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The currency composition of foreign exchange reserves: A new database

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In this paper, I present what is, to the best of my knowledge, the most comprehensive and detailed database on the currency composition of countries' foreign exchange reserves, constructed entirely from publicly available sources. Covering the period from the introduction of the euro in 1999 to 2026, the database provides information on the reserve currency composition of 149 countries across 23 currencies.

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Keywords

International economy **International reserve assets and liquidity**

The currency composition of foreign exchange reserves: A new database *

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[1] *Danmarks Nationalbank*

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Abstract

In this paper, I present what is, to the best of my knowledge, the most comprehensive and detailed database on the currency composition of countries' foreign exchange reserves, constructed entirely from publicly available sources. Covering the period from the introduction of the euro in 1999 to 2026, the database provides information on the reserve currency composition of 149 countries across 23 currencies. Over the sample period, I find that more countries increased their US dollar share than reduced it. By contrast, since the introduction of the euro, more countries have reduced their euro share than increased it. I identify three distinct phases in the evolution of reserve currency holdings: the 2000s, the 2010s, and the 2020s. For each period, I document developments across continents and discuss the factors that may have shaped changes in reserve currency composition.

*I thank Jakob Feveile Adolfsen, Linda Goldberg, Thusjanthan Gunapalasingham, Morten Spange, and Martin Wagner Toftdahl for helpful comments and suggestions. I am indebted to Jakob Lunde Steffensen for outstanding research assistance. Researchers interested in accessing the database are welcome to reach out to the author at thha@nationalbanken.dk. Users of the database are kindly requested to acknowledge the author in any resulting publications or research. The database will be updated on a continuous basis which will allow researchers and central banks to monitor developments in reserve currency allocations on an ongoing basis.. This paper should not be reported as representing the views of Danmarks Nationalbank. The views expressed are those of the author.

1 Introduction

Central banks' holdings of foreign exchange reserves are a key component of the international monetary system and play an essential role in exchange rate arrangements, international payments, and capital flows around the world. Today, geopolitical tensions, financial sanctions and reserve diversification have renewed interest in whether the US dollar's dominance will persist or whether a more multipolar international monetary system will emerge (ECB, 2026).

Historically, most central banks have not disclosed the currency composition of their foreign exchange reserves. For many years, participating central banks have confidentially reported quarterly breakdowns of the currency composition of their foreign exchange reserves to the IMF through its Currency Composition of Official Foreign Exchange Reserves (COFER) survey, with the IMF publishing only aggregate statistics. More recently, an increasing number of central banks have begun disclosing reserve currency shares through annual reports and other official publications.[1]

In this paper, I present what is, to the best of my knowledge, the most comprehensive and detailed database on the currency composition of countries' foreign exchange reserves. I have constructed the database entirely from publicly available sources by browsing a large body of publications of central bank publications, primarily annual reports and financial statements. Covering the period from the introduction of the euro in 1999 to 2026, it provides information on the reserve currency composition of 149 countries and identifies holdings across 23 currencies.[2] The richness of the database enables a granular analysis of the factors driving reserve currency composition, thereby shedding new light on the likely evolution of the international monetary system.[3]

[1] China, which holds the largest foreign exchange reserve in the world, provides a prominent example. In July 2019, the State Administration of Foreign Exchange (SAFE) revealed for the first time that the US dollar share of China's foreign exchange reserves had declined from 79 per cent in 1995 to 58 per cent in 2014. In subsequent years, SAFE published the USD share with a five-year lag. However, in its 2025 Annual Report, it did not report the USD share for 2020.

[2] Appendix A lists the countries included in the database, the years for which data are available, their regions, and the corresponding data sources.

[3] Even a modest reserve-currency role can increase foreign demand for a country's liquid domestic-currency assets, supporting portfolio capital inflows and potentially lowering borrowing costs, although it need not increase net capital inflows because residents' investment abroad can offset those inflows.

Over the sample period, I find that more countries increased their US dollar share than reduced it. By contrast, since the introduction of the euro, more countries have reduced their euro share than increased it.[4] This should be compared with the COFER data, which show that the US dollar's share of global foreign exchange reserves has declined since the turn of the century, while the euro's share has remained broadly stable. The difference arises because, unlike the IMF COFER data, I assign equal weight to each country, meaning that reserve compositions are not weighted by the size of countries' foreign exchange reserves. Weighting countries according to the size of their foreign exchange reserves is the appropriate approach when analysing developments in global foreign exchange reserves. However, when studying central banks' behaviour and the factors that shape their reserve allocation decisions, equal weighting across countries provides, in my view, a more representative picture of central bank behaviour.

I identify three distinct periods in the evolution of foreign currency reserve holdings: the 2000s, the 2010s, and the 2020s. The average US dollar share declined during the 2000s, recovered in the 2010s after the global financial crisis (GFC) of 2007-09, and has remained broadly stable in the 2020s. The decline during the 2000s was led by countries in Europe and Asia-Pacific, while countries in Africa and South America increased their dollar holdings. After the GFC, average US dollar shares rose throughout the 2010s, particularly in non-euro-area European countries, Asia-Pacific, and North America, before levelling off. Over 1999–2025, US dollar shares fell in Europe, increased in Africa, Asia-Pacific, and North America, and remained broadly stable in South America.

Average euro holdings increased during the 2000s following the introduction of the common currency but declined throughout the 2010s before stabilizing toward the end of the decade and in the 2020s. During the 2000s, the average euro share rose across all regions except South America, while during the 2010s, it fell across the board. Over the period 1999–2025, average euro shares declined in every region except North America.

Average reserve holdings of the Chinese renminbi have risen throughout the 2010s and 2020s. The currency is most widely held by central banks in Asia-Pacific, South America,

[4]This result, and all subsequent results, are robust to changes in country coverage and exchange-rate valuation effects.

and Africa, whereas holdings remain small in Europe and North America. Although average renminbi holdings remain modest, they surpass those of the Japanese yen in South America and Africa and is close to doing so in Asia.

Despite a post-GFC recovery, the average share of Japanese yen holdings declined across all regions between 1999 and 2025, with the sharpest fall in Asia-Pacific and North America. Sterling remains widely held, but its average reserve share has declined despite recent stabilisation. The largest declines have occurred in Africa, non-euro-area Europe, and Asia-Pacific, while sterling holdings have increased in South America, largely at the euro's expense. The Australian dollar and the Canadian dollar have gained prominence, although growth in Australian dollar holdings has levelled off since the mid-2010s. Over 1999–2025, Canadian dollar holdings increaed in every region, while Australian holdings rose in all regions except Africa.

Several large reserve holders in Asia-Pacific have diversified significantly into non-SDR currencies since the GFC.[5] Non-SDR currency shares are particularly high in Malaysia, Indonesia, India, Singapore, and China. A growing group of smaller currencies is held by reserve managers across multiple regions, including the Swiss franch, New Zealand dollar, Korean won, Norwegian krone, Swedish krona, Danish krone, Singapore dollar, and Czech Koruna. Among these currencies the Korean won, New Zealand dollar, Norwegian krone, and Swedish krona have gained prominence, while the Swiss franch is now held by fewer countries than a decade ago. The South African rand is the dominant reserve currency for several African central banks.

A large number of central banks have purchased gold since the GFC, particularly in recent years. On average, these countries have not reduced their share of US dollar holdings. However, they hold a smaller share of their foreign exchange reserves in US dollars than countries that have neither bought nor sold gold.

Liquidity, return, and safety are, in that order, the determinants most frequently cited by central banks when explaining their reserve currency allocation decisions among those

[5]The SDR currencies comprimises the US dollar, euro, Japanese yen, British pound, and, since 2016, the Chinese yuan. Although many large Asian reserve holders do not disclose the currency composition of their foreign exchange reserves, they report the amounts held in SDR and non-SDR currencies.

that publicly disclose such information and are included in the database. This hierarchy is broadly consistent with the guidelines set out in IMF (2013) and the framework of Borio et al.(2008a). One notable difference, however, is that both studies rank safety ahead of return, whereas central banks in the database cite return more frequently than safety. Other commonly cited determinants include the exchange rate regime, diversification objectives, external debt, trade patterns, payment needs, foreign exchange intervention, and the currency composition of liabilities. These considerations are consistent with research highlighting the role of safe assets, financial linkages, and trade invoicing patterns. Finally, while central banks rarely acknowledge it publicly, a growing body of evidence also suggests that geopolitical considerations and international alliances may influence reserve currency allocations.

I discuss the factors that may have driven changes in reserve allocations during each of these periods and how these factors align with the determinants highlighted by central banks themselves as well as with the literature. In the 2000s, shifts in reserve allocations may have been shaped by optimism about the euro, broad US dollar weakness, and looser exchange-rate links to the dollar in parts of Asia. Confidence in the euro area's institutions, deeper financial integration, and the euro's sharp appreciation likely increased its appeal as an alternative major reserve currency. Meanwhile, large US external and fiscal imbalances, the dot-com downturn, and low US interest rates may have reduced the relative attractiveness of dollar-denomiated assets. China's 2005 exchange-rate reform may also have supported gradual diversification towards the euro and regional currencies.

In the final years of the decade, the GFC introduced a countervailing force. Disruptions to global US dollar funding markets demonstrated that non-dollar reserves could become costly or difficult to convert into dollars during periods of stress. This may have marked the beginning of a shift towards larger and more readily usable dollar buffers, a trend that continued into the 2010s, particularly among reserve managers with foreign exchange reserves that were limited relative to their potential foreign-currency liquidity needs under stress.

Throughout the 2010s, episodes of US dollar funding stress may have strengthened

the rationale for central banks to hold readily available dollar reserves rather than rely solely on financial markets for dollar liquidity in times of market stress. At the same time, US dollar strength, supported by the relative resilience of the US economy and monetary policy divergence, may have encouraged reserve allocations to the dollar. The euro-area sovereign debt crisis may have further strengthened the dollar's appeal by raising concerns about sovereign default, redenomination risk, and market liquidity in the euro-area and prompting safe-haven flows into the US.

The internationalisation of the Chinese renminbi, which gained momentum in 2010, created a new avenue for reserve diversification and culminated in its inclusion in the IMF's SDR basket in 2016, although capital controls limited its role as a reserve currency. Toward the end of the decade, geopolitical considerations may also have begun to influence reserve allocations. Sanctions and asset freezes highlighted the risk for some countries of losing access to US dollar assets and payment systems, which may have encouraged them to diversify their reserve holdings.

Geopolitical considerations may have become even more important in the 2020s. The freezing of Russian central bank assets in 2022 demonstrated that reserves held in sanctioning jurisdictions could become inaccessible. Nevertheless, the evidence does not indicate a broad shift away from G4 currencies in central bank reserves. Geopolitical uncertainty may, however, have had a more pronounced effect on gold allocations, as many central banks that have accumulated gold in recent years have emphasized its safe-haven properties during periods of geopolitical and financial market uncertainty, alongside its diversification benefits. Exchange rate developments may have played a smaller role in the 2020s than in earlier decades, as most major currencies have remained relatively range-bound.[6]

[6]The notable exception is the Japanese yen, which has depreciated sharply against other major currencies.

2 Related literature

The literature on the currency composition of central-bank reserves has developed from confidential IMF datasets to publicly constructed country-level panels. Early studies relied on confidential or non-public country data. Heller and Knight (1978) examined central bank reserve-currency preferences over 1970–76, while Dooley et. al (1989) studied those of industrial and developing countries over 1976–85. Eichengreen and Mathieson (2000) extended this approach to emerging and transition economies through the mid-1990s. These studies established the importance of exchange-rate arrangements, trade relations and financial links but did not release reproducible country-level datasets. Later research assembled country-level data on reserve composition from official public disclosures, with Truman and Wong (2006) providing an early compilation.

In Figure 1, I compare the database I have constructed with three recently developed databases that are frequently cited in the literature and similarly rely on public disclosures by central banks. Ito and McCauley (2020) created a database covering 62 countries and four currencies, the US dollar, euro, Japanese yen and British pound. This database was subsequently updated and extended by Chinn et al (2022) to cover 74 countries. However, the publically available version still cointains only the original 62 countries. Iancu et al. (2020) compiled currency shares for 57 countries and the same four currencies, although the publicly available database includes only 52 countries. Finally, Laser and Weidner (2022) constructed a panel covering 36 countries plus the euro area, which was subsequently expanded by Laser et al (2024) to 64 economies over 1996–2023. In addition to the four major reserve currencies included in the earlier datasets, their database also covers the Australian dollar, Canadian dollar, and Chinese renminbi, bringing the total number of currencies to seven.

As illustrated, the database I have constructed provides substantially broader coverage across both countries and currencies. For countries covered by both the database I have created and existing databases, the reported currency shares are very similar.

Figure 1: Descriptive statistics of related databases

Database	Number of countries covered	Number of currencies covered	Number of observations	Number of years covered
Ito and McCauley (2020) - updated 2021	62	4	954	1999-2020
Iancu et al. (2020)	52	4	801	1999-2018
Laser and Weidner (2022) - updated 2025	64	7	1077	1996-2023
Harr (2026)	149	23	2650	1999-2026

In addition to the databases mentioned above Arslanalp et al (2022) merged several disclosure-based datasets to analyse diversification into nontraditional reserve currencies. Goldberg and Hannaoui (2026) further harmonised public sources into a panel of US-dollar reserve shares for 75 countries through 2023. For gold specifically, Arslanalp et al (2023) constructed a panel for up to 144 economies over 1980–2021 using IMF data and market-valued gold holdings. Weiss (2025) combines changes in physical gold holdings with information on US dollar reserve shares and, consistent with my findings, finds that countries that recently purchased gold have generally not reduced the US dollar share of their reserves. Eichengreen et al (2016) provide a long-run aggregate reconstruction beginning in 1947, while Ferranti (2023) estimates currency shares for non-disclosing countries using reserve valuation changes.

My broad interpretations of the factors driving changes in reserve currency composition are related to different papers. Arslanalp et al. (2022) attribute the US dollar's long-term decline to active diversification, driven by improved liquidity in non-traditional reserve currencies, higher returns, and evolving reserve-management practices. By contrast, Goldberg and Hannaoui (2026) and Goldberg et al (2026) argue that part of the decline reflects faster reserve accumulation by countries with relatively low dollar allocations, which is consistent with my finding that more countries increased than reduced their US dollar shares between 1999 and 2025. (Iancu et al., 2020) emphasize the growing importance of financial linkages since the GFC, particularly in emerging and developing economies, while (Goldberg and Hannaoui, 2026) find that geopolitical distancing matters primarily when reserves exceed precautionary liquidity needs. Finally, central banks

appear to offset valuation effects through rebalancing, although country-level evidence suggests that rebalancing is, on average only partial (Chinn et al, 2022).

3 Constructing the database

I have constructed the database entirely from publicly available sources by browsing a very large body of publications of central bank publications, primarily annual reports and financial statements. Many central banks do not disclose the currency shares of their foreign exchange reserves, reporting only the amounts held in each currency. In these cases, I have generally calculated the currency shares myself, based on gross foreign assets denominated in foreign currencies.[7] I measure each currency's share as a proportion of total foreign exchange reserves, excluding gold holdings and IMF Special Drawing Rights (SDRs), in line with IMF practice.

For each major reserve currency, I calculate three measures of change since 1999: (i) the unadjusted change in percentage points; (ii) the change adjusted for variations in country coverage; and (iii) the change adjusted for both country coverage and exchange-rate valuation effects.[8] The country-coverage adjustment accounts for the fact that data are only available for a subset of years for many countries during the 1999-2025 period. Consequently, when analyzing the changes in reserve currency composition over time, it is essential to adjust for variations in country coverage. The exchange-rate adjustment is also important because central banks may not fully rebalance their foreign exchange reserve portfolios in response to currency valuation changes. As a result, reserve shares can fluctuate even in the absence of active portfolio reallocation, (Chinn et al, 2022). Unless

[7] A few countries report only net foreign asset positions by currency. Because I generally use data on gross foreign assets denominated in foreign currencies, the reported currency shares may exclude foreign exchange derivatives. Consequently, my estimates may differ slightly from the figures reported by the IMF, which include qualifying foreign exchange derivatives measured at their net market value. For a few countries and years, only the currencies held are reported, not the amounts.

[8] To estimate the exchange rate effect over a given year, we assume that the currency composition of reserves remains unchanged throughout the period. Based on observed exchange rate developments, we construct a counterfactual end-of-period currency composition that reflects valuation effects arising exclusively from exchange rate fluctuations. The difference between the currency share at the beginning of the period and the counterfactual currency share at the end of the period provides an estimate of the exchange rate effect. The residual change in the currency share is attributed to net purchases or sales and other asset valuation effects.

otherwise stated, I use the measure that adjust for both changes in country coverage and exchange-rate valuation effects.[9]

I describe the countries' reserve currency composition excluding gold and SDR holdings. I group countries into five continents: Africa, Asia-Pacific, Europe, North America, and South America. In addition, I distinguish between the euro area and non-euro-area European countries. The US dollar, euro, Japanese yen, British pound, and the Chinese renminbi are held by all five continents and both regions within Europe, with the exception of the euro which is naturally not held by countries within the euro area.[10].

Figure 2 illustrates that the database includes the largest number of countries for Africa and Asia-Pacific. It also shows that Asia-Pacific, non-euro-area Europe, and South America exhibit the greatest diversity of currencies in foreign exchange reserves.

Figure 2: Descriptive statistics of the database

Region	Number of countries covered	Number of currencies covered	Number of observations	Number of years covered
Africa	48	13	723	2001-2026
Asia-Pacific	32	18	539	1999-2026
Euro area	20	14	389	1999-2026
Non-euro area	20	17	483	1999-2026
North America	15	6	323	1999-2026
South America	14	17	193	1999-2026
Total	**149**	**23**	**2650**	**1999-2026**

In addition to the 149 countries for which I have identified publicly disclosed data on the currency composition of foreign exchange reserves, a number of countries also publicly report the amount of reserves held in SDR and non-SDR currencies. This information is particularly valuable for countries that do not disclose the currency composition of their

[9]Unlike my calculations, both Arslanalp et al. (2022) and Ferranti (2023) adjust for bond returns in addition to exchange-rate valuation effects. Arslanalp et al. (2022) account for exchange-rate movements and bond returns when estimating reserve currency shares, while Ferranti (2023) similarly incorporates returns on the underlying bond portfolios. However, the database I have constructed does not contain information on the underlying asset composition of central banks' portfolios, which makes it impossible to implement such adjustments.

[10]I would have liked to include the Middle East as a separate region in the data base. However, only Israel and Iraq disclose the currency composition of their foreign exchange reserves. Bahrain has, for some years, disclosed the currencies held in its reserves without disclosing their weights, while Jordan and Saudi Arabia report only the split between SDR and non-SDR currencies. Given the limited number of countries with sufficiently detailed data, I do not analyze the Middle East as a separate region and instead include these countries in the Asia-Pacific grouping. Data availability is also very limited for countries in Oceania, which are therefore included in the Asia-Pacific region as well

foreign exchange reserves.

I have also compiled a database on central banks' gold holdings, drawing on publically available IMF data as well as information from central banks' websites, annual reports and financial statements. The database places particular attention on central banks' gold purchases and sales. Using IMF data on individual countries' gold holdings and observed gold prices, I construct counterfactual end-of-period gold holdings that isolate valuation changes arising from movements in the gold price. The difference between actual and counterfactual end-of-period holdings then provides an estimate of net gold purchases or sales during the period.

For each country, these annual estimates are aggregated over the full sample period to derive cumulative net gold purchases or sales. A country is classified as a net buyer if estimated cumulative purchases exceed USD 50 million and this assessment is corroborated by external sources. Conversely, a country is classified as a net seller if estimated cumulative purchases are below USD -50 million and the assessment is supported by external evidence.

Going forward, the databases on the currency composition of foreign exchange reserves and central bank gold holdings will be updated continuously, ensuring that researchers and central banks have access to up-to-date data.

4 Stylized facts

In this section, I describe 10 stylized facts from the database focusing on data from 1999 to 2025. In the conclusion, I briefly discuss insights from the smaller sample of countries that have reported data for 2026.

1: The decline and recovery of the US dollar

All countries in the dataset hold US dollars.[11]. In relative terms, the US dollar accounts for the largest share of foreign exchange reserves in South America, followed by

[11]The only exception is the United States itself, as a country's holdings of its own currency are not considered part of its foreign exchange reserve

Asia-Pacific, and the smallest shares in Africa and non-euro-area Europe.[12]

During the 2000s, countries, on average, reduced their holdings of US dollars. This is the case both after adjusting for exchange rate developments and, even more so, without such adjustments. This was led by countries in Europe and in Asia. In contrast, countries in Africa and South America increased their US dollar holdings (see Appendix B).

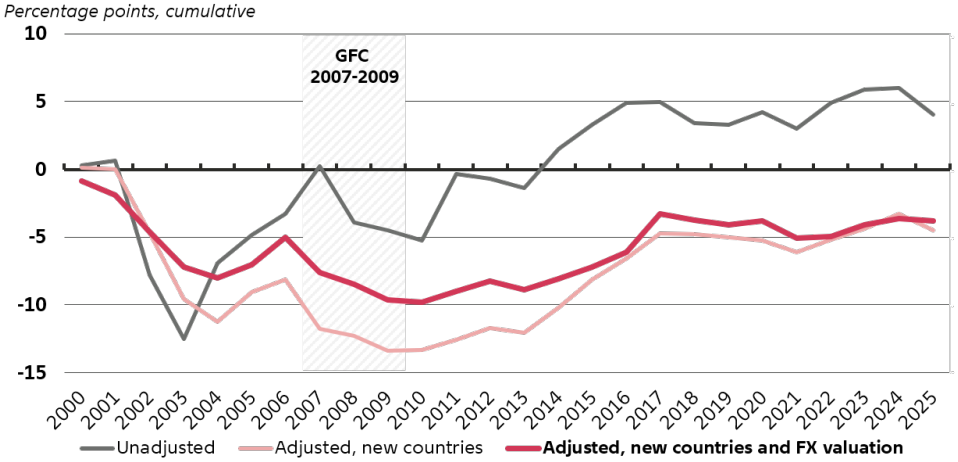
This trend of declining US dollar shares across countries reversed after the GFC of 2007-09. The average share of reserves held in US dollars increased throughout the 2010s before leveling off toward the end of the decade (see Figure 3). Again, this pattern holds after adjusting for exchange rate developments and is even more pronounced without such an adjustment. The post-GFC increase was particularly pronounced among Africa, Asia-Pacific and non-euro area European countries. In South America, average dollar holdings increased until the GFC and have since remained broadly stable. In the 2020s, the USD share has remained broadly stable across regions.

Over the full 1999-2025 sample period, the average US dollar share of foreign exchange reserves declined in both the euro area and non-euro area European countries. In contrast, US dollar shares increased in Africa, Asia, and North America, while remaining broadly stable in South America.[13]

[12]The Middle East is also likely to have a relatively high share of US dollars in its foreign exchange reserves, given the prevalence of US dollar pegs in the region and the documented importance of currency pegs for reserve currency composition (Eichengreen and Mathieson, 2000).

[13]This pattern reflects the countries which disclose the currency composition of their foreign exchange reserves. Many countries in Asia-Pacific do not disclose the currency composition of their foreign exchange reserves. However, several of these countries have reported an increasing share in non-SDR currencies since before the GFC, which may indicate that their US dollar shares have declined over time. For example, China has reported that its US dollar share dropped from 79 per cent in 1995 to 55 per cent in 2019.

Figure 3: Cumulative change in global USD share.



Source: Central bank websites and own calculations of FX valuation effects.

Note: The figure shows the cumulative change in the global USD reserve share relative to 1999.

2: The rise and fall of the euro

Eighty percent of the countries in the dataset hold euros in their foreign exchange reserves in 2025. Africa and non-euro-area European countries hold the largest share of euros, with euro holdings exceeding their holdings of US dollars. By contrast, South America, holds the smallest share of euros among all regions.

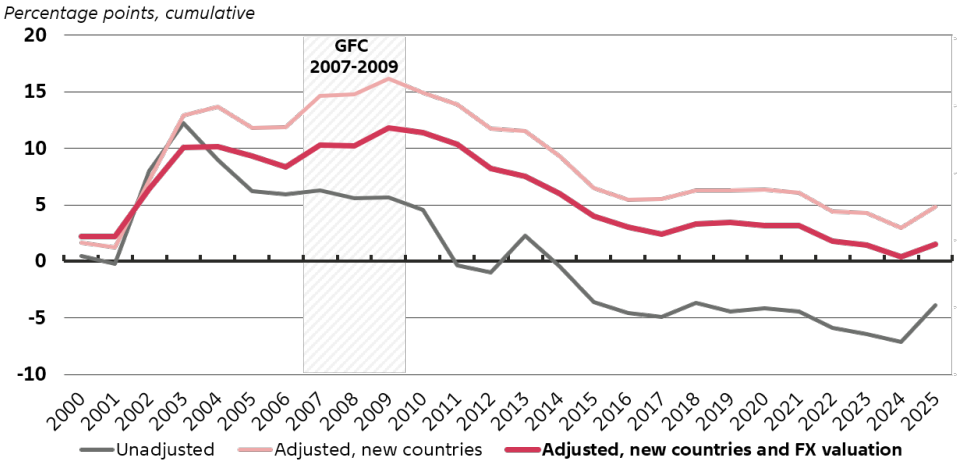
In contrast with the US dollar shares, central banks increased their euro holdings following the introduction of the common currency and throughout the 2000s (see Figure 4). Again, this pattern remains evident after accounting for exchange rate developments but is even stronger in the unadjusted data.[14] During the 2010s, however, the share of euro holdings declined sharply across all regions, a pattern that remains evident after accounting for valuation effects and is even more pronounced in the unadjusted data (See Appendix B). Euro holdings appear to have stabilised since the mid-2010s in non-euro-area European countries, Asia-Pacific, and North America. In the 2020s, the share of euro holdings has remained broadly stable across all regions except South America, where the share has continued to decline, reaching an average of just 2 per cent in 2025.

During the full sample period from 1999 to 2025, the average share of euros in foreign

[14]Given their dominant positions in global FX reserves, the reserve shares of the US dollar and the euro often move in opposite directions.

exchange reserves declined across all continents except North America.[15]

Figure 4: Cumulative change in global EUR share.



Source: Central bank websites and own calculations of FX valuation effects.

Note: The figure shows the cumulative change in the global EUR reserve share relative to 1999.

3: The emergence of the CNY after the GFC

Around one-third of the countries in the dataset hold the Chinese renminbi in their foreign exchange reserves as of 2025. Asia-Pacific has the highest average renminbi share, followed by South America and Africa, although renminbi holdings remain modest across all regions.[16] By contrast, North America and Europe hold the smallest shares of renminbi reserves.

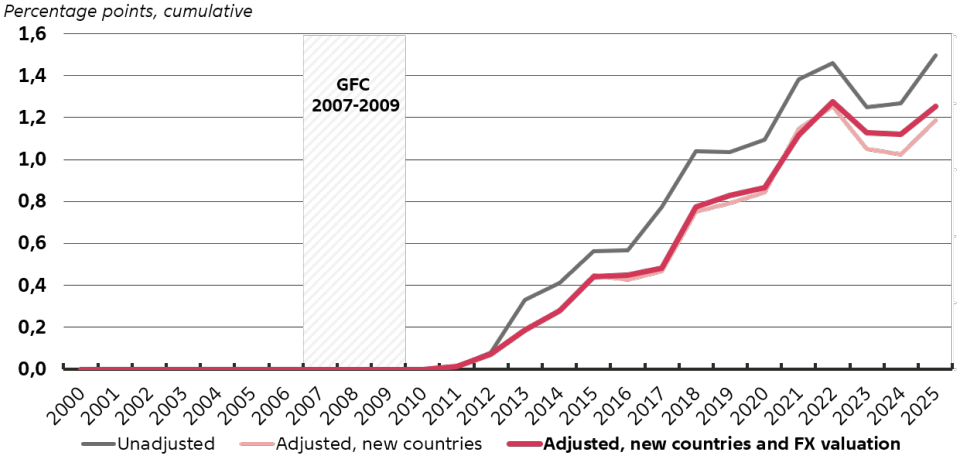
Following broad-based increases in Chinese renminbi holdings across regions during the 2010s, the average share has declined in Europe in the 2020s (see Appendix B). In contrast, Asian-Pacific countries have continued to increase their renminbi holdings, partly at the expense of the euro. In Asia-Pacific, the renminbi is now close to overtaking the Japanese yen as the region's largest regional reserve currency.[17]

[15]Note that the decline in euro holdings among non-euro-area European countries is not solely driven by changes in euro area membership. Among European countries that remained outside the euro area throughout the entire 1999-2025 period, the average share of euro-denominated holdings in foreign exchange reserves declined.

[16]Countries in Asia-Pacific, South America, and Africa were generally the first to report the inclusion of the renminbi in their foreign exchange reserves.

[17]In addition to Asia-Pacific countries that report the currency composition of their reserves, there are indications that non-reporting countries in the region that disclose only their holdings of SDR and non-SDR currencies have also increased their exposure to the renminbi; see the discussion on Asian

Figure 5: Cumulative change in global CNY share.



Source: Central bank websites and own calculations of FX valuation effects.

Note: The figure shows the cumulative change in the global CNY reserve share relative to 1999.

4: The decline of the JPY

A little less half of the countries in the database hold Japanese yen in their foreign exchange reserves in 2025. The euro area and Asia-Pacific hold the largest share of Japanese yen reserves, while Africa and South America hold only negligible amounts of JPY reserves.

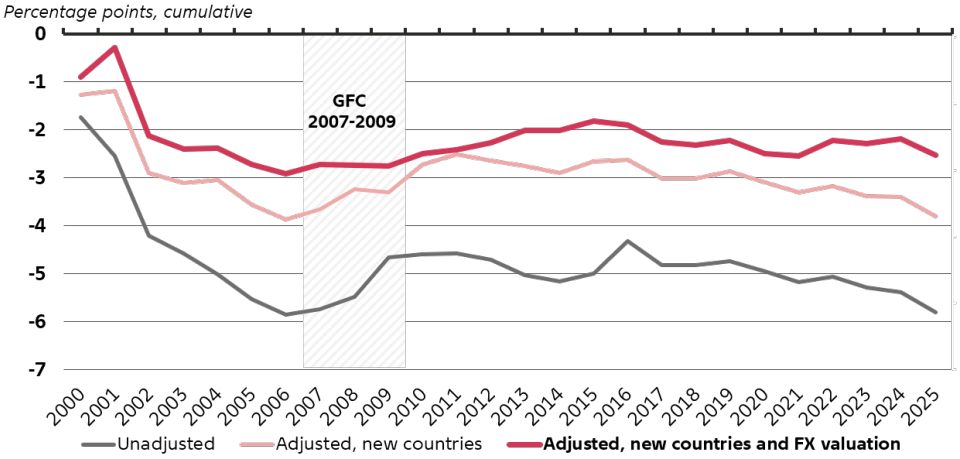
Developments in the Japanese yen's share of foreign exchange reserves broadly mirror those of the US dollar, with its share declining until the GFC, increasing throughout most of the 2010s, and stabilizing in the 2020s. (see Figure 6).[18] This pattern was particularly pronounced in the euro area and in Asia-Pacific (see Appendix B).

During the full sample period from 1999 to 2025, the share of Japanese yen in foreign exchange reserves declined across all regions with exception of non-euro area Europe. The fall was particularly pronounced in Asia-Pacific and North America, which held the largest JPY reserve shares at the start of the period.

diversification.

[18]The JPY's share of global FX reserves is, of course, only a small fraction of that of the USD.

Figure 6: Cumulative change in global JPY share.



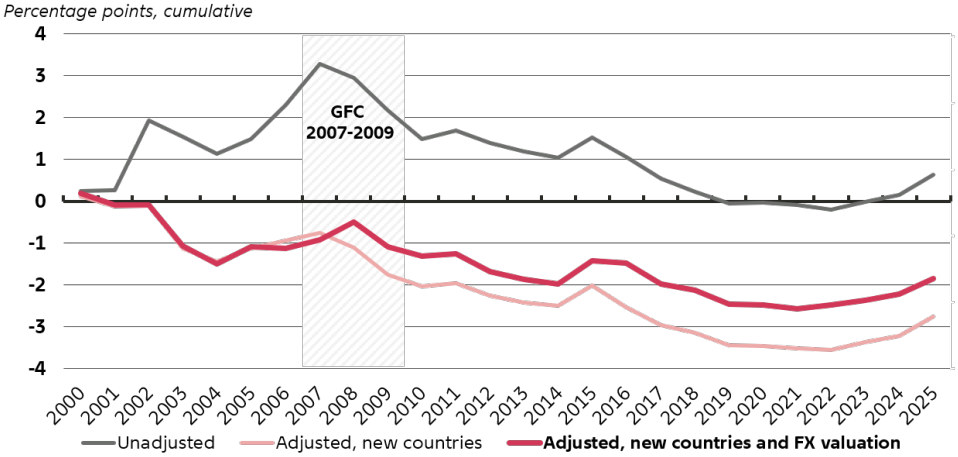
Source: Central bank websites and own calculations of FX valuation effects.

Note: The figure shows the cumulative change in the global JPY reserve share relative to 1999.

5: The decline of the GBP

Around 70 per cent of countries held sterling reserves in 2025, making it the third most widely held currency in the database. Despite this broad presence, sterling shares remain small in most countries. They are highest in the euro area, non-euro area European countries, and Asia-Pacific, and very small in Africa and the Americas. Sterling holdings declined over the sample period, especially during the 2010s, but have recently stabilised and increased modestly (see Figure 7). While African countries reduced their holdings throughout the period, euro-area countries have increased theirs in recent years. South America is the clear outlier, with sterling holdings rising steadily, largely at the expense of the euro, (see Appendix B). From 1999 to 2025, sterling shares declined in Africa, non-euro-area European countries, and Asia-Pacific. The fall was sharpest in Africa, alongside increases in US dollar and, to a lesser extent, Chinese renminbi shares. Sterling shares rose in the euro area and, more modestly, in North and South America, albeit from a low base.

Figure 7: Cumulative change in global GBP share.



Source: Central bank websites and own calculations of FX valuation effects.

Note: The figure shows the cumulative change in the global GBP reserve share relative to 1999.

6: The rise of the AUD and the CAD

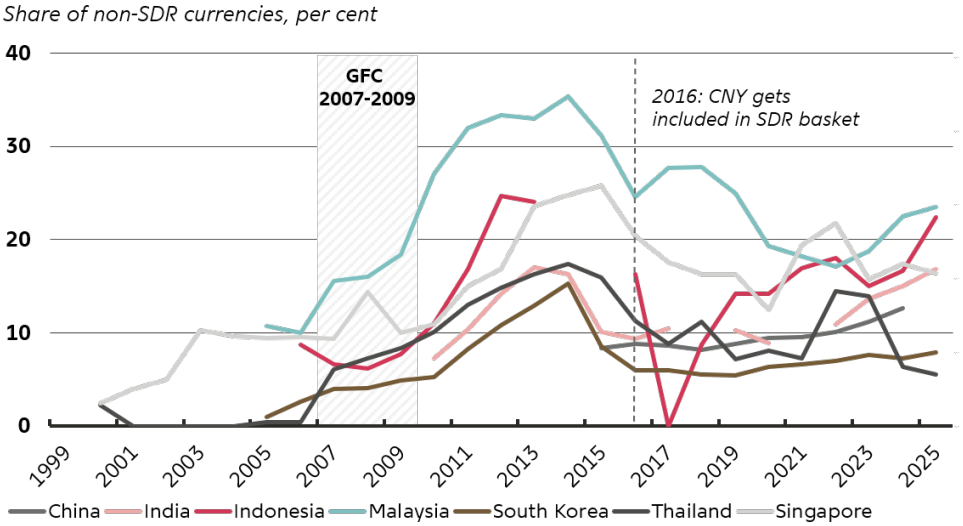
Between 20 and 30 per cent of countries in the database hold Canadian dollar (CAD), with a similar proportion holding Australian dollars (AUD). Average AUD and CAD holdings rose steadily until the early 2010s, with the increase driven primarily by AUD holdings (see Appendix B). The increase in AUD holdings then levelled off, while CAD holdings continued to rise into the 2020s. This pattern is strongest in non-euro area Europe, Asia-Pacific, and South America. Euro area holdings of both currencies have increased since the GFC, while Africa and North America hold negligible shares. From 1999 to 2025, CAD holdings increased across all continents. AUD holdings also increased across all regions except Africa, where already small holdings declined, and North America where no AUD holdings are recorded in the database.

7: Asian diversification

Several Asia-Pacific countries with large reserve portfolios but undisclosed currency compositions appear to have diversified away from SDR currencies over the past two decades (Figure 8), a process that began before the GFC and accelerated thereafter. In the Asia-pacific region, the largest non-SDR shares are found in Malaysia (24 per cent),

Indonesia (22 per cent), India (18 per cent), Singapore (16 per cent), China (13 per cent), South Korea (8 per cent), and Thailand (5 per cent). Besides the Asutralian dollar and the Canadian dollar, these countries may hold each other's currencies, particularly the Chinese renminbi.[19] By contrast, other large Asian reserve holders, notably Japan and the Philippines, hold only marginal non-SDR shares.[20]

Figure 8: Foreign currency assets in non-SDR currencies



Source: The IMF.

Note: The figure shows the share of non-SDR currencies held by individual countries at a given point in time.

8: The emergence of small cross-regional reserve currencies

Several smaller currencies are held by reserve managers across at least three continents or currency blocs, including the Swiss franc, New Zealand dollar, Korean won, Norwegian krone, Swedish krona, Danish krone, Singapore dollar, and Czech koruna, (see also Arslanalp et al, 2022). Most are issued by sovereigns with AAA credit ratings from the major rating agencies, with the exceptions of New Zealand, South Korea, and the Czech Republic. The number of reserve managers holding Korean won, New Zealand dollar,

[19]The Chinese renminbi entered the SDR basket in 2016, possibly explaining that year's decline in non-SDR shares in several countries.

[20]There is also a large group of European countries that disclose the currency composition of their foreign exchange reserves and maintain sizeable holdings of non-SDR currencies. Among these countries, the Australian and Canadian dollars are the most prominent, while the Swiss franc, Norwegian krone, and Swedish krona account for smaller shares.

Norwegian krone and the Swedish krona has increased over time, while fewer hold Swiss franc than a decade ago.[21]

9: The presence of small regional reserve currencies

Another group can be characterized as small regional reserve currencies, as each is held but at least one other central bank within the same region or continent. These include the South African rand, the Botswana Pula, the Malaysian ringgit, the Indian rupee, the Russian ruble, the Saudi riyal, and the Polish Zloty. Among these currencies, the South African rand stands out in that it serves as the dominant reserve currency for a number of African central banks.

10: The link between gold buying and USD holdings

Since the GFC, a large number of central banks have bought gold.[22] This group of countries, consisting mainly of emerging markets, has, on average not reduced the share of US dollars in its foreign exchange reserves. This is consistent with Weiss (2025) who finds that recent gold reserve accumulation is generally not associated with de-dollarization of international reserves at the country level, except in a few prominent cases (see Figure 9).[23] However, countries that either sold gold during the sample period or maintained broadly unchanged gold holdings tend to have significantly higher average USD shares in their foreign exchange reserve.[24]

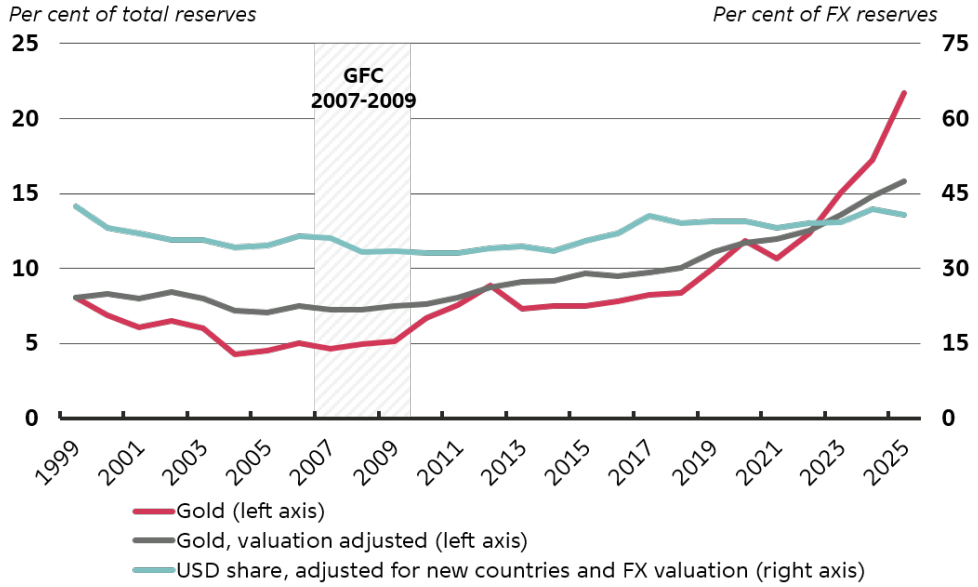
[21] Nevertheless, the CHF remains the most widely held smaller reserve currency in the database.

[22] Over the full sample period from 1999 to 2025, I estimate that around 60 countries were net purchasers of gold. Nearly all of these purchases occured after the GFC, with gold buying accelerating in recent years.

[23] Notable exceptions include Russia, Turkey, and China.

[24] According to the method used, 25 countries are estimated to have been net sellers of gold during the sample period, including several Western countries that reduced their gold reserves during the 2000s.

Figure 9: Cumulative change in gold and US dollar holdings among gold buyers



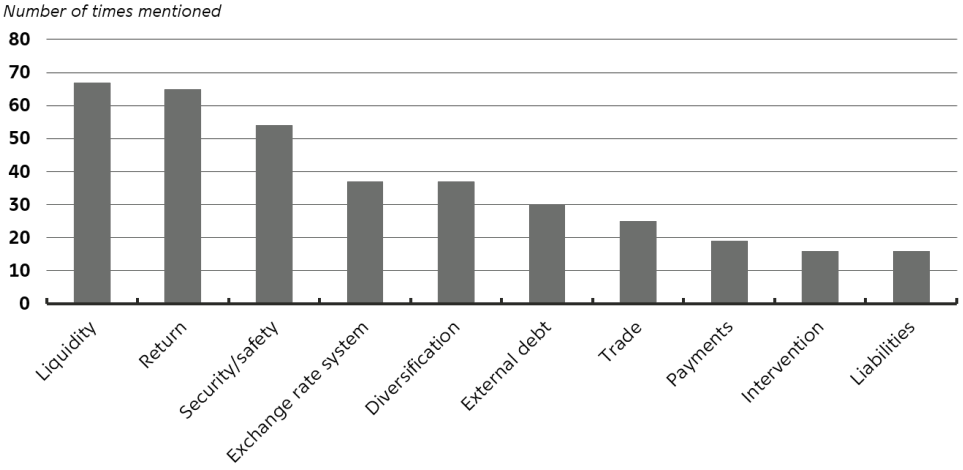
Source: The IMF, central bank websites and own calculations of gold and FX valuation effects.

Note: Cumulative change in gold and US dollar holdings among gold buyers.

5 Factors

Liquidity, return, and safety are, in that order, the determinants most frequently cited by central banks when explaining their reserve currency allocation decisions among those that publicly disclose such information and are included in the database. Other commonly cited determinants include the exchange rate regime, diversification objectives, external debt, trade patterns, payment needs, foreign exchange intervention, and the currency composition of liabilities (see Figure 10). These considerations influence both the choice of reserve currencies and the selection of underlying reserve assets, with central banks investing predominantly in central bank deposits and government bonds.

Figure 10: What central banks say about foreign exchange allocations



Source: Central bank websites

Note: The columns show the number of countries in the database that identify each determinant as influencing their reserve currency allocation decisions.

The determinants most frequently cited by central banks when explaining their reserve currency allocation are broadly consistent with the literature. The prioritization of liquidity, return, and safety aligns closely with the guidelines issued by the IMF (2013) and the reserve management framework developed by Borio et al (2008a). One notable difference is that both studies rank safety ahead of return, whereas central banks in the database more frequently cite return before safety.

The notion that safe assets, such as highly rated government bonds, provide valuable liquidity and safety services builds on the work of Krishnamurthy and Vissing-Jorgensen (2012). The importance of exchange rate arrangements, trade and payment patterns, the currency denomination of external debt and other liabilities, and foreign exchange intervention needs in shaping reserve currency allocations can be traced back to Dooley et al. (1989), Eichengreen and Mathieson (2000), Papaioannou et al. (2006), and Borio et al. (2008b). More recent research has highlighted the role of trade invoicing currencies, domestic banks' foreign currency funding, and broader financial linkages, while also documenting active diversification into non-traditional reserve currencies (Gopinath and Stein, 2018; Ito and McCauley, 2020; Iancu et al., 2020; Arslanalp et al., 2022). Although central banks rarely communicate this publicly, research has shown that alliances and geopolitical considerations may also influence the choice of reserve currency

composition, Eichengreen et al (2019), Weiss (2022) and Goldberg and Hannaoui (2026)

As described above, developments in the currency composition of countries' foreign exchange reserves, as well as in central banks' gold holdings, can be divided into three distinct periods: 1) the 2000s, 2) the 2010s, and 3) the 2020s. Below, I discuss the factors that may have driven changes in reserve allocations during each of these periods and how these factors align with the determinants highlighted by central banks themselves as well as with the literature.

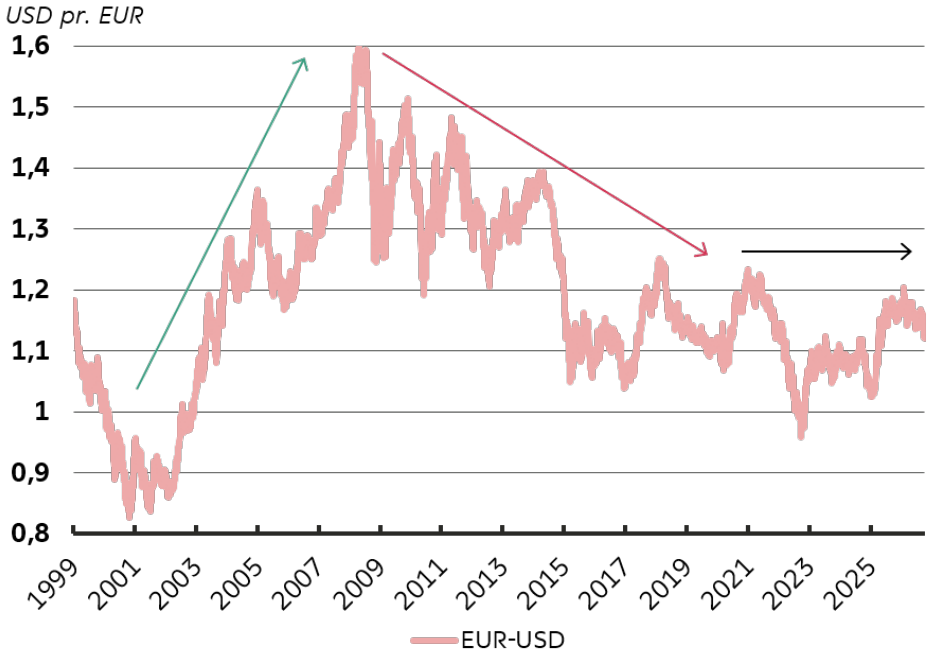
5.1 The 2000s: Euro ascendancy amid broad-based dollar weakness and Asia's gradual decoupling

The rise of the euro

Optimism about the euro area's institutional framework, particularly the establishment of an independent ECB committed to price stability and the prospect of deeper European integration, supported confidence in the euro's international potential despite its initial depreciation following its introduction in 1999, (ECB, 1999). The growth and increasing integration of euro area financial markets enhanced the euro's attractiveness to reserve managers as an alternative to the US dollar (Galati and Wooldridge, 2006). Reflecting this optimism, some studies argued that the euro could eventually rival or even surpass the dollar as the world's leading reserve currency (Chinn and Frankel, 2008).

This optimism, together with the euro's appreciation and the increasing integration of euro-area financial markets throughout the 2000s, during which interest spreads across government bond markeds narrowed, likely strengthened the euro's appeal across several key determinants of reserve allocation, including liquidity, safety, return, and diversification. Consistent with this interpretation, every region in the database increased its euro holdings after adjusting for valuation effects throughtout the 2000s, with the exception of South America, where euro holdings remained broadly unchanged.

Figure 11: EUR-USD rose sharply during the 2000s.



Source: Bloomberg.

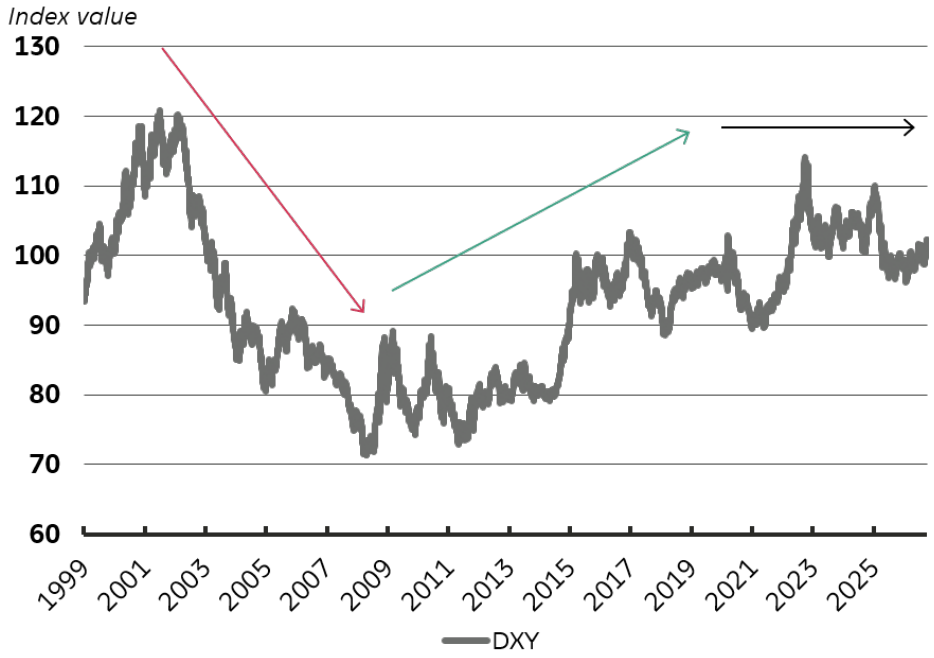
Broad-based US dollar weakness

The 2000s were characterized by broad-based US dollar weakness, interrupted only during the most acute phase of the global financial crisis in late 2008 and early 2009, alongside a strong euro. The dollar's weakness at the time was associated with the widening US current account deficit (Obstfeld and Rogoff, 2005; Blanchard et al., 2005). Dollar depreciation was seen as facilitating US external adjustment through favourable valuation effects in the short run, as US foreign assets were largely denominated in foreign currencies while external liabilities were predominantly in dollars, and through improvements in the trade balance over longer horizons (Gourinchas and Rey, 2007). Cyclically, the dot-com burst early in the decade weakened US growth, equity returns, and private capital inflows, while the Federal Reserve cut its policy rate from 6.5 per cent to 1 per cent by June 2003, reducing the relative return on dollar assets.

Persistent US dollar weakness likely reduced the dollar's attractiveness across several key determinants of reserve currency allocations, particularly return and diversification. Lim (2006) and Galati and Wooldridge (2006) argued that diversification into euros was

especially pronounced among countries with closer ties to the euro area through exchange rate arrangements, trade relationships, and financial linkages.

Figure 12: The DXY Index fell broadly during the 2000s.



Source: Bloomberg.

Asia's gradual decoupling

China's revaluation of the renminbi and its move away from the US dollar peg in July 2005 fuelled expectations of broader Asian currency appreciation and a gradual decoupling of regional exchange rate regimes from the dollar. Since exchange rate anchors influence the optimal composition of reserve portfolios, both according to the academic literature and central banks' own public statements, weaker links to the dollar may have reduced the rationale for concentrating reserves in US dollars and encouraged greater allocations to euros and regional currencies. Such diversification could occur gradually through a larger share of newly accumulated reserves being invested in non-dollar assets.

Consistent with this view, Singapore diversified away from SDR currencies in the early 2000s, followed by Malaysia and Indonesia prior to the GFC (see Figure 8). Moreover, the US dollar's share of China's foreign exchange reserves declined from 79 per cent in 1995 to 58 per cent in 2014. It is likely that a substantial part of this decline occured

during the 2000s, a view supported by the estimates in Sheng (2013).

However, the extent to which China's exchange rate reform contributed to broader reserve diversification across Asia remains uncertain. This partly reflects China's gradual shift away from its dollar peg. The renminbi returned to a near-dollar peg between mid-2008 and mid-2010, slowing the pace of the transition and limiting the degree of exchange rate decoupling from the US dollar.

US dollar funding pressures during the GFC and the 2010s

The GFC of 2007-09 exposed vulnerabilities in global US dollar funding markets, highlighting the importance of reliable access to dollar liquidity. After a period of abundant US dollar funding throughout most of the 2000s, European and Japanese banks' large US dollar assets became vulnerable when the short-term wholesale funding and FX swap markets used to finance them came under stress (McGuire and von Peter, 2009). Previously near-zero euro–dollar and dollar-yen cross-currency bases turned sharply negative from 2007 onwards, indicating that obtaining dollars through FX swaps had become more expensive than borrowing directly in US dollar money markets (see Figure 13). These dislocations intensified following the collapse of Lehman Brothers in September 2008, although the expansion of Federal Reserve swap lines helped alleviate the funding shortage (Baba and Packer, 2009).

For investors and policymakers, the crisis highlighted the risk associated with relying on continued access to dollar funding and currency conversion during periods of market stress. Dollar funding pressures persisted throughout the 2010s, as cross-currency basis deviations reflected strong hedging demand and constraints on banks' capacity to intermediate and arbitrage across markets (Du et. al, 2018; Borio et. al, 2016).

Against this backdrop, the GFC may have increased the perceived liquidity value of holding US dollars and US dollar-denominated assets, which both central banks themselves and the academic literature identify as the most important consideration in reserve currency allocation. The GFC may therefore have encouraged central banks to maintain larger buffers of readily available US dollar reserves and secure reliable swap-line back-

stops, given that reserves held in other currencies could become costly or difficult to convert into dollars precisely when needed (Allen and Moessner, 2010; BIS, 2010). This consideration may have been particularly important for countries whose foreign exchange reserves were relatively low compared with their potential liquidity needs during a crisis, potentially strengthening the incentive to hold a larger share of their reserves in US dollars.

Figure 13: Cross currency basis in EUR-USD and USD-JPY widened sharply during the GFC and remained elevated throughout much of the 2010s



Source: Bloomberg

Note: A negative USD-JPY or EUR-USD cross-currency basis indicates that obtaining US dollar funding by borrowing yen or euros and swapping them into US dollars is more expensive than borrowing directly in US dollar money market.

5.2 The 2010s: US dollar resilience amid financial stress, euro area turmoil and renminbi internationalization

The euro-area sovereign debt crisis

The euro-area sovereign debt crisis of 2010–12 exposed the vulnerabilities of an incomplete monetary union and raised doubts about its viability (Lane, 2012; Shambaugh,

2012). In the years preceding the crisis, credit and property booms, external imbalances, competitiveness losses, and fiscal vulnerabilities had accumulated without common banking safeguards or an framework for managing sovereign crises. The GFC exposed these weaknesses, and Greece's fiscal revelations in late 2009 triggered a broader reassessment of sovereign risk across the euro area. Bank rescues weakened public finances, while deteriorating sovereign creditworthiness impaired banks' balance sheets, creating a destabilising feedback loop between sovereigns and banks (Acharya et al, 2014). The lack of a credible central-bank liquidity backstop for sovereign debt left euro-area governments vulnerable to self-fulfilling funding pressures (De Grauwe and Ji, 2013), while fiscal tightening and bank deleveraging weakened demand and growth (Shambaugh, 2012). The policy response combined EU–IMF assistance, Greek debt restructuring, the creation of the European Stability Mechanism, and steps towards a banking union. Financial markets stabilised following Draghi's July 2012 "whatever it takes" pledge and the ECB's conditional Outright Monetary Transactions backstop, although high public debt and weak growth persisted. The euro depreciated over much of the 2010s, and government bond yield spreads within the euro area, which had widened sharply during the crisis years, remained significantly higher than in the 2000s.

The euro area sovereign debt crisis likely weakened the euro's appeal across several key determinants of reserve currency allocation, most natably liquidity, safety, and return, which are consistently identified as the three most important determinants in both the academic literature and central banks' public statements. As a result, the crisis may have encouraged reserve managers to reduce euro allocations in favour of the US dollar and, to a lesser extent, other reserve currencies, including the Chinese renminbi. Consistent with this interpretation, all regions in the database reduced the average share of euros in their foreign exchange reserves during the 2010s, even after adjusting for the euro's substantial depreciation over the decade.

The internationalization of the renminbi

Renminbi internationalisation, which gained momentum in 2010, initially expanding

the currency's role primarily in trade. In 2010, China promoted the use of the renminbi for foreign trade settlement to reduce firms' reliance on foreign currencies and their exposure to exchange rate risk. The July 2010 liberalisation of Hong Kong's renminbi clearing arrangements supported the expansion of offshore renminbi markets, including deposits, "dim sum" bonds and, subsequently, deliverable CNH forwards (HKMA, 2010; McCauley, 2011). Alongside the expansion of swap arrangements and clearing infrastructure, the renminbi's share of China's cross-border goods-trade receipts and payments reached 29.1 per cent in the first half of 2026 (PBoC, 2026)

The growing use of the Chinese renminbi in trade settlement, together with China's increasing importance in global trade, may have encouraged countries to increase their reserve allocations to the currency, consistent with the argument put forward by Gopinath and Stein (2018). Notably, the regions with the largest shares of renminbi in their foreign exchange reserves, in descending order, are Asia, South America, and Africa, which are also the regions with the largest shares of their trade with China.[25] Expectations of renminbi appreciation, its growing importance in Asian exchange-rate systems, and diversification motives likely also contributed to its rise as a reserve currency, consistent with the factors central banks themselves identify as important for foreign exchange reserve allocations (see Figure 10). Broader access to both onshore and offshore government bond markets may also have supported reserve allocations to the renminbi, although capital controls and limited financial openness continue to constrain its global role.

Broad-based US dollar strength

The 2010s brought renewed US dollar strength, driven by the relative resilience of the US economy, monetary policy divergence, and demand for safe assets. Early in the decade, the euro area sovereign debt crisis triggered safe-haven flows that supported the US dollar (Federal Reserve, 2010). More generally, the safety and liquidity of US Tresuries during episodes of global uncertainty may have provided additional support, as stronger foreign demand for these attributes increased their convenience yield and strengthened

[25] I am not aware of regional data on the share of trade with China settled in renminbi.

the dollar (Jiang et. al, 2021). The dollar's appreciation accelerated from mid-2014, as the stronger US recovery supported expectations of Federal Reserve tightening, while the ECB and the Bank of Japan expanded monetary stimulus, shifting expected interest-rate differentials in the dollar's favour (BIS, 2015).

Expectations of higher US short-term interest rates and continued dollar strength, together with the convenience yields of US Treasuries, may therefore have enhanced the dollar's appeal throughout the 2010s across several key determinants of reserve allocation, particularly liquidity, safety, and expected return.

Geopolitics

Geopolitical tensions during the 2010s may, however, have pulled in the other direction. The freezing of Libyan official assets in 2011 and sanctions against Russia from 2014 highlighted the possibility that political disputes could restrict access to foreign assets and dollar payments.

For countries that perceived themselves as vulnerable to potential US sanctions, these geopolitical tensions may have reduced the perceived safety benefits of holding US dollar-denominated assets in reserve allocations. Russia sharply reduced its dollar-denominated reserve assets and increased its holdings of Chinese renminbi assets in 2018, coinciding with an escalation of US sanctions and reflecting concerns about the security of its reserves (McDowell, 2021). Turkey's sharp reduction in US Treasury holdings during 2018 coincided with deteriorating relations with Washington and US sanctions, suggesting that concerns about US financial pressure may have encouraged diversification (McDowell, 2021).

Still, historical evidence linking military alliances to reserve currency choice suggests that US security ties may have supported dollar holdings among its partners (Eichengreen et. al, 2019). Countries with strong geopolitical relations with the U.S. likely perceive a smaller increase in sanctions risk, (Weiss, 2022).

5.3 The 2020s: Geopolitics and range-bound currencies

Geopolitics continued

Geopolitical tensions in the 2020s increased further and may have continued to reinforce incentives for reserve diversification in some countries. The freezing of Russian central-bank assets following the invasion of Ukraine in 2022 highlighted the risk that reserves in US dollars, euros and other currencies issued by sanctioning countries could become inaccessible (Weiss, 2022). Still, Chinn et. al (2024) find limited robust cross-country evidence that sanctions systematically influence the currency composition of foreign exchange reserves.

Geopolitical tensions may, however, have contributed more strongly to the increase in central bank gold purchases during this decade, as gold is widely regarded as a safe-haven asset in periods of heightened global uncertainty, (see also Arslanalp, 2023). In explaining their gold purchases, several central banks have publicly cited gold's safe-haven properties, particularly amid heightened geopolitical uncertainty, as well as its diversification benefits within reserve portfolios.

More range-bound major currencies

Compared with the 2000s and 2010s, reserve currencies, including the US dollar, euro, pound sterling, Australian dollar, Canadian dollar, and the Chinese renminbi have been more range-bound during the 2020s. As a result, exchange rate developments, through their impact on return expectations, may have played a less important role in shaping reserve currency composition than in previous decades. The Japanese yen stands out as a clear exception, heaving depreciated sharply against the other major currencies. Interestingly, however, this does not appear to have been a major driver of changes in central banks' allocations to the yen.

6 Conclusion

In this paper, I present what is, to the best of my knowledge, the most comprehensive and detailed database on the currency composition of countries' foreign exchange reserves. Spanning the period from the introduction of the euro in 1999 to 2026, the database covers 149 countries and identifies reserve holdings across 23 currencies.

Over the sample period, I find that more countries increased their US dollar share than reduced it. By contrast, since the introduction of the euro, more countries have reduced their euro share than increased it. I identify three distinct periods in the evolution of foreign exchange reserve holdings: the 2000s, the 2010s, and the 2020s. The average US dollar share declined in the 2000s, recovered after the GFC during the 2010s, and has remained broadly stable in the 2020s. Average euro holdings increased in the 2000s but declined throughout the 2010s before stabilizing toward the end of the decade and into the 2020s. Several large Asian reserve holders appear to have diversified substantially away from SDR currencies, particularly since the GFC. Many central banks have also purchased gold since the GFC, especially in recent years, but these countries have not reduced their share of US dollar holdings.

I offer broad interpretations of the factors driving reserve currency composition across the three periods and assess how they align with the determinants highlighted by central banks themselves and in the literature. In the 2000s, allocations may have reflected optimism about the euro, US dollar weakness, and looser dollar links in parts of Asia. Late in the decade, stress in US dollar funding markets highlighted that converting non-dollar reserves could be costly during periods of market stress, potentially strengthening incentives to hold US dollar reserves, particularly for countries with substantial US dollar liquidity needs. Meanwhile, in the 2010s, dollar strength, US economic resilience, and monetary policy divergence may have encouraged reserve allocations to the dollar. The euro-area sovereign debt crisis raised concerns about default, redenomination, and liquidity, supporting safe-haven flows to the US dollar. Geopolitical considerations may have become more important from the late 2010s into the 2020s. Yet for most countries,

geopolitics does not appear to have been a major determinant of US dollar reserve holdings. By contrast, geopolitical uncertainty may have exerted a stronger influence on gold allocations given gold's safe-haven properties and portfolio diversification benefits.

In future work, I aim to develop the theoretical and empirical applications of the database. What does a model that incorporates central banks' preferences for liquidity, safety, and return, alongside geopolitical considerations and the other factors outlined in Figure 10 and the literature, imply for the optimal allocation of foreign exchange reserves? And to what extent does such a theoretical framework align with the actual behavior of central banks observed in the dataset?

Going forward, the database will be updated continuously, allowing researchers and central banks to monitor developments in reserve currency allocations on an ongoing basis. While the analysis in this paper covers the period from 1999 to 2025, the database also includes 2026 data for countries that have already reported them. Although the sample remains small, these data point to a slight decline in the average share of US dollar holdings and a slight increase in the average share of euro holdings. Whether this marks the beginning of a new trend remains to be seen.

Appendix A. Sources

Table A.1: Sources for currency composition

Country	Available years	Region	Source
Afghanistan	2007-2023	APAC	Da Afghanistan Bank
Albania	2003-2025	NEAE	Bank of Albania
Angola	2012-2025	AFR	Banco Nacional De Angola
Anguilla	2004-2026	NA	Eastern Carribean Central Bank
Antigua & Barbuda	2004-2026	NA	Eastern Carribean Central Bank
Armenia	2004-2025	APAC	Central Bank of the Republic of Armenia
Aruba	2010-2011, 2021-2022	SA	Central Bank of Aruba
Australia	1999-2025	APAC	Reserve Bank of Australia
Azerbaijan	1999-2024	APAC	Central Bank of the Republic of Azerbaijan
Bahamas	2011-2025	NA	Central Bank of the Bahamas
Bahrain	2002-2014	APAC	Bahrain Monetary Agency
Bangladesh	2006-2025	APAC	Bangladesh Bank
Barbados	1999-2025	NA	Central Bank of Barbados
Belgium	1999-2025	EA	National Bank of Belgium
Belize	2008-2011, 2015-2025	NA	Central Bank of Belize
Benin	2002-2010, 2012-2025	AFR	BCEAO
Bhutan	2013-2021	APAC	IMF
Bolivia	2008-2025	SA	Banco Central de Bolivia
Bosnia and Herzegovina	1999-2025	NEAE	Central Bank of Bosnia and Herzegovina
Botswana	2019-2024	AFR	Bank of Botswana
Brazil	2002-2025	SA	Banco Central Do Brasil
Brunei	2011-2024	APAC	Central bank of Brunei
Bulgaria	1999-2025	NEAE	Bulgarian National Bank
Burkina Faso	2002-2010, 2012-2025	AFR	BCEAO
Burundi	2013-2017, 2020-2021	AFR	Banque de la Republique du Burundi
Cameroon	2001-2025	AFR	BEAC
Canada	1999-2025	NA	Canada, Department of Finance
Cape Verde	2009-2024	AFR	Banco de Cabo Verde
Central African Republic	2001-2025	AFR	BEAC
Chad	2001-2025	AFR	BEAC
Chile	2004-2025	SA	Banco Central de Chile
China	2014-2019	APAC	State Administration of Foreign Exchange
Colombia	2009-2025	SA	Banco de la Republica Colombia
Comoros	2018-2024	AFR	Banque Centrale Des Comores
Costa Rica	2011-2025	SA	Banco Centrale de Costa Rica
Côte d'Ivoire	2002-2010, 2012-2025	AFR	BCEAO
Croatia	1999-2026	EA	Croatian National Bank
Curacao	2020-2024	SA	Centrale Bank Curacao
Cyprus	2022-2025	EA	Central Bank of Cyprus
Czech Republic	1999-2026	NEAE	Czech National Bank
Democratic Republic of Congo	2011-2024	AFR	Banque Centrale Du Congo
Denmark	1999-2025	NEAE	Danmarks Nationalbank
Dominica	2004-2026	NA	Eastern Carribean Central Bank
Equador	2018-2025	SA	Central Bank of Equador
Equatorial Guinea	2001-2025	AFR	BEAC
Estonia	1999-2005, 2010-2025	EA	Eesti Pank
Eswatini	2008-2017	AFR	Central Bank of Swaziland
Ethiopia	2019-2025	AFR	Bank of Ethiopia
Fiji	2009-2024	APAC	Reserve Bank of Fiji
Finland	2001-2025	EA	Bank of Finland

Note: AFR = Africa; APAC = Asia-Pacific; EA = Euro area; NEAE = Non-Euro area Europe; NA = North America; SA = South America.

Table A.2: Sources for currency composition (continued)

Country	Available years	Region	Source
France	2018-2025	EA	Banque de France
Gabon	2001-2025	AFR	BEAC
Gambia	2012-2023	AFR	Central Bank of the Gambia
Georgia	1999-2023	APAC	National Bank of Georgia
Germany	1999-2025	EA	Deutsche Bundesbank
Ghana	2003-2025	AFR	Bank of Ghana
Greece	2022-2025	EA	Bank of Greece
Grenada	2004-2026	NA	Eastern Carribean Central Bank
Guinea	2017-2023	AFR	Banque Centrale de la Republique de Guinea
Guinea-Bissau	2002-2010, 2012-2025	AFR	BCEAO
Guyana	2020-2024	SA	Bank of Guyana
Hong Kong	1999-2025	APAC	Hong Kong Monetary Authority
Hungary	2001-2025	NEAE	Hungarian National Bank
Iceland	2003-2025	NEAE	Central Bank of Iceland
Iraq	2006-2024	APAC	Central Bank of Iraq
Ireland	2016-2025	EA	IMF
Israel	2011-2025	APAC	Bank of Israel
Italy	1999-2025	EA	Banca D'Italia
Jamaica	1999-2025	NA	Bank of Jamaica
Kazakhstan	1999-2024	APAC	National Bank of the Republic of Kazakhstan
Kenya	2002-2025	AFR	Central Bank of Kenya
Kosovo	2006-2025	NEAE	Central Banking Authority of Kosovo
Kyrgyz Republic	1999-2025	APAC	National Bank of the Kyrgyz Republic
Latvia	1999-2025	EA	Bank of Latvia
Lesotho	2018-2025	AFR	Central Bank of Lesotho
Liberia	2007-2025	AFR	Central Bank of Liberia
Libya	2003	APAC	IMF
Lithuania	1999-2025	EA	Lietuvos Bankas
Luxembourg	2003-2019	EA	Banque Centrale du Luxembourg
Macau	2012	APAC	Monetary Authority of Macau
Madagascar	2017-2022	AFR	Banque Centrale de Madagascar
Malawi	2009-2025	AFR	Reserve Bank of Malawi
Maldives	2012-2016, 2019, 2022-2024	AFR	Maldives Monetary Authority
Mali	2002-2010, 2012-2025	AFR	BCEAO
Malta	2008-2025	EA	Central Bank of Malta
Morocco	2015-2025	AFR	Bank Al-Maghrib
Mauritius	2016-2025	AFR	IMF
Mexico	2020-2025	NA	IMF
Moldova	2011-2025	NEAE	National Bank of Moldova
Mongolia	2010-2025	APAC	Bank of Mongolia
Montenegro	2004-2026	NEAE	Central Bank of Montenegro
Montserrat	2004-2026	NA	Eastern Carribean Central Bank
Mozambique	2007-2025	AFR	Banco De Mozambique
Namibia	2007-2025	AFR	Bank of Namibia
Nepal	2010-2025	APAC	Nepal Rastra Bank
Netherlands	1999-2010, 2014-2025	EA	De Nederlandsche Bank
New Zealand	1999-2025	APAC	Reserve Bank of New Zealand
Niger	2002-2010, 2012-2025	AFR	BCEAO
Nigeria	2010-2025	AFR	Central Bank of Nigeria
North Macedonia	2008-2025	NEAE	National Bank of the Republic of Macedonia

Note: AFR = Africa; APAC = Asia-Pacific; EA = Euro area; NEAE = Non-Euro area Europe; NA = North America; SA = South America.

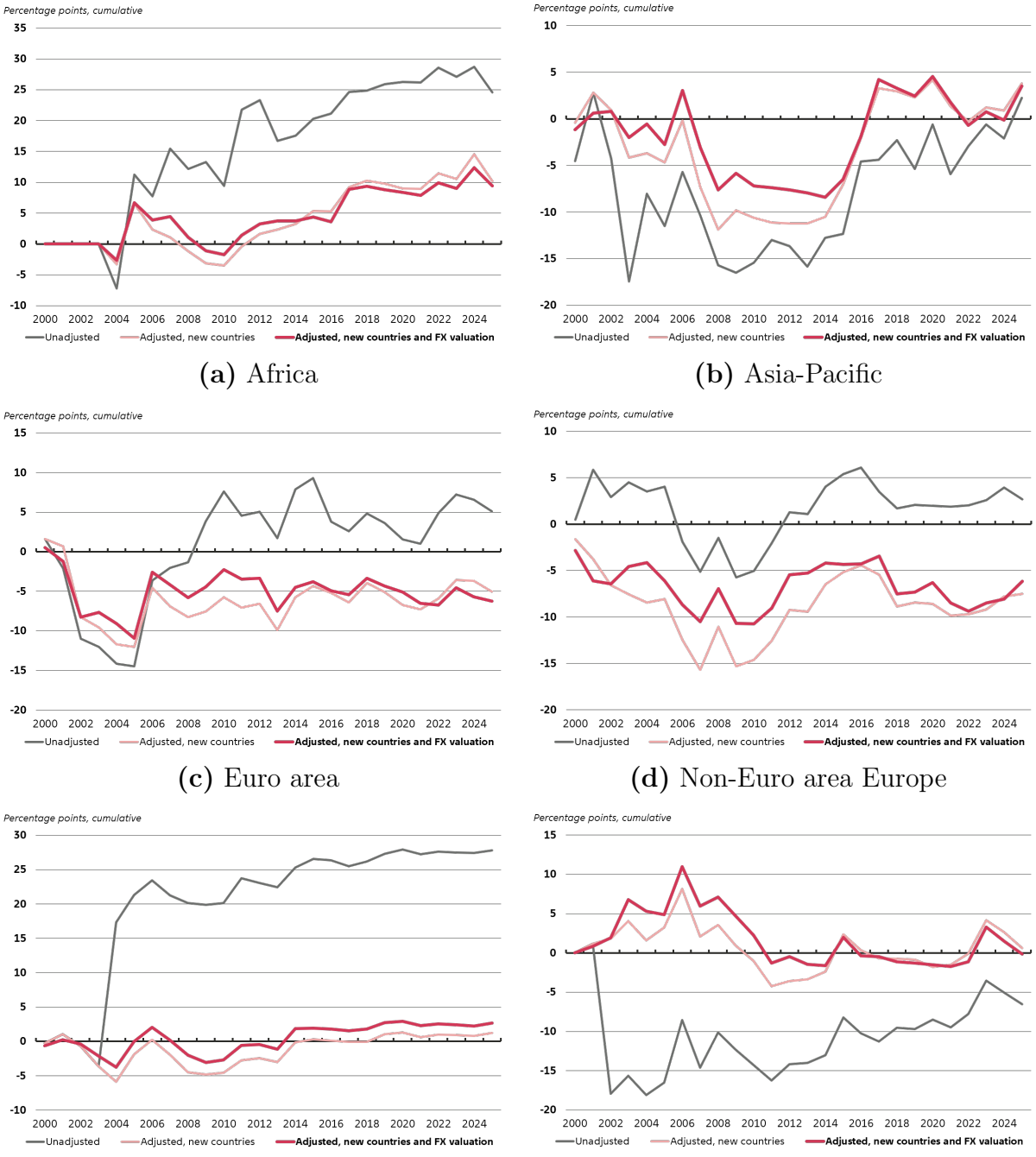
Table A.3: Sources for currency composition (continued)

Country	Available years	Region	Source
Norway	1999-2025	NEAE	Norges Bank
Papua New Guinea	2005-2024	AFR	Bank of Papua New Guinea
Paraguay	2002-2025	SA	Banco Central Del Paraguay
Peru	2000-2025	SA	Central Reserve Bank of Peru
Philippines	2003-2024	APAC	Bangko Sentral ng Pilipinas
Poland	2004-2025	NEAE	National Bank of Poland
Portugal	2014-2017	EA	Banco De Portugal
Republic of the Congo	2001-2025	NEAE	BEAC
Romania	2001-2025	NEAE	National Bank of Romania
Russia	2007-2021	APAC	Bank of Russia
Rwanda	2019-2025	AFR	National Bank of Rwanda
Saint Kitts and Nevis	2004-2026	NA	Eastern Carribean Central Bank
Saint Lucia	2004-2026	NA	Eastern Carribean Central Bank
Saint Vincent and the Grenadines	2004-2026	NA	Eastern Carribean Central Bank
Samoa	2003-2006, 2010-2012, 2017-2024	APAC	Central Bank of Samoa
Sao Tome & Principe	2002-2008	AFR	Banco Central De Sao Tome E Principe
Senegal	2002-2010, 2012-2025	AFR	BCEAO
Serbia	2005-2025	NEAE	National Bank of Serbia
Seychelles	2015-2025	AFR	Central Bank of Seychelles
Sierra leone	2008-2023	AFR	Bank of Sierra Leone
Slovakia	1999-2008	EA	Bank of Slovakia
Slovenia	1999-2024	EA	Banka Slovenia
Solomon Island	2005-2024	APAC	Central Bank Solomon Islands
Somalia	2022-2025	AFR	Central Bank of Somalia
South Africa	2005-2025	AFR	South African Reserve Bank
South Korea	2002-2025	APAC	Bank of Korea
Spain	1999-2025	EA	Banco De Espana
Sri Lanka	2008-2025	APAC	Central Bank of Sri Lanka
Sweden	1999-2025	NEAE	Sveriges Riksbank
Switzerland	1999-2026	NEAE	Swiss National Bank
Tajikistan	2010-2025	APAC	National Bank of Tajikistan
Tanzania	2003-2025	AFR	Bank of Tanzania
Timor Leste	2010-2025	APAC	Central Bank of Timor Leste
Togo	2002-2010, 2012-2025	AFR	BCEAO
Tonga	2015-2025	APAC	National Reserve Bank of Tonga
Trinidad and Tobago	1999-2002	SA	Central Bank of Trinidad and Tobago
Tunisia	2009-2025	AFR	Central Bank of Tunisia
Turkey	2000-2001, 2004-2025	NEAE	The Central Bank of the Republic of Turkey
Uganda	2006-2025	AFR	Bank of Uganda
Ukraine	2001-2026	NEAE	National Bank of Ukraine
United Kingdom	1999-2025	NEAE	Bank of England
United States	1999-2026	NA	Federal Reserve Bank of New York
Uruguay	2006-2025	SA	Banco Central Del Uruguay
Uzbekistan	2023-2025	APAC	The Central Bank of The Republic of Uzbekistan
Vanuatu	2000-2003, 2010-2024	APAC	Reserve Bank of Vanuatu
Venezuela	2011	SA	Central Bank of Venezuela
Zambia	2004-2024	AFR	Bank of Zambia
Zimbabwe	2022-2024	AFR	Reserve Bank of Zimbabwe

Note: AFR = Africa; APAC = Asia-Pacific; EA = Euro area; NEAE = Non-Euro area Europe; NA = North America; SA = South America.

Appendix B. Regional currency developments

Figure B.1: Regional developments in USD share



(a) Africa

(b) Asia-Pacific

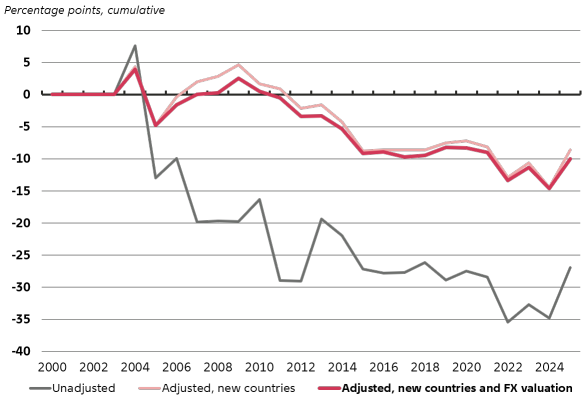
(c) Euro area

(d) Non-Euro area Europe

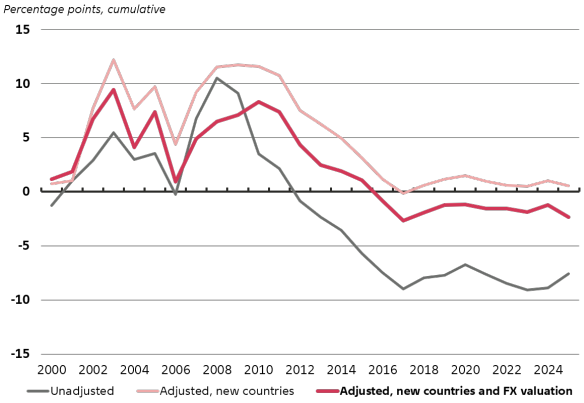
(e) North America

(f) South America

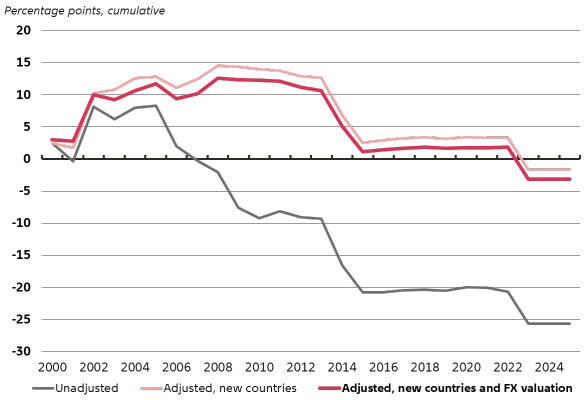
Figure B.2: Regional developments in EUR share



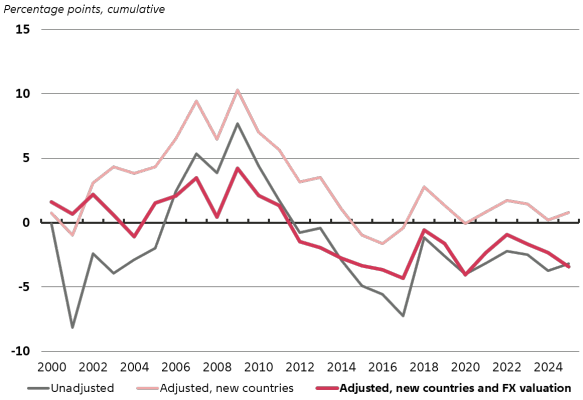
(a) Africa



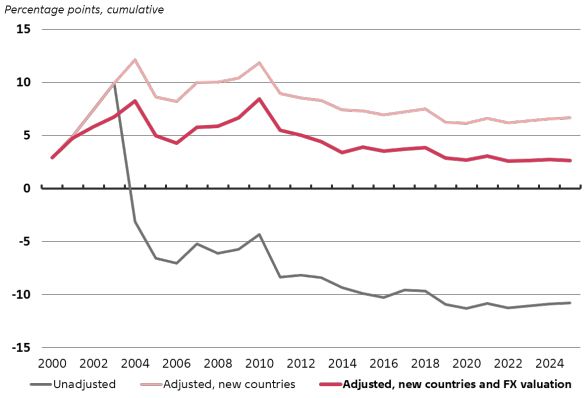
(b) Asia-Pacific



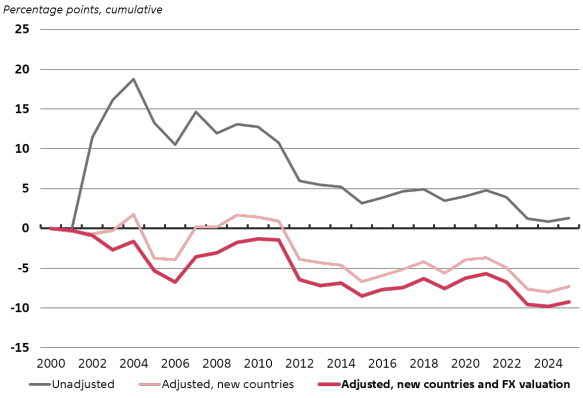
(c) Euro area



(d) Non-Euro area Europe

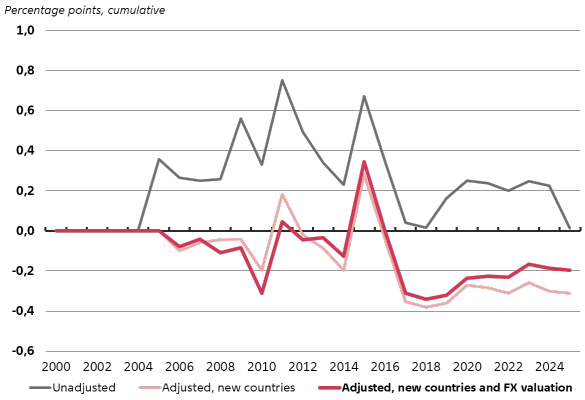


(e) North America

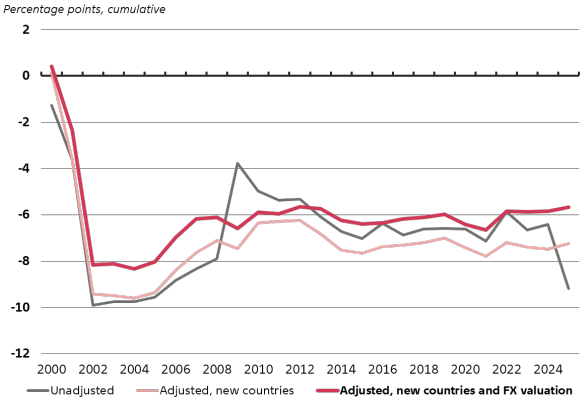


(f) South America

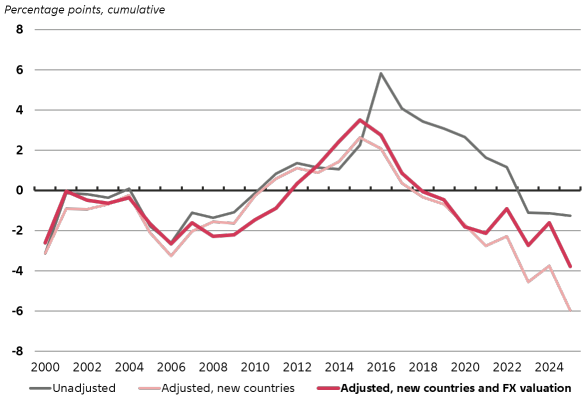
Figure B.3: Regional developments in JPY share



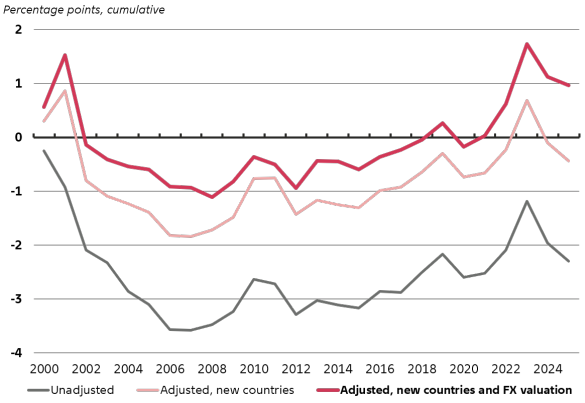
(a) Africa



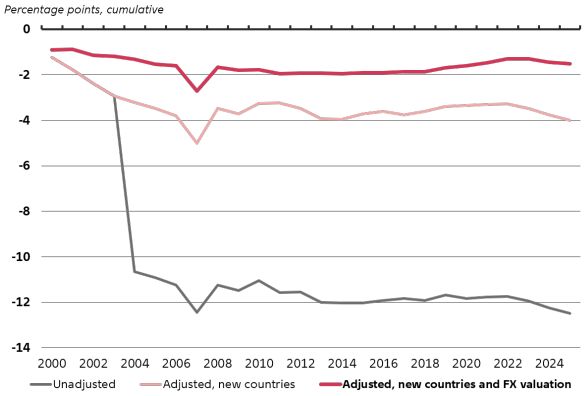
(b) Asia-Pacific



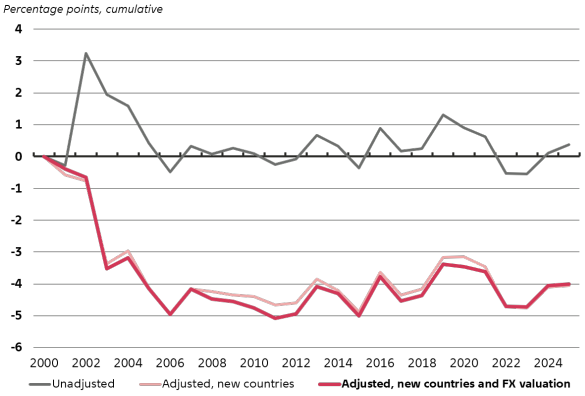
(c) Euro area



(d) Non-Euro area Europe

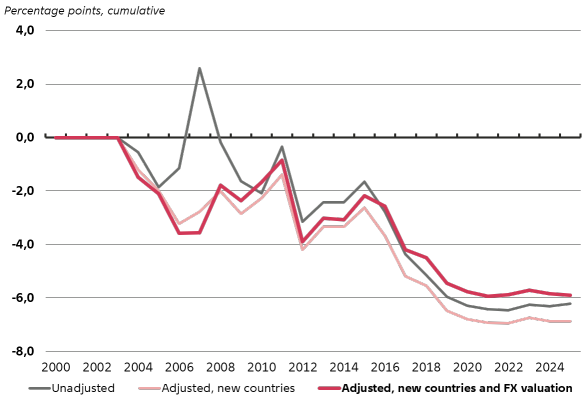


(e) North America

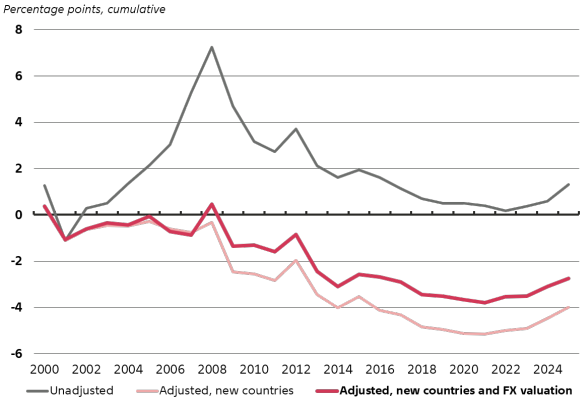


(f) South America

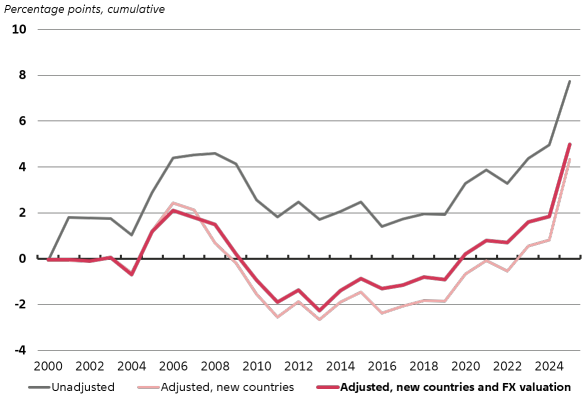
Figure B.4: Regional developments in GBP share



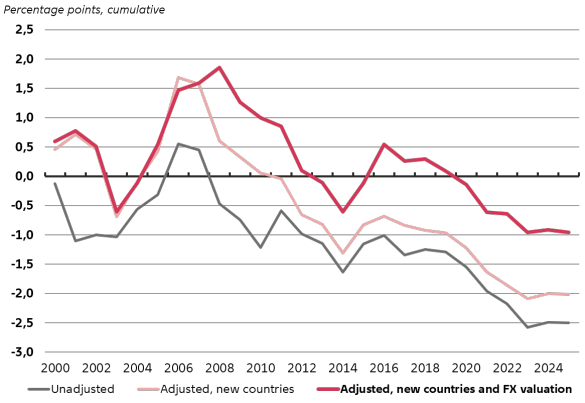
(a) Africa



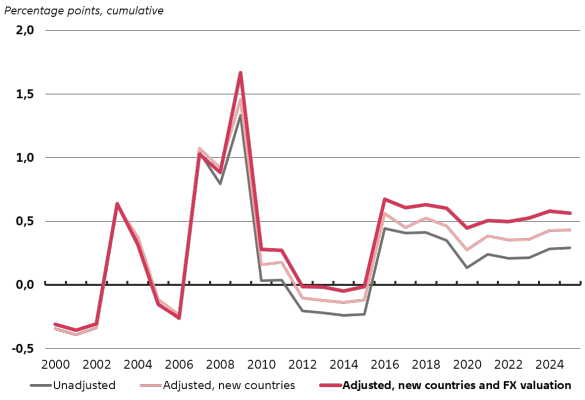
(b) Asia-Pacific



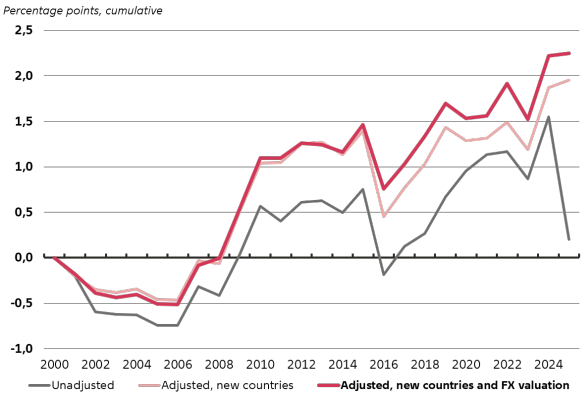
(c) Euro area



(d) Non-Euro area Europe

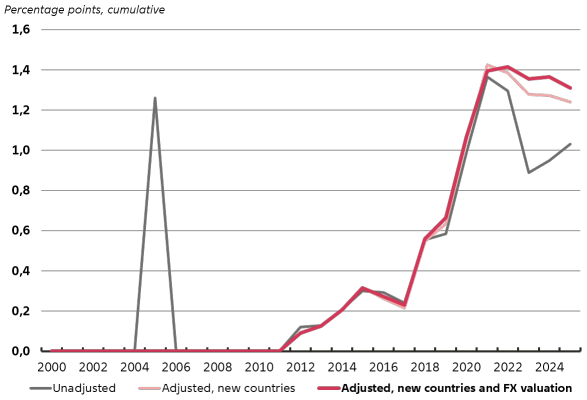


(e) North America

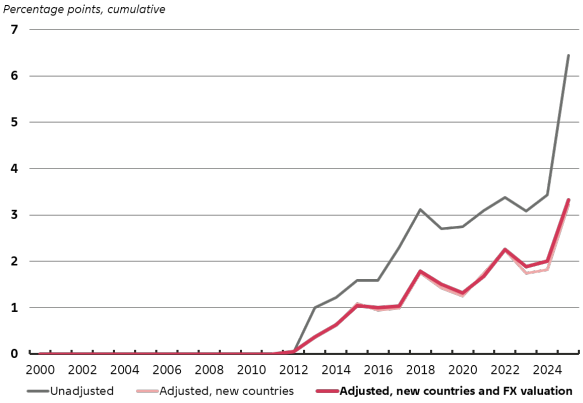


(f) South America

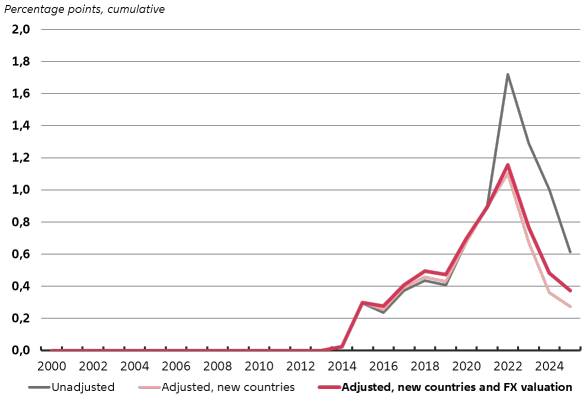
Figure B.5: Regional developments in CNY share



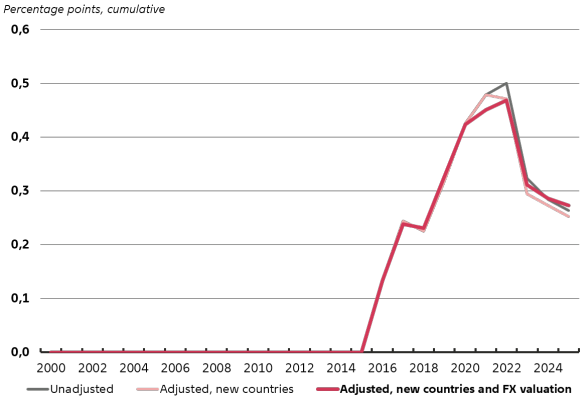
(a) Africa



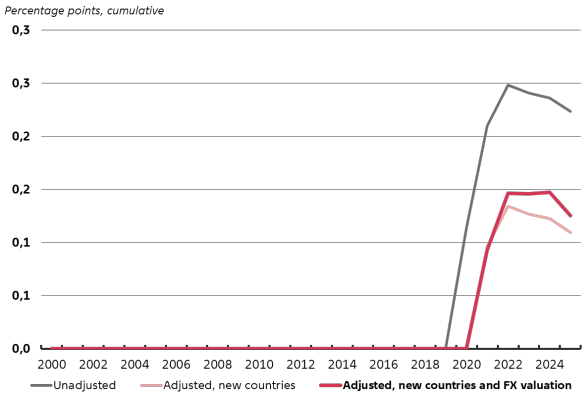
(b) Asia-Pacific



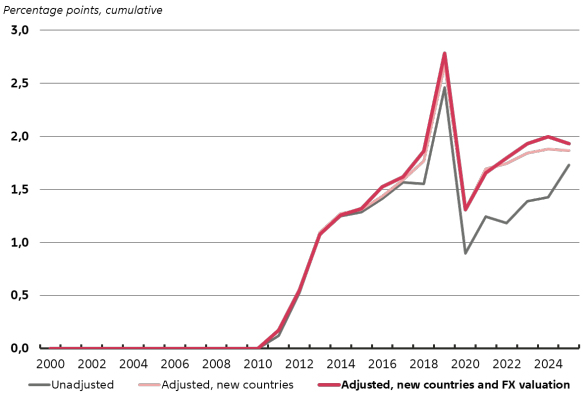
(c) Euro area



(d) Non-Euro area Europe

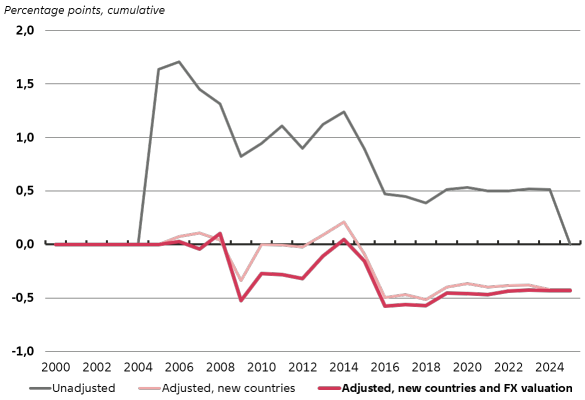


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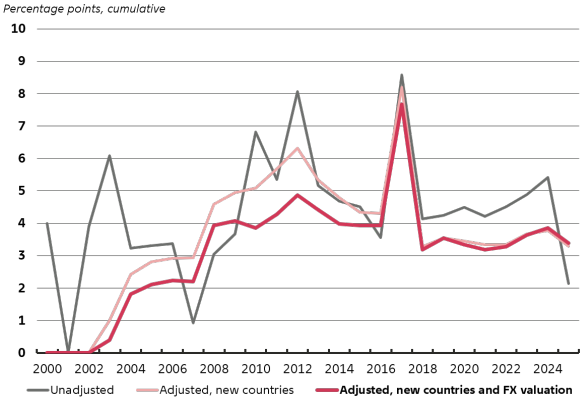


(f) South America

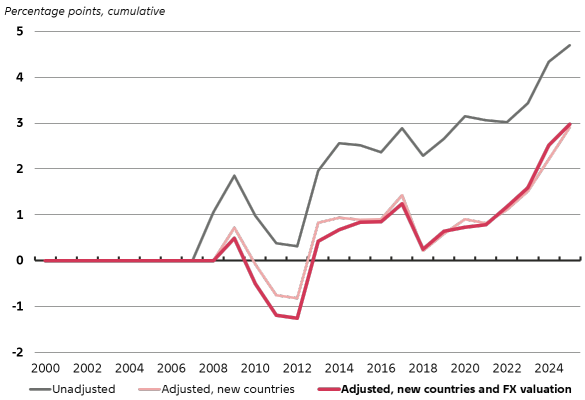
Figure B.6: Regional developments in AUD share



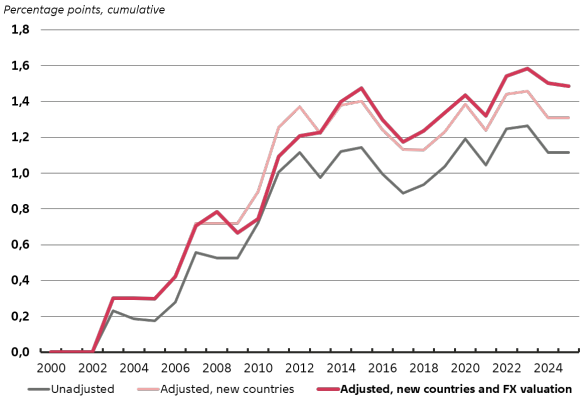
(a) Africa



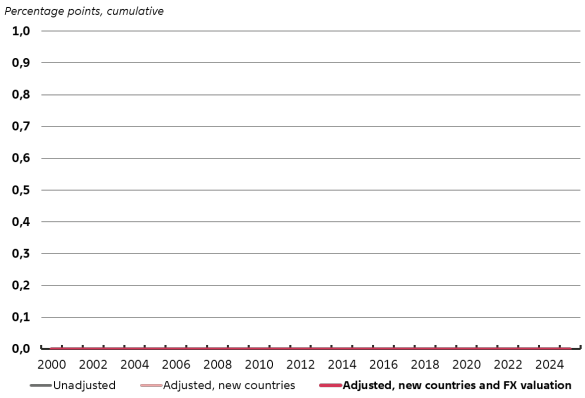
(b) Asia-Pacific



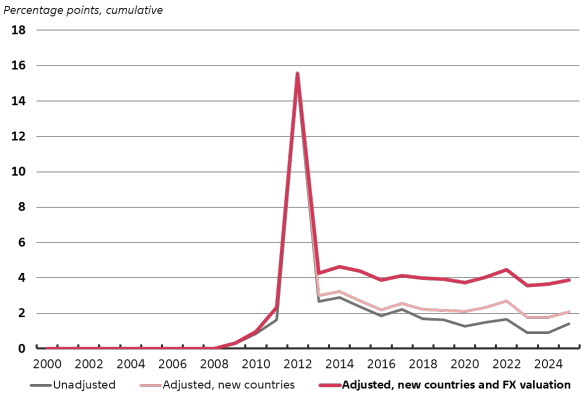
(c) Euro area



(d) Non-Euro area Europe

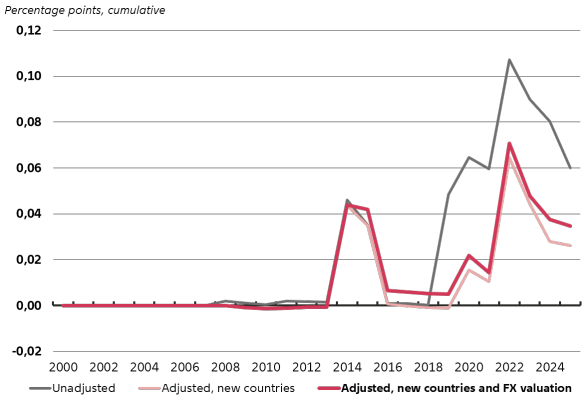


(e) North America

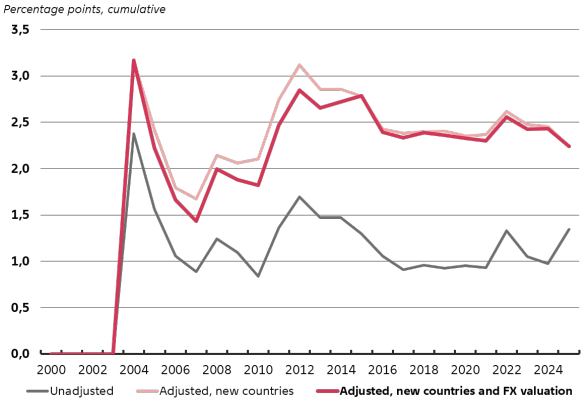


(f) South America

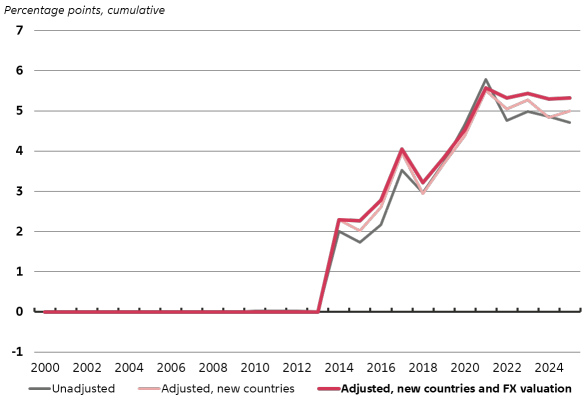
Figure B.7: Regional developments in CAD share



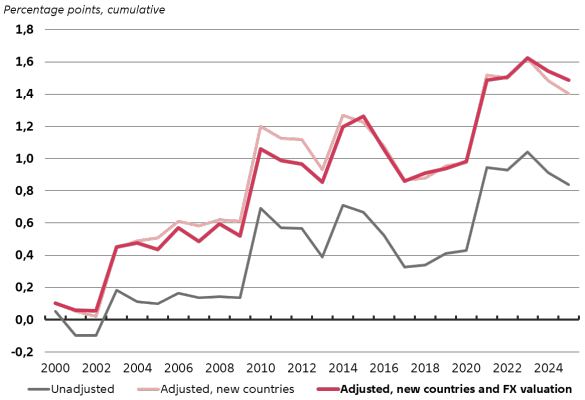
(a) Africa



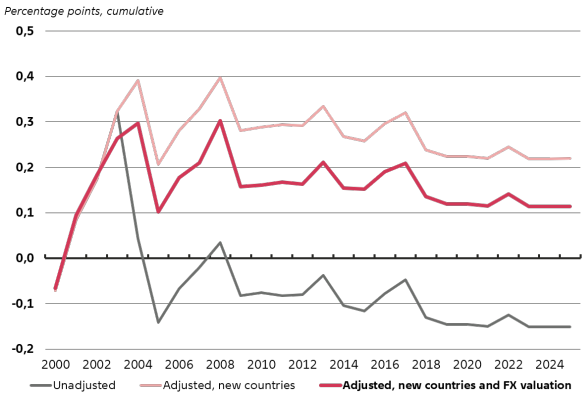
(b) Asia-Pacific



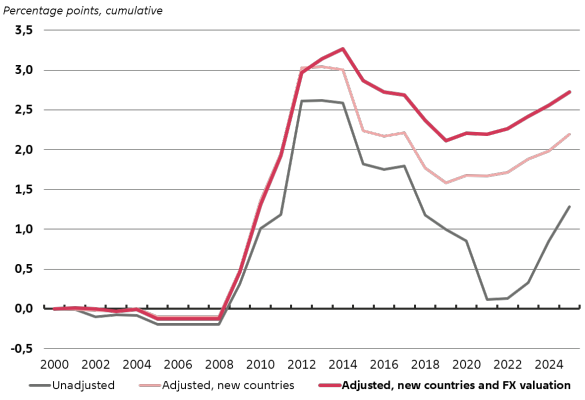
(c) Euro area



(d) Non-Euro area Europe

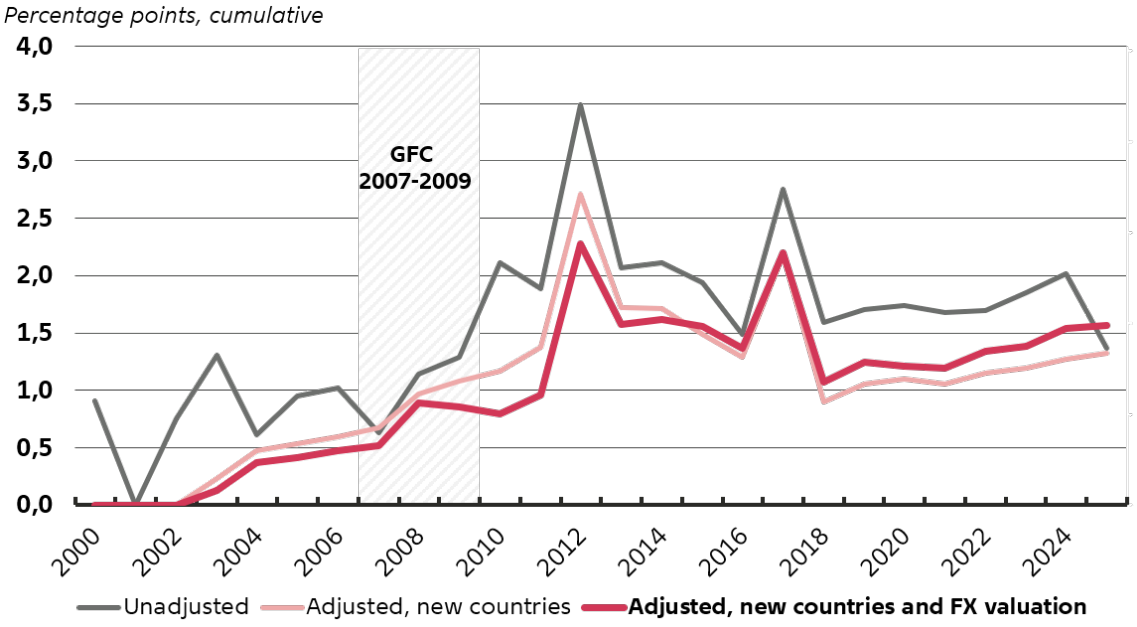


(e) North America

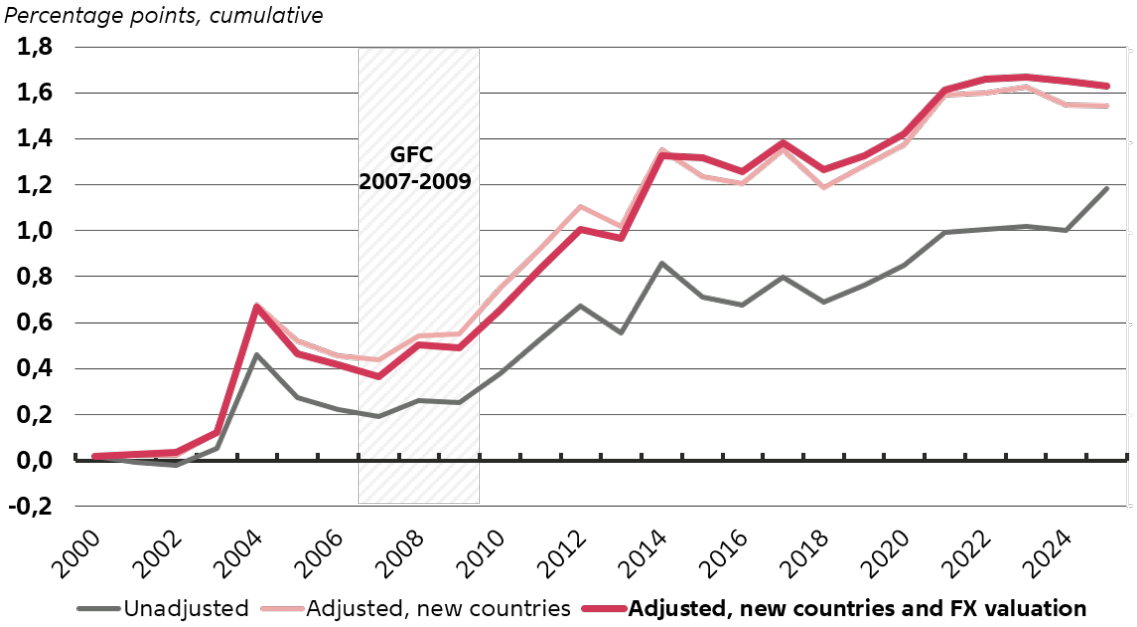


(f) South America

Figure B.8: Global developments in AUD and CAD share



(a) AUD



(b) CAD

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