIQUIDITY: $ versus € denomination

Credit to non-resident nonbanks = Bank loans + debt securities

... denominated in $ to borrowers outside the US

... denominated in € to borrowers outside the euro area.

Graph on next slide shows % changes on year-earlier end of quarter.

2009 Q4: +5.4% in $ but -4.9% in €

Until late-2013: $ lending surges € lending stagnant

From 2015: stronger € lending

2022 Q3: $ lending declines but that in € still strong.

$ and € credit expansion to borrowers outside respective currency areas*

*Bank loans plus debt securities, annual percentage changes.

Source: BIS Global Liquidity Indicators

What explains $ versus € denomination?

Apparently a structural break around 2014:

2009 Q4 until late-2013: $ lending surges € lending stagnant

From 2015 to date (COVID period excepted)**:** € lending growth stronger than $ lending growth

Two possible explanations:

1. *Monetary policy divergence* ... Companies issue bonds in lower-yielding currency
2. *Relative financial system stress:*

- *Comparative health of banks* ... Strong banks can lend abroad. Which are weaker: European or US banks?
- *Financial market stress* ... (a) depends on market segment (b) US diverges from Europe

Measuring monetary policy divergence

Differential $ and € global liquidity and Fed/ECB monetary policy divergence

With inflation low, policy rates near zero and QE a key instrument of monetary policy, a **simple indicator of monetary policy divergence is the differential in long-term interest rates**.

October 2009, 10-year yields in both currencies were around 3.8%.

From then until July 2012 (Draghi "whatever it takes") Fed policies were more expansionary.

Thereafter ECB progressively becomes more expansionary.

- Once ECB reverses a decline in its balance sheet, € long-term rates decline: from mid-2014 € yields reach 1% or less.
- Bernanke's first signal of future tapering ("take a step down in purchasing") in May 2013 but QT, delayed by bond market decline. Yields rise to the 2½ to 3% range.

US Treasuries and the French bond

10-year yields in $ and € bond markets

Source: Hördahl et al. (2016), updated

Relative financial system stress

Future research:

(a) Comparative health of banks

European banks weaker than US banks in the first period (up to end-2013) but this changes in the second period.

(b) Financial market conditions (and stresses).

For the US, the MOVE index is the best to capture market stress under monetary tightening.

GLOBAL REGULATION NEGLECTS INTEREST RATE RISK

Regulators induce financial firms to reduce credit risks and hold more "safe" government bonds, but ***turn a blind eye to what will happen when interest rates rise***.

Under Basel III banks:

- have no capital charge for interest rate risk on held-to-maturity government bonds (i.e. not marked to market)
- can count even bonds not marked to market as a liquid asset

Borrowers raise more funds in bond markets. Non-bank financial investors (hedge funds, investment funds, pension funds etc) create a **"shadow" banking system –** and G7 countries do not agree on how to regulate.

In 2018, US regulators relax rules for all but largest US banks ... Ignoring the advice of the Systemic Risk Council, the IMF and many others.

Hence, by 2021 and before interest rates rise, bond market exposures of banks and other financial intermediaries are very large, highly leveraged and opaque (Turner (2021, 2022)).

Interest rate risk is systemic because the interest rate environment created by central banks affects all, because regulations are global, and because banks have similar risk blindspots

Two bodies float to the surface …

Clear and public warnings by IMF, BIS etc well before the crisis were ignored.

The first body to float to the surface: *UK pension funds.* The Bindseil/Kamin report (BIS, 2018): a sudden rise in long-term interest rates could cause liquidity problems fro pension funds "driven by additional collateral demands linked to losses on derivative positions."

The second: *Silicon Valley Bank.*

Contrary to Fed and US Treasury insistence that medium-sized banks lacked systemic importance, the IMF's FSAP warned in 2020 that "the overall stringency of prudential regulations has been reduced while financial stability risks are rising ... fewer banks subject to full Basel standards. There are few tools to deal with the ongoing migration of risk to nonbanks."

THE GREAT FED MONETARY TIGHTENING

Inflation surge and (too-much-too-late?) monetary policy reaction.

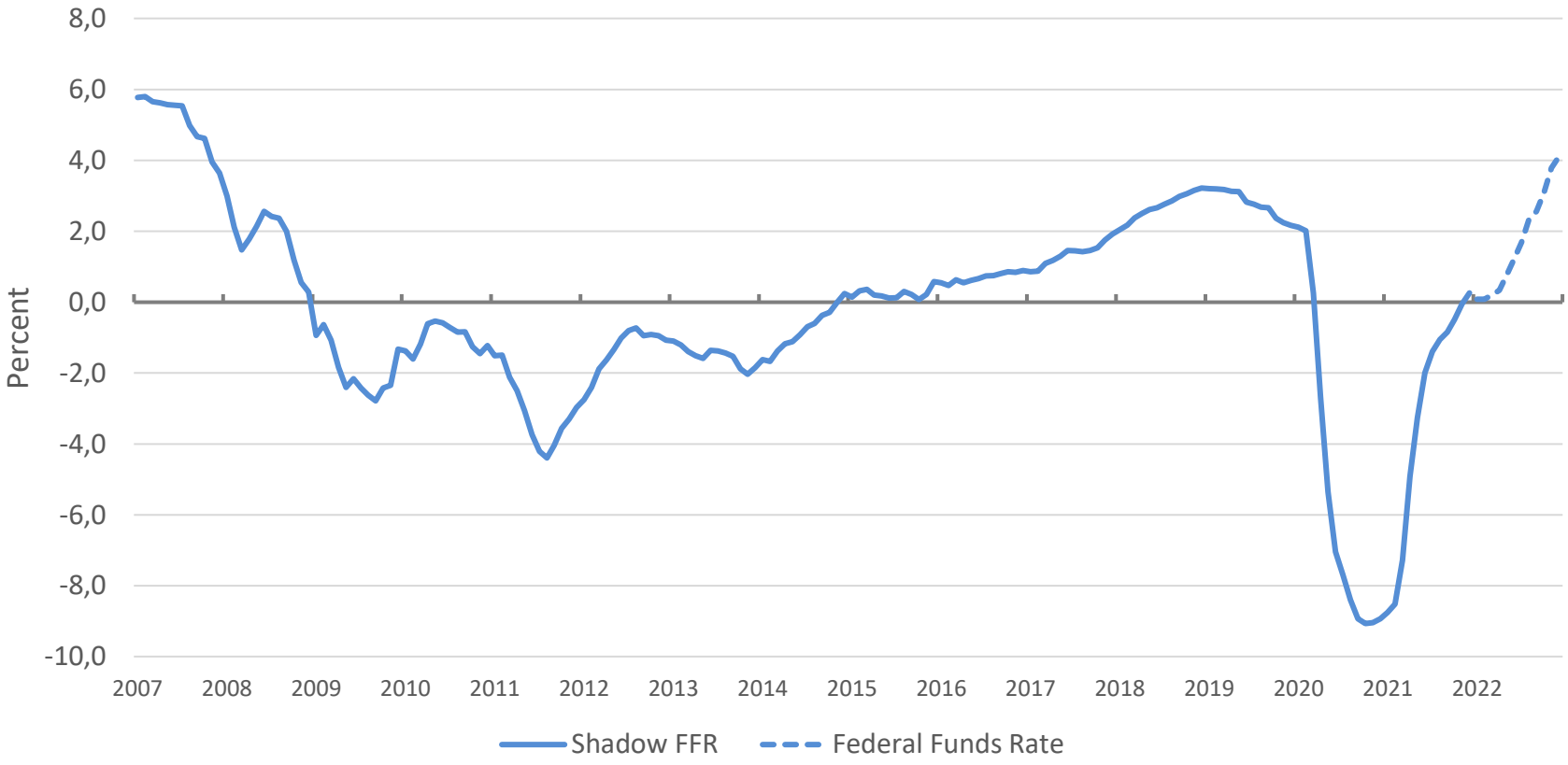
Demand stimulus. Biden fiscal stimulus. Extreme monetary ease.
Reduced supply. Post-COVID shortages of goods and labour, China shutdown, war in Ukraine.

The Great Monetary Tightening led by the Fed … sharpest since at least 1994/5

"Shadow" Fed funds rate of Lombardi and Zhu … converts balance sheet expansion to the Fed funds equivalent:

- COVID-19 balance sheet stimulus larger but shorter than in GFC.
- From March 2021, the end of asset purchases + (later) higher Fed funds + (still later) net bond sales ***= very sharp rise in the shadow rate***

Fed funds rate and “shadow” Fed funds rate



Source: Federal Reserve Board and Lombardi and Zhu (2014 and 2018) updated

Reading global bond markets

World long-term interest rate

Monetary tightening is global but $ dominated

"Bond market vigilantes" indulgent. The "world" real interest rate has risen but still moderate (Misev and Turner (2022)).

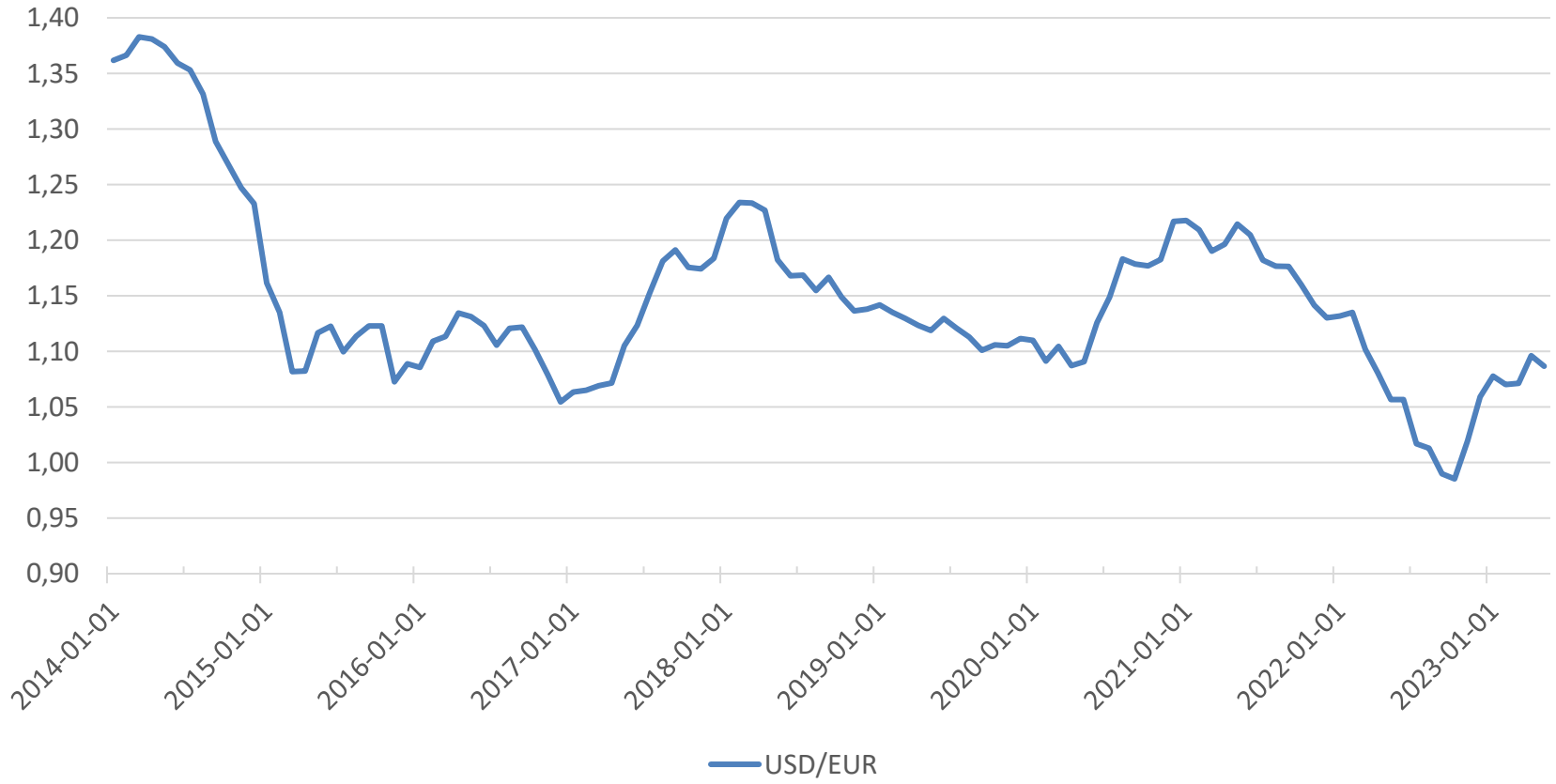
Long-run expectations of policy rates. Higher but suggest the natural rate of interest will remain low.

Credibility. Central banks have market confidence that inflation will return to target

Interest rate risks on the balance sheets of banks and other financial firms. Large and opaque: no good measures of aggregate interest rate risk

FX Markets

U.S. Dollars to Euro Spot Exchange Rate



Note: Monthly averages.

Source: Federal Reserve Bank of St. Louis

Should the ECB "out tighten the Fed"?

Analysing monetary policy in terms of current inflation + demand strength + the policy rate is mistaken.

Yes, Inflation remains stubbornly high ... but ignores monetary transmission lags.

Credit (bank loans & bonds) is the vehicle of transmission … and so forward-looking.

Heavier reliance bond finance means (a) less under central bank control (b) monetary transmission takes longer.

Growth of domestic credit to the non-financial sector

Year-on-year percentage point changes in % of GDP

Note: Year-on-year first differences of the total credit to the private non-financial sector as % of GDP.
Source: Table F2.1 BIS Statistics Explorer.

Should the ECB "out tighten the Fed"?

Two international dimensions.

Allowing for what the Fed has already done:

- Global liquidity in $ declining sharply, and this is not over.
- ECB estimates the medium-term impact of Fed tightening on euro area industrial production as large as on US output (Lane, 2023)

Reading the world long-term interest rate:

By Feb 2023, average long-run expectation of the policy rate had risen to **3½% from 1-1½%** in 2020 and 2021.

Half of rises in policy rates viewed as permanent … greater macroeconomic effect than if temporary

Indexing bonds to a basket of currency

Gains from bond diversification into other currencies. ... André Icard on a multi-currency international monetary system.

Official initiatives. SDR key. A BRICS index?

There is also a crucial private dimension: international borrowers and investors both worry about their excessive exposures to the dollar.

The World Parity Unit is one private index which includes 11 currencies.

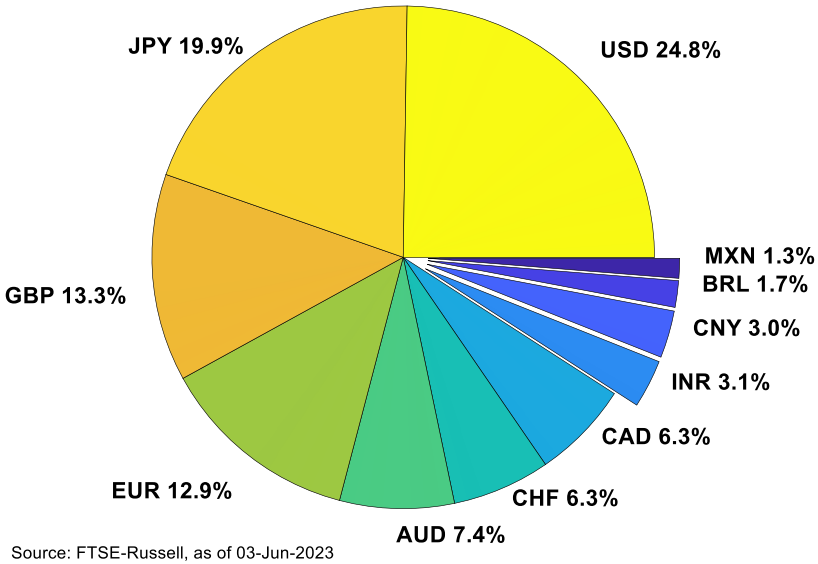
Adding non-dollar currency exposures to dollar portfolios reduces the volatility of that portfolio.

The World Parity Unit "WPU"

WPU is designed to preserve investors' wealth in the long run, and in global terms

The World Parity Unit (WPU) is a diversified basket of eleven currencies.
The WPU currency basket is designed to preserve investors' wealth in the long run, and in global terms.
Fiat currencies bring the *short run* risk of devaluation and *long run* risk of loss of global purchasing power.

WPU Currency Basket



Source: FTSE-Russell, as of 03-Jun-2023

Short Run Devaluation Risk
The seven developed currencies cover 78% of all currency trading. All currencies trade against the Dollar. The USD is brought in at the US share of GDP. The other DM weights are set to minimize FX volatility.

Long Run Risk of Loss of Global Purchasing Power
Prices of global goods are increasingly set in the largest growing EM markets. The 9.1% in EM currencies seeks to preserve investors' long term global purchasing power (exploiting the Harrod Balassa Samuelson effect). The EM weights are based on their share of global GDP with adjustment for trading liquidity.

WPU was created by MPG working in partnership with FTSE-Russell. The WPU settlement rate is calculated daily at the London 4pm Fixing time.

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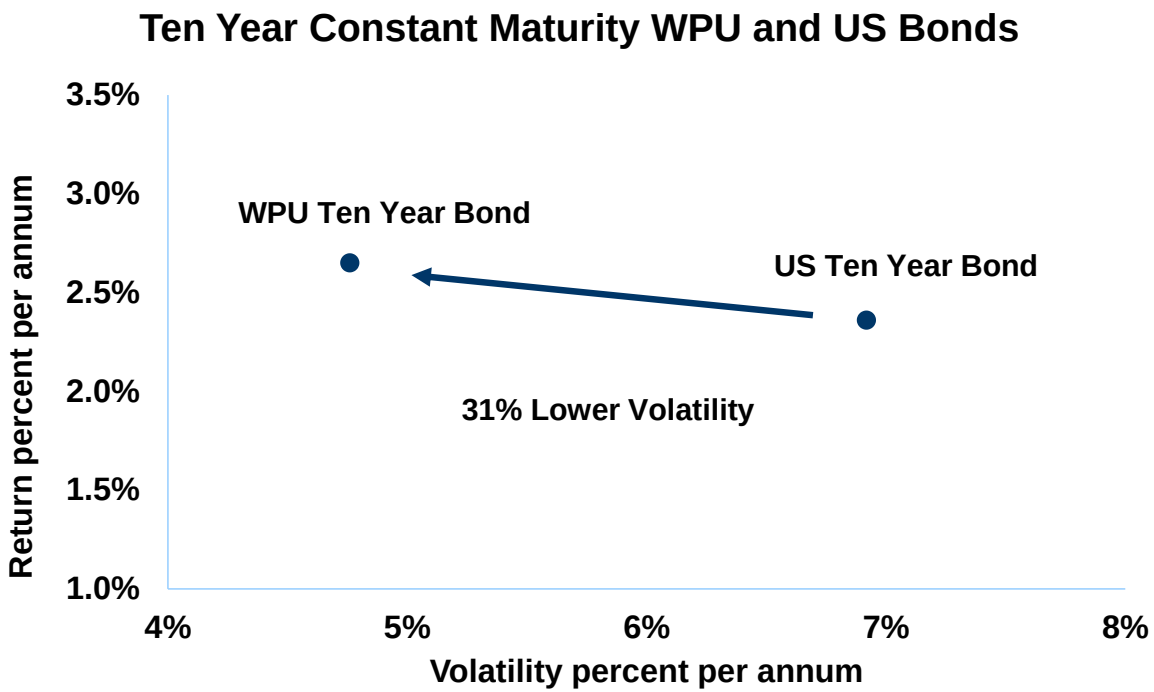
Currency and Bond Diversification Reduces Risk



Data: FTSE-Russell, Refinitiv, Factset and MPG calculations. Monthly data from December 1998 through May 2023

Currencies trade against each other: some currencies rise, while others fall.
Hence, unlike investment in equities or bonds, a basket of currencies is certain to reduce risk.

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Conclusions

$ dominance remains strong and the contraction in $ global liquidity from the Fed's monetary tightening could signal a major financial shock.

The full impact of this on domestic credit worldwide is still to be felt.

But the € can dilute this dominance. In recent years, the euro has had a larger share in global liquidity expansion when ECB monetary policy is easy relative to the Fed's.

Using other currencies in bond markets would reduce dollar dominance.

- Bond issuance based on a basket of currencies would be safer for many borrowers than dollar bonds.
- Many (most?) investors would like more straightforward currency diversification than they have now.

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