

The currency composition of foreign exchange reserves*



By
Hiro Ito and Robert N McCauley

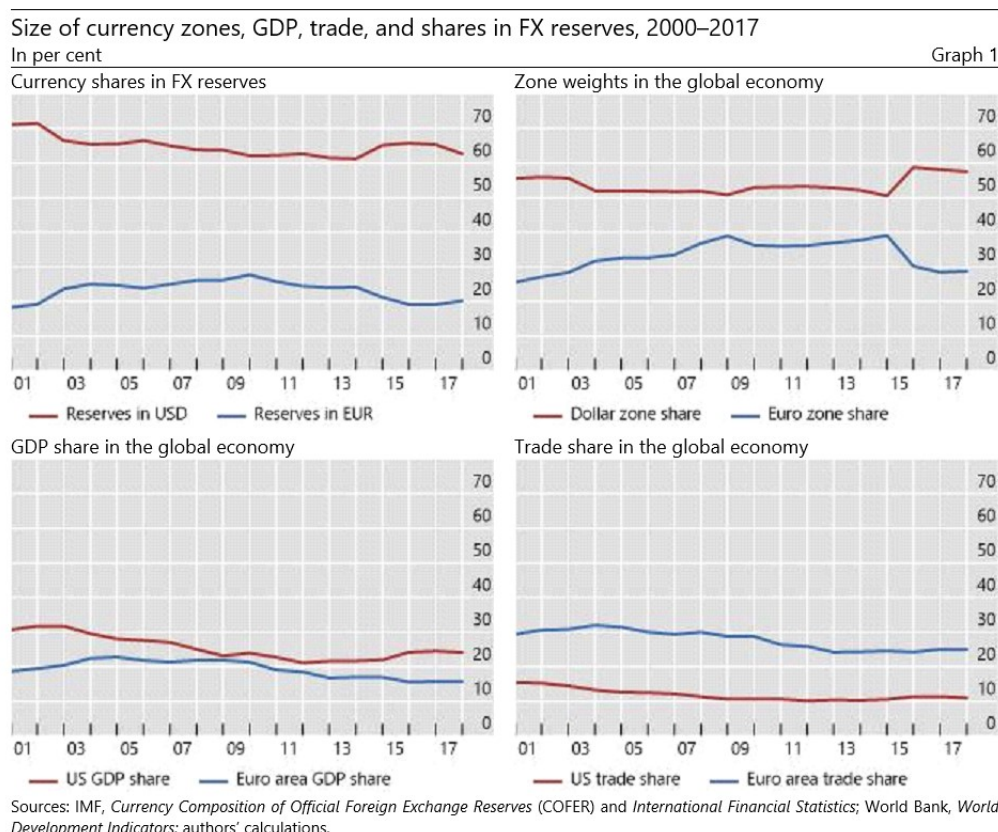
Keywords: International reserves, safe asset, currency zones, trade invoicing.

We analyse the factors that govern the choice of the currency composition of official foreign exchange reserves. First, we introduce a new panel dataset on the key currencies in foreign exchange reserves of about 60 economies in the 1999-2017 period. Second, we show that the currency composition of reserves relates strongly to the co-movement of the domestic currency with key currencies and the currency invoicing of trade. These factors represent attributes of the dollar or the euro rather than of the United States or the euro area. They exert about equal effects on the currency composition of foreign exchange reserves. We demonstrate that these findings are robust to a host of other possible factors.

* This article was previously published in the *Journal of International Money and Finance*, vol 102, April 2020. It is also available as BIS Working Papers no 828: <https://www.bis.org/publ/work828.pdf>.

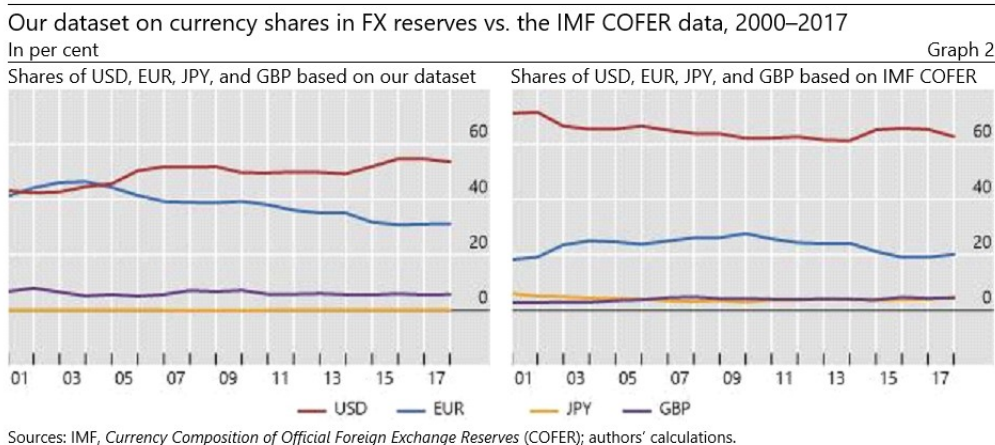
Since 1945, the US dollar has dominated the international monetary and financial system. The dollar plays a particularly outsized role in official foreign exchange (FX) reserves. Scholars find it puzzling that its share has persisted at about two thirds of the total. After all, the US share of both world GDP and global trade has declined post-war. However, when researchers seek to understand the dollar’s predominance in FX reserves, they quickly encounter severe data limitations that greatly impede empirical analysis.

We attempt to remove this impediment. To do so, we compile a data set from annual reports, financial statements and other relevant sources for 58 central banks across the world (in 1999–2017). This data set makes a big contribution. The IMF’s Currency Composition of Official Foreign Exchange Reserves (COFER) data generally disclose only aggregates for the entire world, advanced economies and emerging market economies, not data on individual economies.

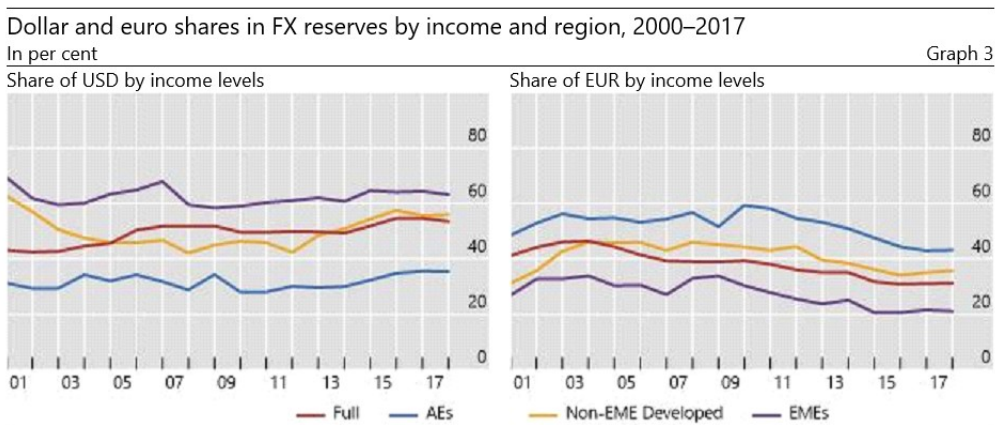


Our dataset includes 13 advanced economies; 45 “emerging and developing economies”, as defined by the IMF. By region we have 10 Asian-Pacific; 12 African and Middle Eastern; 6 Western European; 17 Eastern European and Central Asian; and 12 Western Hemisphere (we exclude issuers of the key currencies: the United States, the euro area, and Japan).

Our aggregate USD and EUR shares demonstrate a waning European selection bias in disclosure of currency weights (Graph 2). While the IMF COFER shows the USD share has been on a slightly declining trend in the 60–70% range, it starts in our dataset from low levels (ie, 40–45%), and rises in the late 2000s and the mid-2010s. The contrast between our data and the COFER data arise mainly because our dataset, especially in the early years, over-represents European countries that tend to disclose their reserve currency composition. Our lower USD share also arises from our exclusion of Japan and the euro area, whose reserves well exceed US reserves, and which hold high shares (90%?) of USD in their FX reserves.



Across income groups, EMEs have held persistently high USD shares in their reserves (Graph 3, top left panel). Non-EME developing countries do not have as high USD shares as EMEs do. AEs hold lower USD shares on average, which reflects that many are (non-euro area) European countries in Northern and Western Europe.



Using this data set, we find that the greater the co-movement of the domestic currency with the dollar (euro), the higher its dollar (euro) share of FX reserves. This finding holds in both the cross section and the panel. This makes sense. If a currency varies less against the dollar than against other key currencies, then an FX reserve portfolio with a large dollar share poses less risk when returns are measured in domestic currency. We also find in smaller samples that the higher the dollar-denominated (euro-denominated) share of exports, the higher the dollar (euro) share in FX reserves. The effect of currency anchoring appears to be on a par with that of the unit of account in trade as determinants of reserve composition. ■

About the authors

Hiro Ito is Professor of Economics at Portland State University, Oregon, U.S.A. His areas of focus are financial liberalization and development, capital flows, emerging market open macro policies, and global imbalances. His papers have been published in the *Oxford Economic Papers*, *Journal of Development Economics*, *Journal of International Money and Finance*, and *Review of International Economics*. Ito is currently an associate editor of the *Journal of International Money and Finance* and the *Journal of International Commerce, Economics and Policy*. Ito received his Ph.D. and M.A. in economics from the University of California, Santa Cruz and M.A. in international relations from the Paul H. Nitze School of Advanced International Studies (SAIS) of Johns Hopkins University in Washington, D.C.

Robert N McCauley does policy-relevant and market-savvy research on international financial markets, the international monetary system and corporate finance. His research spans the international monetary system, reserve management, money, bond and foreign exchange markets and renminbi internationalisation. The *Financial Times*, the *Economist*, the *Wall Street Journal* and the *New York Times* cite his work extensively. He has enjoyed teaching banking and international finance in business and law schools. He spent most of his career at the Bank for International Settlements and the Federal Reserve Bank of New York. He is a nonresident senior fellow at Boston University's Global Development Policy Center and a senior research associate at the Global History of Capitalism project at the Oxford Global History Centre. He serves on the scientific committee of the Fondation Banque de France.



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
Frank Lierman
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