

## Determinants of currency choice in cross-border bank loans\*



### By Lorenz Emter (European Central Bank—ECB), Peter McQuade (ECB), Swapan-Kumar Pradhan (Bank for International Settlements) and Martin Schmitz (ECB)

*Keywords: dominant currency paradigm, currency denomination, cross-border banking, gravity. JEL codes: F31, F33, F34, F36, G21.* 

This paper provides insights into the determinants of currency choice in cross-border bank lending, such as bilateral distance, financial and trade linkages to issuer countries of major currencies, and invoicing currency patterns. Cross-border bank lending in US dollars, and particularly in euro, is highly concentrated in a small number of countries. The UK is central in the international network of loans denominated in euro, although there are tentative signs that this role has diminished for lending to non-banks since Brexit. Offshore financial centres are pivotal for US dollars loans, reflecting, in particular, lending to non-bank financial intermediaries in the Cayman Islands, possibly as a result of regulatory and tax optimisation strategies. The empirical analysis suggests that euro denominated loans face the "tyranny of distance", in line with predictions of gravity models of trade, in contrast to US dollar loans. Complementarities between trade invoicing and bank lending are found for both the euro and the US dollar.

\*This Policy Brief is based on <u>ECB Working Paper Series No 2918</u>. The views expressed are those of the authors and do not necessarily reflect those of the European Central Bank (ECB) or the Bank for International Settlements (BIS).

Dominant currencies provide the issuer with important economic, financial and strategic advantages, so it is important to understand why some currencies have a more prominent international role than others. We offer insights into the determinants of currency choice in cross-border bank lending, such as bilateral distance, financial and trade linkages to issuer countries of major currencies, and invoicing currency patterns.

Using granular data from the bilateral BIS locational banking statistics, we are able to reveal several new stylised facts and provide robust and nuanced supporting evidence of the complementarities between the choice of currency for cross-border bank lending and trade invoicing (Emter, McQuade, Pradhan and Schmitz, 2024).

Cross-border bank lending in US dollar and particularly in euro is highly concentrated in a small number of countries. The United Kingdom is central in the international network of loans denominated in euro (Figure 1, left panel), although there are tentative signs that since Brexit this role has diminished for lending to non-banks. Offshore financial centres are pivotal for US dollar loans (Figure 1, right panel) reflecting, in particular, lending to non-bank financial intermediaries in the Cayman Islands, possibly as a result of regulatory and tax optimisation strategies.

### Figure 1: Network of euro-denominated (left) and US dollar-denominated (right) cross-border bank loans



Sources: BIS locational banking statistics (by residence) and Emter, McQuade, Pradhan and Schmitz (2024) calculations. Notes: Arrows originating from a node represent loans by banks located in the country/region to the country/region where arrow ends. Edges (arrows) of a size of less than USD 1 billion have been omitted in the calculations. The node size is proportional to the total and shows relative importance (e.g. banks in the United Kingdom are the largest non-euro area providers of euro-denominated loans, followed by those in offshore centres, the United States, Japan, other advanced economies, Switzerland and emerging market economies). Loans between countries in the same region are excluded. Data reported are the average of quarterly observations for 2021.

Our empirical analysis in Emter et al. (2024) suggests that, in contrast to US dollar loans, euro-denominated loans face the "tyranny of distance", in line with predictions of gravity models of trade (see, for example, Mehl, Sabbadini, Schmitz, and Tille, (2024)). Figure 2 shows the coefficients estimated using regression analysis. The results imply that if both the source and destination countries are far away from the euro area they are likely to lend less bilaterally in euro, whereas this distance effect is negligible for bilateral lending in US dollar.

Complementarities between trade invoicing and bank lending are found for both the euro and the US dollar. Figure 3 shows that, consistent with economic theory (Gopinath and Stein, 2021), there is a strong correlation between trade invoicing and bank lending in euro.

# Figure 2: Estimated effect of distance to currency issuer on EUR and US dollar claims

(percentages)



Sources: BIS locational banking statistics, CEPII & Emter, McQuade, Pradhan and Schmitz (2024).

Notes: Bars show estimated percentage change (regression coefficients) in cross-border claims on all sectors in currency of issuer in response to a one percent increase in distance to currency issuer. Error bars show 90% confidence intervals. Includes source and host country, currency and time fixed effects. Cluster-robust standard errors (reporter, counterpart, currency level). Regression includes bilateral data on 32 reporters and 178 counterparty countries in 2019.

## Figure 3: Cross-border bank loans and export invoicing, by counterparty countries, for euro

(y-axis: share of euro in cross-border bank loan to all sectors in %; xaxis share of euro in export invoicing in %)



Sources: BIS locational banking statistics (by residence), Boz et al. (2022), and Emter, McQuade, Pradhan and Schmitz (2024). Notes: The data displayed are for counterparty/destination countries in the BIS data. Euro area countries are included but intra-euro area bank loans are excluded. Reported values are for the 2016-2019 average.

Overall, the analysis confirms that the euro's role in cross-border bank lending is more regional, while the use of the US dollar is global. These results have implications for policy. Stronger trade and financial links to the euro area foster international use of the euro, so preserving the openness of international trade and financial markets could support the global appeal of the euro.

### References

Boz, E., Casas, C., Georgiadis, G., Gopinath, G., Le Mezo, H., Mehl, A., & Nguyen, T. (2022). Patterns of invoicing currency in global trade: New evidence. Journal of International Economics, 136(100).

Emter, L., McQuade, P., Pradhan, S.-K., Schmitz, M. (2024). Determinants of currency choice in cross-border bank loans. (Working Paper Series No. 2918). European Central Bank.

Gopinath, G., & Stein, J. C. (2021). Banking, Trade, and the Making of a Dominant Currency. The Quarterly Journal of Economics, 136(2), 783–830.

Mehl, A., Sabbadini, G., Schmitz, M., & Tille, C. (2024). Distance(s) and the volatility of international trade(s). European Economic Review, forthcoming.

### About the authors

**Lorenz Emter** is an Economist at the European Central Bank on leave from the Central Bank of Ireland. He holds a PhD from Trinity College Dublin and an MSc in Economics from the University of Heidelberg. His research interests include international macroeconomics, international finance, macro-financial linkages and financial stability.

**Peter McQuade** is a Senior Economist in the International Policy Analysis Division of the European Central Bank. He has previously worked as an economist in the Central Bank of Ireland and the European Commission, Directorate General for Economic and Monetary Affairs. He holds a PhD and MSc in Economics from Trinity College, Dublin. His research interests include international currency use, international financial linkages and monetary policy spillovers.

**Swapan-Kumar Pradhan** is a Principle Statistical Analyst at the Bank for International Settlements (BIS). Before joining the BIS in 2003, he served in the Statistics Department of the Reserve Bank of India, Mumbai, for 8 years. He holds a PhD in financial economics, a MSc and BSc in statistics from the University of Calcutta. His fields of interest include financial and banking statistics, international capital flows and financial markets.

**Martin Schmitz** is a Senior Team Lead Economist-Statistician at the European Central Bank (ECB). Martin has worked at the ECB since 2010 in various areas. Prior to joining the ECB, he studied economics at Trinity College Dublin (PhD and MSc) and at the University of Maastricht and HEC Montréal (BSc). His research focuses on international macroeconomics and international finance.

#### **SUERF Publications**

Find more SUERF Policy Notes and Briefs at www.suerf.org/publications/suerf-policy-notes-and-briefs/



**SUERF** is a network association of central bankers and regulators, academics, and practitioners in the financial sector. The focus of the association is on the analysis, discussion and understanding of financial markets and institutions, the monetary economy, the conduct of regulation, supervision and monetary policy.

SUERF's events and publications provide a unique European network for the analysis and discussion of these and related issues. **SUERF Policy Briefs (SPBs)** serve to promote SUERF Members' economic views and research findings as well as economic policy-oriented analyses. They address topical issues and propose solutions to current economic and financial challenges. SPBs serve to increase the international visibility of SUERF Members' analyses and research.

The views expressed are those of the author(s) and not necessarily those of the institution(s) the author(s) is/are affiliated with.

All rights reserved.

**Editorial Board** Ernest Gnan David T. Llewellyn Donato Masciandaro Natacha Valla

SUERF Secretariat c/o OeNB Otto-Wagner-Platz 3 A-1090 Vienna, Austria Phone: +43-1-40420-7206 www.suerf.org • suerf@oenb.at