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# THE INTERNATIONAL MONETARY SYSTEM IN THE LAST AND NEXT 20 YEARS REDUX

Barry Eichengreen
Raul Razo-Garcia

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## ABSTRACT

In a paper 20 years ago, we analyzed the evolution of the international monetary system over the preceding 20 years and projected its evolution 20 years into the future, on the assumption of unchanged transition probabilities. Here we compare those projections with outcomes and provide new projections, again 20 years into the future. Although the world as a whole has seen financial opening and movement away from intermediate exchange rate regimes, as projected, movement has been slower than projected on the basis of observed transition probabilities in the 20 years preceding our forecast. New projections again based on unchanged transition probabilities but allowing countries to shift between advanced, emerging and developing country groupings and reclassifying exchange rate regimes to accord with current practice again suggest that policy regimes will be modestly different in 2045 than today. There will be a continued decline in intermediate exchange rate arrangements, and gains for hard pegs, as emerging markets move in this direction, and for more freely floating rates, driven by developing countries. There will be a further increase in the share of countries with open capital accounts, driven by emerging markets and developing countries.

Barry Eichengreen
University of California, Berkeley
Department of Economics
and NBER
eichengr@econ.Berkeley.edu

Raul Razo-Garcia
Carleton University
Department of Economics
rrazogar@connect.carleton.ca

# The International Monetary System in the Last and Next 20 Years Redux

**Barry Eichengreen (UC Berkeley) and Raul Razo-Garcia (Carleton University)**

**June 2025**

**Abstract**

In a paper 20 years ago, we analyzed the evolution of the international monetary system over the preceding 20 years and projected its evolution 20 years into the future, on the assumption of unchanged transition probabilities. Here we compare those projections with outcomes and provide new projections, again 20 years into the future. Although the world as a whole has seen financial opening and movement away from intermediate exchange rate regimes, as projected, movement has been slower than projected on the basis of observed transition probabilities in the 20 years preceding our forecast. New projections again based on unchanged transition probabilities but allowing countries to shift between advanced, emerging and developing country groupings and reclassifying exchange rate regimes to accord with current practice again suggest that policy regimes will be modestly different in 2045 than today. There will be a continued decline in intermediate exchange rate arrangements, and gains for hard pegs, as emerging markets move in this direction, and for more freely floating rates, driven by developing countries. There will be a further increase in the share of countries with open capital accounts, driven by emerging markets and developing countries.

## 1. Introduction

In an article marking the 20th anniversary of *Economic Policy* 20 years ago (Eichengreen and Razo-Garcia 2006), we traced the evolution of the international monetary and financial system in the preceding decades. We defined the international monetary system as made up of exchange-rate regimes and capital-account management practices and used observed regularities in preceding decades to project the evolution of the system in the coming 20 years. Specifically, we used the pattern of observed transitions between different exchange-rate arrangements and capital-account regimes to forecast future transitions, assuming that the observed pattern of transitions remained unchanged.

Twenty years have come and gone, allowing us to compare those projections with outcomes. Divergences between past projections and current outcomes should help us identify changes in the evolution of the system between the period ending in 2004, the last year for which data were available when we wrote, and what happened since. In turn, this should position us to again make educated guesses about changes in the future, which we take to mean in the coming 20 years.

Our analysis built on the bipolar view of exchange rate regimes.[1] This is the idea that intermediate regimes characterized by limited exchange rate flexibility (as opposed to hard pegs

[1] Pun intended.

and freer floats) become more difficult to maintain with the relaxation of financial restrictions limiting international capital mobility. According to this hypothesis, with the growth of cross-border financial flows it becomes more challenging for policy makers to hold the exchange rate within broad bands as they seek to simultaneously pursue both a modicum of exchange rate stability and other goals. With the growth of capital mobility, pressure to abandon competing goals becomes more intense. Policy makers must either subordinate exchange rate stabilization to goals such as low and stable inflation, or else abandon those other goals in order to adopt a firm and irreversible currency peg (Eichengreen 1994).

Our earlier paper provided support for this view. We first documented the decline of capital-account restrictions, showing that the share of countries with open capital accounts rose from 22 to 40 percent between 1990 and 2003. Using the IMF's index of de facto exchange rate arrangements, we then found that the share of countries with intermediate exchange rate regimes fell from roughly 70 percent in 1990 to 45 percent in 2004. Countries abandoning intermediate exchange rate arrangements moved to hard pegs or their equivalent (including by adopting the euro) and to more freely floating exchange rates in a ratio of roughly 3 to 4.[2]

In addition, there were differences in the evolution of international monetary arrangements in advanced countries, emerging markets, and developing countries. The share of advanced countries with open current accounts rose from a bit more than half in 1990 to more than 90 percent in 2003.[3] Intermediate regimes all but disappeared, as some countries accepted greater exchange rate flexibility while others, in Europe, adopted hard pegs to their monetary union partners. Strictly speaking, they eliminated their separate legal tender arrangements.[4]

Although emerging markets and developing countries also saw increases in capital account openness and declines in the prevalence of intermediate exchange rate regimes, capital account restrictions remained more prevalent than in advanced countries, the abandonment of intermediate exchange rate regimes less. The share of emerging markets with intermediate regimes fell from 77 percent to 41 percent over the period, while the share of developing countries with intermediate regimes fell from 66 to 54 percent. The share of emerging markets with open capital accounts rose from 20 percent to 45 percent, the share of developing countries from 16 to 29 percent.

Extrapolating these trends into the future, we forecast that essentially all advanced countries would have open capital accounts by 2025 and that at most 6 percent would retain intermediate exchange rate regimes. In contrast, we projected that 40 percent of emerging markets and 33 percent of developing countries would have open capital accounts, while 44 percent and 52 percent of these two country groupings, respectively, would continue to operate intermediate exchange rate regimes. Looking at all six possible combinations (three exchange rate regime categories times two capital account categories), we projected that the most popular advanced-country combination would be an open capital account and a hard peg (the latter

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[2] Prevailing practice at the time, including by the IMF, was to classify members of the Euro Area as adopting hard pegs, although it can be argued (and has since been argued by the IMF itself) that it makes more sense to see them as collectively floating their common exchange rate against other currencies. We return to this below.

[3] The three countries retaining some restrictions on capital account transactions in 2003, according to the data used (as described further below), were Australia, Iceland and San Marino.

[4] The one advanced country retaining an intermediate regime was (and is) Denmark, which pegs to the euro within a band. Its special case is discussed in Eichengreen (2023).

reflecting the way exchange rate regimes for Euro Area countries were categorized). For emerging markets and developing countries, the most popular combination would be a closed capital account and an intermediate exchange rate arrangement. Thus, we forecast different outcomes for the advanced economies on the one hand and emerging markets and developing countries on the other, where the former were forecast to move further toward open capital accounts and away from intermediate exchange rate regimes, while the latter were forecast to continue maintaining capital account restrictions and soft pegs, resembling their prior international monetary arrangements.

Comparing these projections with outcomes, it turns out, is not straightforward. A first issue is whether to retain the same country groupings over time. Different economies have grown and developed at different rates. Reflecting these differential rates of growth and development, multilateral organizations and global data providers have promoted select developing countries to the emerging market category and select emerging markets to the advanced country category. Retaining the earlier country groupings has the virtue of simplicity, but if the goal is to ask how exchange rate and capital account regimes in, say, middle-income countries continue to differ from those in low-income countries, then keeping countries that have graduated to middle-income (emerging market) status in the developing country grouping may cloud rather than clarify the picture. If countries as they graduate to middle-income status, develop their financial markets and/or acquire greater institutional capacity, enabling them to more easily operate flexible exchange rates and manage the capital flows associated with an open capital account, then keeping them in the low-income category may disguise how prevailing practice in low-income countries with limited financial development and relatively weak institutions has changed over time.

Second, thinking about exchange rate regimes, and hence how multilateral institutions and others classify such regimes, has changed. In our earlier paper, we followed then-prevailing IMF practice of classifying Euro Area members as operating hard pegs. This convention was evidently based on the idea that founding members of the Euro Area irrevocably pegged their legacy currencies to one another in the years immediately following establishment of the European Central Bank, irrevocable pegs being the sine qua non of fixed exchange rate regimes.[5] After we wrote our paper, the Fund reclassified these countries as floaters, reflecting the fact that their common currency, which replaced legacy currencies in 2001, floats against the currencies of countries outside the Euro Area.[6] It is possible to argue this point both ways.[7] Be this as it may, it makes no sense to use the earlier IMF convention for the years between 1999 and 2003, the end of our earlier data set, and then to use the new IMF convention for subsequent years.

Third, there have been other changes over time in the exchange rate regimes distinguished by the IMF, requiring one to create a concordance between the old categories and

[5] Subsequently, those legacy currencies were replaced by the euro, meaning that the countries in question had no separate legal tender, another traditional criterion for defining a hard peg at the national level.

[6] See footnote 1 above. In contrast to its treatment of members of the Euro Area, the IMF classified members of the two African monetary unions as currency union/exchange arrangement with no separate legal tender from 1990 to 2005 and as conventional pegs from 2006 to 2022. The only exception is Guinea-Bissau classified as crawling peg from 1990 to 1996, as currency union/exchange arrangement with no separate legal tender from 1997 to 2005 and as conventional pegs from 2006 to 2022.

[7] O'Rourke and Vicquery (2025) point to the importance of considering the entire vector of bilateral exchange rate arrangements when classifying a country as maintaining a pegged or floating exchange rate.

new ones. The Bubula and Otker-Robe (2002) classification on which the de facto exchange rate regimes initially distinguished by the IMF were based included two categories labelled "tightly managed exchange rates" and "managed floating." Starting in 1999, the IMF replaced these regimes with two new categories: "pegged exchange rates within horizontal bands," which in our 2005 paper we classified as an intermediate regime, and "managed floating with no preannounced path for the exchange rate," which we classified as floating. In 2009, the IMF's Exchange Restrictions and Exchange Arrangements Annual, from which subsequent data are drawn, replaced the "managed floating with no preannounced path for the exchange rate" category with two new categories: "floating" and "other managed arrangements." In this paper, we classify the latter as intermediate, the former self-evidently as floating.[8]

There have been still other changes in how regimes and countries are classified, which further complicate comparisons over time – and which in addition shed light on how international monetary arrangements have evolved in the last two decades. We describe and discuss these below.

## 2. The Strict Comparison

The starting point for our update is a strict comparison between our earlier forecasts and current outcomes, where we adopt the same conventions as in our earlier paper when classifying countries by stage of economic development and exchange rate and capital account regime. Countries are classified as advanced, emerging or developing throughout the four decades considered; we do not shift them between categories even if they are recategorized by the IMF or commercial data providers. We adopt the same classification of exchange rate regimes used by the IMF in the period prior to 2004 and utilized in our earlier paper. Data are drawn from Bubula and Otker-Robe (2002) and the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER), which were the basis for that earlier paper.[9]

As before, we utilize the Chinn-Ito measure of capital account restrictions. Specifically, we utilize their sub-index focusing on capital controls narrowly defined.[10]

Table 1 displays the results of this comparison. The first three columns replicate the results of our earlier paper.[11] The last three columns are updates. For comparison, Table 2

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[8] Habermeier et al. (2009) describe this last category, which includes cases where the central bank intervenes in the foreign exchange market but without a fixed target for the rate. More generally, in mapping these new categories into old ones, we were guided by descriptions of the new categories in the Habermeier et al. paper.

[9] As we noted there, there exist a number of different efforts to classify de facto and de jure exchange rate regimes, which not infrequently categorize the regime of a given country in different ways. Direct comparisons of these different datasets for recent years is not always possible, since not all of these datasets have been updated to incorporate recent experience. In addition, there are some new attempts to classify exchange rate regimes based on different underlying logics. While we stick with the Bububa/Otker-Robe/AREAER exchange rate classification when constructing and discussing our basic results, the appendix provides the same analysis using an alternative classification as a robustness check.

[10] Chinn and Ito also consider a broader measure that is the first principal component of this sub-index and three others, where the others consider current account restrictions (given the tendency to relabel capital flows as current account restrictions as a way of attempting to evade financial controls). In our earlier paper we showed that substituting that broader measure made little difference for the results.

[11] In fact, there are some very small differences. Several emerging markets and developing countries that were previously classified by Bubula and Otker-Robe (2002), whose taxonomy provides the basic template for the official IMF Exchange Arrangements and Exchange Restrictions tabulation, as operating managed floats in 2004 (and

shows forecasts for 2025 from our earlier paper, which were based on the assumption of no subsequent changes in the transition probabilities over the period 1990-2004.

The comparison is close, although there are some differences. The share of all countries with hard pegs has risen slightly since 2004, from 26 percent to slightly less than 30 percent (29.51 percent in the most recent year). That figure is virtually identical to our earlier forecast for 2025 (29.98 percent).

The share with intermediate exchange rate arrangements has continued to fall over time, again in line our earlier projections, though it remains slightly higher than forecast in that paper (46.45 versus the forecast 41.64 percent). The share of all countries with floating rates is correspondingly lower (24.04 percent versus the forecast 28.38 percent). For the world as a whole, the assumption of stable transition probabilities thus yielded a broadly accurate forecast of the current state of affairs, as if the structure of the global exchange rate system, while not static, continued to evolve in stable fashion.

When one distinguishes the different country groupings, however, the picture grows more complex. For the advanced countries, our earlier transition probabilities predicted a further increase in countries with hard pegs and decline in the share with floating rates. Neither of these trends is evident in Table 1. The earlier transition probabilities reflected the sharp increase in countries classified as moving to hard pegs in 1999 with the advent of monetary union in Europe. Specifically, there was a high probability of moving from an intermediate regime (the earlier Exchange Rate Mechanism of the European Monetary System) to a hard peg (the irrevocably locked rates between legacy currencies), something that the assumption of constant transition probabilities extrapolated into the future. The reality, of course, was a one-time jump to new regime for the high-income core countries of the European Union (and, in the cases of Denmark, Sweden and the UK, a non-jump), whereas no such jump was visible, or one might say possible, for advanced countries outside Europe. Hence the discrepancy between the projection (the forecast of more hard pegs over time) and the reality (little change in actual practice).

For emerging markets, the share of countries with intermediate exchange rate regimes has continued to fall, as predicted, but even more rapidly than projected on the basis of our earlier transition probabilities. In the most recent year, slightly more than a third (34 percent of emerging markets) maintain intermediate regimes, compared to a forecast of 44 percent. Emerging markets previously with intermediate regimes moved mainly to floating rates; in fact, the share of emerging markets with floating rates in the most recent year is higher than predicted by our earlier extrapolations based on the assumption of constant transition probabilities. An interpretation is that emerging economies, which tend to have rapidly developing financial markets and significant international financial exposure, have been compelled by the pressures of financial globalization to move to greater exchange rate flexibility faster than predicted by their earlier experience. It can be argued as well that the advent of inflation targeting has provided

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therefore categorized as floating in our earlier tabulation) were reclassified subsequently by the IMF as operating managed floats with no preannounced path for the exchange rate. In addition, one country (Trinidad and Tobago) classified by Bubula and Otker-Robe as operating a managed float in July 2004 was reclassified by the IMF as operating a conventional pegged arrangement.

them with a viable nominal anchor and monetary strategy, rendering floating more feasible than in the previous period before inflation targeting became a thing.[12]

As for developing countries, a majority continue to operate intermediate exchange rate regimes, in contrast to prevailing practice in advanced countries and emerging markets. This is broadly consistent with our earlier projections. The share of developing countries with intermediate regimes has nevertheless declined somewhat since 2004, again consistent with projections. However, that decline has proceeded more slowly than forecast. The actual share of developing countries with intermediate regimes in the most recent year, 57 percent, is higher than our forecast of 52 percent. In addition, the fraction of developing countries abandoning intermediate regimes for hard pegs is somewhat higher than projected, while the share abandoning them for floats is somewhat lower. This discrepancy reflects the tendency for formerly low-income Eastern European countries, classified here as developing, to adopt the euro, a tendency that transition probabilities for the earlier period did not capture.

Tables 3 and 4 provide analogous comparisons of outcomes and projections for capital account regimes. For the world as a whole, our earlier projections based on unchanged transition probabilities forecast a gradual increase in the share of countries with open capital accounts. While this gradual increase is evident from 2004 to 2018, there is then a reversal between 2018 and 2022, coincident with Covid-era disruptions. This reversal is concentrated in developing countries and emerging markets, as might be expected, advanced countries responding to Covid with a variety of exceptional measures but not capital account restrictions.[13] Interestingly, there is some sign of this movement back in the direction of capital account regulation in emerging markets beginning already before Covid, that is, between 2004 and 2011 where a number of these new restrictions were imposed around the time of the Global Financial Crisis.[14]

Comparing outcomes in 2022 with earlier projections, the data thus show slower movement in the direction of open capital accounts than predicted by unchanged transition probabilities. Just 38 percent of countries have open capital accounts, compared to the predicted 46 percent. The discrepancy is greatest among emerging markets (40 percent were projected to have open capital accounts, where the actual share is just 31 percent). For developing countries, where 33 percent were projected to have open capital accounts, the shortfall is only half as large (the actual share in the most recent year is 29 percent).

Tables 5 and 6 combine data on capital account openness and exchange rate regimes. For the world as a whole, our earlier projections suggested that international monetary regimes would be fairly evenly distributed across the six possible alternatives, with a somewhat higher than average prevalence of closed capital accounts accompanied by intermediate exchange rate regimes, this being the most popular option for emerging markets and developing countries. For

[12] Between 1997 and 2015 seventeen countries in our emerging market group implemented an inflation targeting regime according to AREAER.

[13] Nine countries are classified as imposing additional capital account restrictions between 2018 and 2022: Argentina, Bulgaria, the Dominican Republic, Guyana, Kazakhstan, Oman, Romania, the Slovak Republic, and Trinidad and Tobago.

[14] Thus, between 2008 and 2010 Chile adopted new controls on capital market securities, money market instruments, direct investments and real estate transactions, Ecuador implemented new controls on capital market securities, money market instructions and certain other transactions, and Egypt added controls on money market instruments and collective investment securities. Venezuela reimposed capital controls in 2006 and kept them through the end of the sample period.

advanced countries, in contrast, the most popular option was a fixed rate and an open capital account, the prevalent combination in Europe, followed by a floating rate and an open capital account, as in the U.S., Canada and Japan.

Table 5 confirms that these patterns remained similar over the subsequent two decades. Among advanced countries, the most notable feature is the unchanged share with the hard peg/open capital account combination, reflecting the fact there has been no change in Euro Area membership in the initial advanced country grouping. None of the founding members of the Euro Area (including Greece, which joined in 2001) left subsequently, and none of the European countries that stayed out initially (Denmark, Sweden and the UK) opted to enter. One noticeable change is the removal of residual capital account restrictions by Australia and Iceland, which accounts for modest further movement toward the floating/open category.

Among emerging markets, there has been an increase in the shares of both floating rates/open capital accounts and floating rates/closed capital accounts. While floating has become more prevalent among emerging markets, as noted previously, these countries continue to operate a variety of different capital account regimes. For developing countries, there has been virtually no change in the ranking of the alternatives: a closed capital account and intermediate exchange rate regime remains the most popular combination, followed by a closed capital account together with a hard peg or an open capital account with an intermediate regime.

For the world as a whole, outcomes are quite close to the projections in our earlier paper. Two exceptions were the projection of a further rise in the share of countries in Category I (open capital account and hard peg) and the forecast a further decline in the share of countries in Category V (closed capital account and an intermediate regime). As noted earlier, there had been a sharp increase in the share of countries in Category I in the earlier period due to the locking of the legacy currencies of Euro Area countries and then establishment of the euro. Subsequent to 2004, no additional countries in the unchanged advanced-country grouping adopted the euro. Hence the shortfall of actual relative to predicted.

Finally, we can replicate our earlier exercise of using estimated transition probabilities to project exchange rate and capital account regimes 20 years into the future, in 2045. For this purpose, we use transition probabilities over the entire 1990-2022 sample period.

For exchange rates, the forecast for 2045 is of additional countries abandoning intermediate exchange rate arrangements for both hard pegs and floating. The majority of movement is in the direction of hard pegs, whose share is forecast to rise from 30 to 34 percent (Table 2). This change is again a mechanical function of movement in this direction by advanced countries joining the Euro Area in the first half of the sample period. This effect is visible in the share of advanced countries forecast to have hard pegs in 2045 (63 percent, up from 54 percent).

For emerging markets, the share of countries with hard pegs is forecast to rise from 13 percent to 17 percent between now and 2045. This is plausible if one thinks that more middle-income Eastern and Southern European countries will adopt the euro.[15] Nine percent of developing countries are forecast to abandon intermediate exchange rate regimes for floating over the coming two decades.

[15] This result goes away when one estimates the transition probabilities for the shorter 2004-22 period.

In terms of the prevalence of capital controls, transition probabilities for 1990-2022 forecast modestly declining prevalence between now and 2045, with the share of countries with open capital accounts projected as rising from 38 to 43 percent. No change is projected among the advanced economies, virtually all of which are financially open. In both emerging markets and developing economies, the share of countries with open capital accounts is projected to rise by roughly five percentage points.

In sum, these projections based on unchanged transition probabilities suggest that policy regimes will be modestly different in 2045 than today. There will be a continued decline in intermediate exchange rate arrangements, and modest gains for both hard pegs, including euro adoption, as advanced countries and emerging markets move in this direction, and for more freely floating rates, driven mainly by developing countries. Similarly, there will be a further increase in the share of countries with open capital accounts, driven entirely by emerging markets and developing countries.

Table 1. Evolution of the exchange rate regimes: IMF de facto classification (percentage of members in each category).

| | Shares | | | | | |
|---|---|---|---|---|---|---|
| | 1990 | 1997 | 2004 | 2011 | 2018 | 2022 |
| **All countries** | | | | | | |
| Hard Pegs | 15.72 | 18.58 | 25.95 | 28.80 | 28.80 | 29.51 |
| Intermediate | 68.55 | 52.46 | 55.14 | 45.11 | 45.11 | 46.45 |
| Floating | 15.72 | 28.96 | 18.92 | 26.09 | 26.09 | 24.04 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 159 | 183 | 185 | 184 | 184 | 183 |
| **Advanced countries** | | | | | | |
| Hard Pegs | 0.00 | 4.17 | 54.17 | 54.17 | 54.17 | 54.17 |
| Intermediate | 73.91 | 58.33 | 4.17 | 8.33 | 4.17 | 4.17 |
| Floating | 26.09 | 37.50 | 41.67 | 37.50 | 41.67 | 41.67 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 23 | 24 | 24 | 24 | 24 | 24 |
| **Emerging market countries** | | | | | | |
| Hard Pegs | 6.67 | 12.50 | 12.50 | 12.50 | 12.50 | 12.50 |
| Intermediate | 76.67 | 56.25 | 53.13 | 34.38 | 28.13 | 34.38 |
| Floating | 16.67 | 31.25 | 34.38 | 53.13 | 59.38 | 53.13 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 30 | 32 | 32 | 32 | 32 | 32 |
| **Developing countries** | | | | | | |
| Hard Pegs | 21.70 | 22.83 | 24.03 | 28.13 | 28.13 | 29.13 |
| Intermediate | 65.09 | 50.39 | 65.12 | 54.69 | 57.03 | 57.48 |
| Floating | 13.21 | 26.77 | 10.85 | 17.19 | 14.84 | 13.39 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 106 | 127 | 129 | 128 | 128 | 127 |

Notes: Hard pegs include arrangements with no separate legal tender, currency boards and currency unions. Intermediate regimes include conventional pegs, pegged exchange rate within horizontal bands, stabilized arrangements, crawling pegs, crawl-like arrangements, tightly managed, managed floating with no preannounced path for the exchange rate and other managed regimes. Floating regimes include managed floating, floating and freely floating. Country classification unchanged throughout the sample and Euro Area members and African currency union members classified as hard pegs throughout the sample.
Source: Authors' estimates using the IMF de facto classification.

Table 2. Transition probabilities and forecasts: IMF de facto classification.

| | Estimated probability of regime in t+1 | | | |
|---|---|---|---|---|
| Regime in period t | Hard Pegs | Intermediate | Floating | Total observations |
| **All countries** | | | | |
| Hard Peg | 0.9938 | 0.0028 | 0.0035 | 1449 |
| Intermediate | 0.0084 | 0.9086 | 0.0830 | 2735 |
| Floating | 0.0018 | 0.1210 | 0.8772 | 1637 |
| Total | | | | 5821 |
| Share in the exchange rate distribution | | | | |
| Distribution in 2022 | 29.51 | 46.45 | 24.04 | |
| Forecast 2025 made in 2005 | 29.98 | 41.64 | 28.38 | |
| Forecast 2045 | 34.01 | 38.55 | 27.52 | |
| **Advanced countries** | | | | |
| Hard Peg | 1.0000 | 0.0000 | 0.0000 | 305 |
| Intermediate | 0.0755 | 0.8616 | 0.0629 | 159 |
| Floating | 0.0000 | 0.0199 | 0.9801 | 302 |
| Total | | | | 766 |
| Share in the exchange rate distribution | | | | |
| Distribution in 2022 | 54.17 | 4.17 | 41.67 | |
| Forecast 2025 made in 2005 | 64.42 | 5.55 | 30.03 | |
| Forecast 2045 | 62.92 | 4.93 | 32.16 | |
| **Emerging market countries** | | | | |
| Hard Peg | 0.9918 | 0.0082 | 0.0000 | 122 |
| Intermediate | 0.0022 | 0.8677 | 0.1300 | 446 |
| Floating | 0.0044 | 0.0931 | 0.9024 | 451 |
| Total | | | | 1019 |
| Share in the exchange rate distribution | | | | |
| Distribution in 2022 | 12.50 | 34.38 | 53.13 | |
| Forecast 2025 made in 2005 | 22.01 | 44.42 | 33.59 | |
| Forecast 2045 | 16.59 | 35.26 | 47.97 | |
| **Developing countries** | | | | |
| Hard Peg | 0.9922 | 0.0029 | 0.0049 | 1022 |
| Intermediate | 0.0047 | 0.9207 | 0.0746 | 2130 |
| Floating | 0.0011 | 0.1697 | 0.8292 | 884 |
| Total | | | | 4036 |
| Share in the exchange rate distribution | | | | |
| Distribution in 2022 | 29.13 | 57.48 | 13.39 | |
| Forecast 2025 made in 2005 | 20.10 | 52.45 | 27.45 | |
| Forecast 2045 | 29.76 | 48.28 | 21.96 | |

Notes: Hard pegs include arrangements with no separate legal tender, currency boards and currency unions. Intermediate regimes include conventional pegs, pegged exchange rate within horizontal bands, stabilized arrangements, crawling pegs, and crawl-like arrangements. Floating regimes include floating, freely floating and other managed regimes. Country classification unchanged throughout the sample and Euro Area members and African currency union members classified as hard pegs throughout the sample.

Source: Authors' estimates using IMF de facto classification.

Table 3. Evolution of capital controls: Chinn and Ito binary component (percentage of members in each category)

| | Shares | | | | | |
|---|---|---|---|---|---|---|
| | 1990 | 1997 | 2004 | 2011 | 2018 | 2022 |
| **All countries** | | | | | | |
| Closed | 77.63 | 66.12 | 60.77 | 60.44 | 58.79 | 62.22 |
| Open | 22.37 | 33.88 | 39.23 | 39.56 | 41.21 | 37.78 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 152 | 183 | 181 | 182 | 182 | 180 |
| **Advanced countries** | | | | | | |
| Closed | 42.86 | 13.04 | 13.04 | 13.04 | 8.70 | 4.35 |
| Open | 57.14 | 86.96 | 86.96 | 86.96 | 91.30 | 95.65 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 21 | 23 | 23 | 23 | 23 | 23 |
| **Emerging market countries** | | | | | | |
| Closed | 80.00 | 75.00 | 56.25 | 62.50 | 62.50 | 68.75 |
| Open | 20.00 | 25.00 | 43.75 | 37.50 | 37.50 | 31.25 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 30 | 32 | 32 | 32 | 32 | 32 |
| **Developing countries** | | | | | | |
| Closed | 84.16 | 73.44 | 70.63 | 68.50 | 66.93 | 71.20 |
| Open | 15.84 | 26.56 | 29.37 | 31.50 | 33.07 | 28.80 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 101 | 128 | 126 | 127 | 127 | 125 |

Notes: Each component is equal to zero when restrictions are present or 1 otherwise. Country classification unchanged throughout the sample

Source: Authors' estimates using one of the binary components of the Chinn and Ito index (capital account restrictions).

Table 4. Transition probabilities and forecasts using Chinn-Ito binary component.

| | Estimated probability of regime in *t+1* | | |
|---|---|---|---|
| Regime in period t | Closed | Open | Total observations |
| **All countries** | | | |
| Closed | 0.9742 | 0.0258 | 3678 |
| Open | 0.0314 | 0.9686 | 2071 |
| Total | | | 5749 |
| Share in the capital controls distribution | | | |
| Distribution in 2022 | 62.22 | 37.78 | |
| Forecast 2025 made in 2005 | 54.28 | 45.72 | |
| Forecast 2045 | 56.76 | 43.24 | |
| **Advanced countries** | | | |
| Closed | 0.8776 | 0.1224 | 98 |
| Open | 0.0063 | 0.9937 | 634 |
| Total | | | 732 |
| Share in the capital controls distribution | | | |
| Distribution in 2022 | 4.35 | 95.65 | |
| Forecast 2025 made in 2005 | 7.53 | 92.47 | |
| Forecast 2045 | 4.88 | 95.12 | |
| **Emerging market countries** | | | |
| Closed | 0.9693 | 0.0307 | 685 |
| Open | 0.0507 | 0.9493 | 335 |
| Total | | | 1020 |
| Share in the capital controls distribution | | | |
| Distribution in 2022 | 68.75 | 31.25 | |
| Forecast 2025 made in 2005 | 59.84 | 40.16 | |
| Forecast 2045 | 63.25 | 36.75 | |
| **Developing countries** | | | |
| Closed | 0.9786 | 0.0214 | 2895 |
| Open | 0.0399 | 0.9601 | 1102 |
| Total | | | 3997 |
| Share in the capital controls distribution | | | |
| Distribution in 2022 | 71.20 | 28.80 | |
| Forecast 2025 made in 2005 | 67.27 | 32.73 | |
| Forecast 2045 | 66.51 | 33.49 | |

Notes: Each component is equal to zero when restrictions are present or 1 otherwise. Country classification unchanged throughout the sample.
Source: Authors' estimates using Chinn and Ito binary component (capital account restrictions)

Table 5. Prevalence of capital controls and exchange rate regimes: Chinn and Ito Index and IMF de facto classifications (percentage of members in each category).

| | Capital controls | Exchange rate regime | Shares | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1990 | 1997 | 2004 | 2011 | 2018 | 2022 |
| **All countries** | | | | | | | | |
| I | Open | Hard Pegs | 3.31 | 4.44 | 12.22 | 12.36 | 12.36 | 11.43 |
| II | Open | Intermediate | 14.57 | 18.89 | 18.89 | 15.73 | 16.85 | 13.71 |
| III | Open | Floating | 4.64 | 11.11 | 8.33 | 11.80 | 11.80 | 12.57 |
| IV | Closed | Hard Pegs | 12.58 | 13.33 | 12.78 | 15.73 | 15.73 | 17.14 |
| V | Closed | Intermediate | 54.97 | 33.89 | 36.67 | 30.34 | 30.34 | 33.71 |
| VI | Closed | Floating | 9.93 | 18.33 | 11.11 | 14.04 | 12.92 | 11.43 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 151 | 180 | 180 | 178 | 178 | 175 |
| **Advanced countries** | | | | | | | | |
| I | Open | Hard Pegs | 0.00 | 4.35 | 47.83 | 47.83 | 47.83 | 47.83 |
| II | Open | Intermediate | 33.33 | 47.83 | 4.35 | 8.70 | 4.35 | 4.35 |
| III | Open | Floating | 23.81 | 34.78 | 34.78 | 30.43 | 39.13 | 43.48 |
| IV | Closed | Hard Pegs | 0.00 | 0.00 | 4.35 | 4.35 | 4.35 | 4.35 |
| V | Closed | Intermediate | 42.86 | 8.70 | 0.00 | 0.00 | 0.00 | 0.00 |
| VI | Closed | Floating | 0.00 | 4.35 | 8.70 | 8.70 | 4.35 | 0.00 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 21 | 23 | 23 | 23 | 23 | 23 |
| **Emerging market countries** | | | | | | | | |
| I | Open | Hard Pegs | 6.67 | 6.25 | 12.50 | 9.38 | 9.38 | 6.25 |
| II | Open | Intermediate | 13.33 | 12.50 | 25.00 | 15.63 | 9.38 | 9.38 |
| III | Open | Floating | 0.00 | 6.25 | 6.25 | 12.50 | 18.75 | 15.63 |
| IV | Closed | Hard Pegs | 0.00 | 6.25 | 0.00 | 3.13 | 3.13 | 6.25 |
| V | Closed | Intermediate | 63.33 | 43.75 | 28.13 | 18.75 | 18.75 | 25.00 |
| VI | Closed | Floating | 16.67 | 25.00 | 28.13 | 40.63 | 40.63 | 37.50 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 30 | 32 | 32 | 32 | 32 | 32 |
| **Developing countries** | | | | | | | | |
| I | Open | Hard Pegs | 3.00 | 4.00 | 5.60 | 6.50 | 7.32 | 5.83 |
| II | Open | Intermediate | 11.00 | 15.20 | 20.00 | 17.07 | 20.33 | 16.67 |
| III | Open | Floating | 2.00 | 8.00 | 4.00 | 8.13 | 4.88 | 5.83 |
| IV | Closed | Hard Pegs | 19.00 | 17.60 | 17.60 | 21.14 | 20.33 | 22.50 |
| V | Closed | Intermediate | 55.00 | 36.00 | 45.60 | 39.02 | 37.40 | 42.50 |
| VI | Closed | Floating | 10.00 | 19.20 | 7.20 | 8.13 | 9.76 | 6.67 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 100 | 125 | 125 | 123 | 123 | 120 |

Notes: Chinn-Ito k3 component is equal to zero when capital restrictions are present or 1 otherwise. Hard pegs include arrangements with no separate legal tender, currency boards and currency unions. Intermediate regimes include conventional pegs, pegged exchange rate within horizontal bands, stabilized arrangements, crawling pegs, crawl-like arrangements, tightly managed, managed floating with no preannounced path for the exchange rate and other managed regimes. Floating regimes include managed floating, floating and freely floating. Country classification unchanged throughout the sample and Euro Area members and African currency union members classified as hard pegs throughout the sample.
Source: Authors' estimates using IMF de facto exchange rate regime classification and Chinn and Ito binary component (capital account restrictions).

Table 6. Transition probabilities and forecasts: Chinn and Ito Index and IMF de facto classifications.

| | | | Estimated probability of regime in t+1 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Capital controls | Exchange rate regime | `I | II | III | IV | V | VI | Total observations |
| **All countries** | | | | | | | | | |
| I | Open | Hard Pegs | 0.9720 | 0.0000 | 0.0000 | 0.0280 | 0.0000 | 0.0000 | 572 |
| II | Open | Intermediate | 0.0191 | 0.8889 | 0.0539 | 0.0000 | 0.0370 | 0.0011 | 891 |
| III | Open | Floating | 0.0000 | 0.0788 | 0.8955 | 0.0017 | 0.0068 | 0.0171 | 584 |
| IV | Closed | Hard Pegs | 0.0126 | 0.0000 | 0.0000 | 0.9773 | 0.0063 | 0.0038 | 793 |
| V | Closed | Intermediate | 0.0010 | 0.0252 | 0.0025 | 0.0020 | 0.9115 | 0.0579 | 2022 |
| VI | Closed | Floating | 0.0000 | 0.0051 | 0.0278 | 0.0013 | 0.1315 | 0.8344 | 791 |
| Total | | | | | | | | | 5653 |
| Share in the bivariate distribution | | | | | | | | | |
| Distribution in 2022 | | | 11.43 | 13.71 | 12.57 | 17.14 | 33.71 | 11.43 | |
| Forecast 2025 made in 2005 | | | 17.61 | 14.78 | 14.58 | 15.90 | 23.53 | 13.59 | |
| Forecast 2045 | | | 15.28 | 15.37 | 11.85 | 18.69 | 27.27 | 11.59 | |
| **Advanced countries** | | | | | | | | | |
| I | Open | Hard Pegs | 0.9961 | 0.0000 | 0.0000 | 0.0039 | 0.0000 | 0.0000 | 258 |
| II | Open | Intermediate | 0.0862 | 0.8448 | 0.0603 | 0.0000 | 0.0086 | 0.0000 | 116 |
| III | Open | Floating | 0.0000 | 0.0192 | 0.9731 | 0.0000 | 0.0000 | 0.0077 | 260 |
| IV | Closed | Hard Pegs | 0.0000 | 0.0000 | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 24 |
| V | Closed | Intermediate | 0.0278 | 0.1944 | 0.0000 | 0.0000 | 0.6944 | 0.0833 | 36 |
| VI | Closed | Floating | 0.0000 | 0.0000 | 0.1053 | 0.0000 | 0.0263 | 0.8684 | 38 |
| Total | | | | | | | | | 732 |
| Share in the bivariate distribution | | | | | | | | | |
| Distribution in 2022 | | | 47.83 | 4.35 | 43.48 | 4.35 | 0.00 | 0.00 | |
| Forecast 2025 made in 2005 | | | 63.02 | 4.78 | 28.28 | 0.00 | 1.19 | 2.73 | |
| Forecast 2045 | | | 52.92 | 4.53 | 31.29 | 8.86 | 0.31 | 2.09 | |
| **Emerging market countries** | | | | | | | | | |
| I | Open | Hard Pegs | 0.9667 | 0.0000 | 0.0000 | 0.0333 | 0.0000 | 0.0000 | 90 |
| II | Open | Intermediate | 0.0000 | 0.8613 | 0.0803 | 0.0000 | 0.0584 | 0.0000 | 137 |
| III | Open | Floating | 0.0000 | 0.0556 | 0.8889 | 0.0093 | 0.0185 | 0.0278 | 108 |
| IV | Closed | Hard Pegs | 0.0938 | 0.0000 | 0.0000 | 0.8750 | 0.0313 | 0.0000 | 32 |
| V | Closed | Intermediate | 0.0000 | 0.0343 | 0.0029 | 0.0029 | 0.8429 | 0.1171 | 350 |
| VI | Closed | Floating | 0.0000 | 0.0000 | 0.0166 | 0.0033 | 0.1060 | 0.8742 | 302 |
| Total | | | | | | | | | 1019 |
| Share in the bivariate distribution | | | | | | | | | |
| Distribution in 2022 | | | 6.25 | 9.38 | 15.63 | 6.25 | 25.00 | 37.50 | |
| Forecast 2025 made in 2005 | | | 17.51 | 15.46 | 14.24 | 4.22 | 31.08 | 17.46 | |
| Forecast 2045 | | | 10.87 | 12.55 | 14.24 | 5.20 | 27.73 | 29.61 | |
| **Developing countries** | | | | | | | | | |
| I | Open | Hard Pegs | 0.9464 | 0.0000 | 0.0000 | 0.0536 | 0.0000 | 0.0000 | 224 |
| II | Open | Intermediate | 0.0110 | 0.9028 | 0.0470 | 0.0000 | 0.0376 | 0.0016 | 638 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| III | Open | Floating | 0.0000 | 0.1620 | 0.8056 | 0.0000 | 0.0093 | 0.0231 | 216 |
| IV | Closed | Hard Pegs | 0.0095 | 0.0000 | 0.0000 | 0.9810 | 0.0054 | 0.0041 | 737 |
| V | Closed | Intermediate | 0.0006 | 0.0196 | 0.0024 | 0.0018 | 0.9309 | 0.0446 | 1636 |
| VI | Closed | Floating | 0.0000 | 0.0089 | 0.0288 | 0.0000 | 0.1574 | 0.8049 | 451 |
| Total | | | | | | | | | 3902 |
| Share in the bivariate distribution | | | | | | | | | |
| Distribution in 2022 | | | 5.83 | 16.67 | 5.83 | 22.50 | 42.50 | 6.67 | |
| Forecast 2025 made in 2005 | | | 3.25 | 20.07 | 9.66 | 16.52 | 33.69 | 16.90 | |
| Forecast 2045 | | | 7.44 | 18.35 | 6.27 | 22.58 | 35.66 | 9.62 | |

Notes: Chinn-Ito k3 component is equal to zero when capital restrictions are present or 1 otherwise. Hard pegs include arrangements with no separate legal tender, currency boards and currency unions. Intermediate regimes include conventional pegs, pegged exchange rate within horizontal bands, stabilized arrangements, crawling pegs, crawl-like arrangements, tightly managed, managed floating with no preannounced path for the exchange rate and other managed regimes. Floating regimes include managed floating, floating and freely floating. Country classification unchanged throughout the sample and Euro Area members and African currency union members classified as hard pegs throughout the sample.

Source: Authors' estimates using IMF de facto exchange rate regime classification and Chinn and Ito binary component (capital account restrictions).

## 3. New Categories, Taxonomies and Forecasts

We now modify our methodology to accommodate changes in country circumstances and how exchange rate regimes are classified. Following current IMF practice, we classify members of the Euro Area as maintaining a floating exchange rate. We apply this convention to the entire period for which we have data (before the change in IMF procedure as well as after). Note that the two African monetary unions in which the CFA franc circulates continue to peg to the euro. The IMF first classified the countries in question as currency union members (as operating hard pegs) and then in 2006 reclassified them as operating conventional pegs (intermediate regimes). We are aware of no actual change in their monetary practice.[16] We therefore classify them as operating conventional pegs throughout.

In addition, we now shift countries between developing, emerging and advanced-country groupings when MSCI or the IMF shifts them. For example, MSCI added Kuwait, Qatar, Saudi Arabia and the United Arab Emirates to its emerging market index starting in 2013 (see Appendix C). The IMF included Hong Kong and Singapore to its advanced country category in 1997 and then added nine mainly Central and Eastern European countries to the advanced country grouping after 2001. We follow MSCI and IMF practice going back to 1990, when our data begin.

These changes make it infeasible to use the 2025 forecasts from our previous paper, since these relied on the IMF's earlier classification method (e.g., treating eurozone members as maintaining hard pegs) and fixed country groupings. We therefore generate new 2025 forecasts using data from 1990 to 2004—consistent with our earlier approach—while adopting the IMF's current classification practices and allowing for shifts in country groupings. The new forecasts are in Tables 8, 10, and 12.

When we make these modifications, we obtain a picture in Tables 7-12 that combines continuity and change or, to put it another way, stability and flux. We begin by examining global trends to assess how changes in exchange rate regime classifications impact our analysis of the evolution of the monetary system.[17]

Once again, a decline is observed in the actual share of countries with intermediate exchange rate regimes, decreasing from 54 percent in 2022 to 51 percent in 2045. But that decline is now much more pronounced than in forecasts based on the new transition probabilities computed for the period 1990 to 2004 (54 percent actual versus 62 percent forecast). All of the movement in the last two decades is in the direction of floating. Looking to the future, the forecast based on transition probabilities for the 1990-2022 period is that the share of countries worldwide with floating rates will rise further over the coming two decades from 35 to 40

[16] One change was when in 2020 the French national assembly voted to end French engagement with the West African CFA franc. This meant eliminating the requirement for member countries to deposit half of the foreign exchange reserves with the French Treasury, in return for which the Treasury guaranteed the one-to-one convertibility vis-à-vis the euro. (Arrangements affecting the Central African CFA franc remained unchanged.) But this cannot explain the 2006 change in IMF categorization.

[17] In Table 7, when all countries are pooled together, changes in the country categorization do not affect global averages. Hence differences between the proportions and the trends shown in Tables 1 and 7 for the "all countries" group are explained entirely by changes in how the IMF categorizes exchange rate regimes (e.g., if Eurozone members regimes are categorized as floats or hard pegs).

percent, at the expense of intermediate regimes.[18] That we now see slightly more movement from intermediate regimes to floating and less from intermediate regimes to pegs reflects the fact that cases of euro adoption are classified as transitions to floating rates.

For the world as a whole, changes in capital account arrangements through 2022 and projections two decades into the future are unchanged from those in Section 2. While some countries now move between the advanced, emerging and developing groupings, this has no implications for the global averages. To repeat, while we observe little change in the prevalence of open capital accounts since 2004, we forecast of some modest further opening over the next two decades, reflecting the share increase in openness in the earlier 1992-2004 period.

Even with the addition of new countries to the group of advanced countries, as per IMF and MSCI, members of this grouping have settled into a stable equilibrium in which, consistent with our earlier projections, capital account restrictions and intermediate exchange rate regimes have all but disappeared. The promotion of additional countries to the advanced country grouping does not alter finding, since most of the additions were already aligned with advanced country practice: 9 of the 13 additions to the advanced country category had floating exchanges at the time of reclassification, with two more (Cyprus and Israel) adopting floating rates shortly thereafter. Seven already had open capital accounts at the time of reclassification, while three others (Cyprus, Israel, and South Korea) removed capital controls subsequently.[19] Evidently, when a country is promoted to advanced country status, it already has adopted exchange rate and capital account arrangements similar to those of the incumbents. As before, there is a limited number of exceptions: Hong Kong continues to operate a hard peg, Denmark an intermediate exchange rate regime.[20] Projecting this history into the future leaves little reason to expect further changes in international monetary arrangements in the advanced-country world, as shown in Tables 8, 10 and 12.[21]

Between 1996 and 2020, the emerging market group saw eight entries and five exits.[22] All new entrants had intermediate exchange rate regimes at the time of reclassification, while three of the five exiters had floating rates. The result was a net increase in intermediate regimes and net loss of countries with floating exchange rates in the emerging market grouping. On the capital account side, five of the eight entrants had closed capital accounts on entry, while a sixth,

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[18] Note that the 2025 forecast for the share of all countries with intermediate (hard peg) regimes obtained in this section are higher (lower) than those in our earlier paper. This is a consequence of changes in the way the IMF classifies exchange rate regimes.

[19] San Marino maintained capital controls for all the years in which it was classified as an advanced country. Slovenia and Slovakia had open capital accounts when they were added to the advanced country grouping in 2006 and 2009, respectively, but they subsequently imposed capital controls and maintained them until the end of our sample period.

[20] Recall that both this characterization of the current state of affairs and projections into the future are based on classifying Euro Area members as floating over the entire period when the euro has been in existence (see accompanying discussion).

[21] In Tables 1 and 5 proportions may vary due to a change in the number of countries implementing a regime or a change in the number of countries with available data in a specific year. The same changes could occur in Tables 7 and 11, but the reader is advised to be more cautious when interpreting the proportions presented in these tables, as the proportions may vary not only for the reasons mentioned above but also due to the addition or removal of countries from a group.

[22] See Appendix C. We lack data for the exchange rate regime for Russia in 1990 and 1991. The Czech Republic was classified as a developing country (1990-1995), an emerging market (1996-2008), and an advanced country (2009-2022).

Egypt, reimposed controls a year later. Among the five exits, only two had closed capital accounts at the time of reclassification. These entries and exits thus lead to a net increase in the share of emerging markets with intermediate exchange rates and capital account restrictions. Intuitively, the relatively mature emerging markets exiting this grouping look more like members of the advanced country grouping they are joining, while the less mature emerging markets joining this grouping look more like members of the developing country grouping they are leaving.

In principle, these changes in group composition can have important implications for the trends analyzed previously. Our previous projections for emerging markets pointed to a small decline in the share of countries with intermediate exchange rate regimes (from 57 percent in 2004 to 55 percent in 2025). The experience of the past 20 years, while consistent with this trend, shows a more pronounced decline (Table 7 shows this share as declining to 45 percent of the emerging market subgroup).[23] The earlier period had seen some increase in hard pegs among the emerging-market subgroup, a tendency that our projections extended into the future but one that did not materialize.[24] In fact, there has been no further adoption of hard pegs in emerging markets since Argentina abandoned its currency board in 2001. Since then, only three emerging markets – Bulgaria, Ecuador and Panama – have kept their existing hard pegs.[25] Overall, then, the decline in the share of emerging markets with intermediate exchange rate arrangements has been matched by an increase in the share with floating rates. This result is observed in both Tables 1 and 7.

Even with these entries and exits, there was some movement among emerging markets toward open capital accounts in the 1990-2004 period, but one that our procedures did not project into the future. The transition probabilities did not project this trend into the future for three reasons. First, the persistence of the closed regime was higher than that of the open regime (0.95 versus 0.92). Second, the share of emerging markets with closed capital accounts in 2004 was significantly higher than the share with open accounts (61% vs. 39%). Third, slightly more countries were projected to move to a closed regime than to an open regime, given transition probabilities and shares in 2004.

Not projecting this trend into the future turned out to be correct: over the subsequent two decades the share of emerging markets with open capital accounts fell rather than rising; it returned to the level observed in 1990, with more emerging market countries maintaining capital controls in 2022 (24) than in 1990 (21) or 2004 (17).[26] Note that we already observed this

[23] If we omit data for the countries added and dropped from the emerging market group, the trend away from intermediate regimes is still evident, and indeed stronger (that is, if we only consider the data for the 24 countries that were part of the group for the entire sample). In this restricted sample, 17 emerging countries had an intermediate regime in 1990, 12 in 2004, and just 8 in 2022. This result is stronger in this subsample because all new emerging markets added to the group had an intermediate regime at the time of the shift, and only one of the emerging markets promoted to the advanced group had a soft peg. Hence, the change in the composition of the group affects quantitative but not qualitative results.

[24] The only emerging markets switching to a hard peg between 1990 and 2004 were Argentina in 1991, Bulgaria in 1997, and Ecuador in 1999. Hong Kong is classified as an emerging market country only from 1990 to 1996, and Panama already had a hard peg in 1990 (both the U.S. dollar and the Panamanian balboa have legal tender status).

[25] Note that Bulgaria is scheduled to join the Euro Area on January 1, 2026, at which point current IMF convention will require it to be reclassified as a floater.

[26] The reason why the share returned to the same level observed in 1990 even though more countries maintained capital account restrictions is because we have more emerging countries in 2022 than in 1990.

reversal in Section 2 (in other words, this trend is not sensitive to changes in country groupings and exchange rate classifications.) The same trend is evident when we only consider the countries that were part of the emerging market group over the entire period. In this case, 16 of 24 emerging market countries had a closed capital account in 2004, compared to 20 in 2022.[27]

Looking forward to 2045, the transition probabilities in Table 12 project a fall in the share of emerging markets with floating exchange rates and closed capital accounts, and a rise in the share with hard pegs and open capital accounts. This is not because countries leap from the first of these categories to the second; we see zero such transitions in the data. Rather, a number of emerging markets with hard pegs and capital account restrictions opened their capital accounts; these cases account for some 9 percent of direct transitions from the closed-hard peg to open-hard peg category.[28] This pattern is consistent with the bipolar view that countries with hard pegs should be able to open the capital account, assuming the exchange rate peg is sufficiently hard and credible. Hong Kong, Bulgaria, Estonia and Lithuania fall into this hard peg/open capital account category, although some move into the advanced country grouping later in the sample period, and in two cases then move from hard pegs to floats with adoption of the euro.

Analogously, the fall in the share of emerging markets with floating exchange rates and closed capital accounts reflects cases where countries kept their capital accounts closed but moved from floating to intermediate exchange rate regimes—these account for 11 percent direct transitions from the closed-floating category.[29] Again, these results continue to hold if we only use data from the 24 countries that remained in the emerging group throughout. The bipolar hypothesis is that so long as capital account restrictions remain in place economies have scope for limiting exchange rate flexibility by adopting an intermediate exchange rate regime. These results suggest that some emerging markets continue to take advantage of this scope.

Of the 16 developing countries reclassified between 1996 and 2020, half moved to the advanced economy group and half to the emerging market group.[30] 9 of these countries had intermediate exchange rate regimes, while 6 were floaters.[31] These changes reduced the share of developing countries with intermediate regimes and therefore affect the estimated rate at which the developing countries were moving away from the intermediate option. Capital account openness was affected as well: 9 of the 16 developing countries that moved to another group had open capital accounts.[32]

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[27] Between 2004 and 2022, Bulgaria, Chile, Ecuador, and Venezuela moved from an open to a closed capital account.

[28] And a similar number of country cases evidently moved into the hard peg/closed capital account category as moved out.

[29] In this case, a similar number of countries move in and out of the closed/intermediate regime category.

[30] Cyprus, Estonia, Latvia, Lithuania, Malta, San Marino, Slovakia, and Slovenia were recategorized as advanced countries, while China, Czech Republic, Egypt, Hungary, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates were recategorized as emerging markets.

[31] All eight developing countries reclassified as emerging markets had intermediate regimes at the time of the shift, whereas only one of those reclassified as advanced, Cyprus, maintained a soft peg. In contrast, six of the countries promoted to the advanced group had floating regimes. San Marino had a hard peg when it was reclassified.

[32] Six of the eight moved to the advanced group had open capital accounts, compared to just three among those reclassified as emerging markets. Cyprus and San Marino are the two countries shifted to the advanced country group that had a closed capital account. Egypt, Qatar, and United Arab Emirates are the developing countries with open capital accounts that were recategorized as emerging markets.

For developing countries, there has been a decline in the share of intermediate exchange rate regimes in favor of freer floating, as projected by the estimated transition probabilities. This trend is still evident when the 16 developing countries shifted to the other groups are removed from the sample. There has been less movement in the direction of open capital accounts than predicted by the revised 2005 forecast (there had been some increase between 1990 and 2004 in the share of developing countries with open capital accounts, which we projected into the future). In fact, actual movement has been in the opposite direction. But when the data for countries that shifted between groups is discarded, the decrease in the share of developing countries with open capital accounts vanishes—25 percent of the developing countries had open capital accounts (out of 114 countries) in both 2004 and 2022.[33] Thus, the decline in the proportion of developing countries with open capital accounts in Table 8 is to some extent explained by the change in the composition of the developing country subgrouping – that countries with the capacity to open their capital accounts graduated to other country groupings.

Looking forward, the biggest changes forecast by the transition probabilities are an increase in the share of developing countries with closed capital accounts and floating rates, a decline in the share with closed capital accounts and intermediate rates, and an increase in the proportion of developing with open capital accounts and intermediate rates. Most of the changes between the closed-floating and closed-intermediate is explained by past transitions directly between these two types of arrangements. We observe transitions in both directions, although movement from intermediate to floating rates is somewhat more prevalent. An interpretation is that some developing countries experience bursts of inflation and macroeconomic imbalances that force them to abandon regimes of limited exchange rate flexibility, while other countries that suffered similar circumstances in the past were able to bring inflation and related imbalances under control and move back to regimes of more limited flexibility. Other evidence is consistent with this conjecture. For example, when we looked at inflation and growth rates directly, we find that developing countries with closed capital accounts abandoning intermediate exchange rate regimes for floating have higher than average inflation rates and lower than average rates of economic growth.

In sum, these projections based on unchanged transition probabilities but allowing countries to shift between groupings and reclassifying exchange rate regimes to accord with current practice suggest that policy regimes will be modestly different in 2045 than today. There will be a continued decline in intermediate exchange rate arrangements, and gains for both hard pegs, as emerging markets move in this direction, and for more freely floating rates, driven by developing countries. Similarly, there will be a further increase in the share of countries with open capital accounts, driven mainly by emerging markets and developing countries.

[33] In this subgroup there are also many entries and exits due to data availability.

Table 7. Evolution of the exchange rate regimes: IMF de facto classification (percentage of members in each category). Country classification varies throughout the sample, Euro Area members reclassified as floats, and African currency union members reclassified as conventional pegs.

| | Shares | | | | | |
|---|---|---|---|---|---|---|
| | 1990 | 1997 | 2004 | 2011 | 2018 | 2022 |
| **All countries** | | | | | | |
| Hard Pegs | 7.55 | 10.93 | 11.89 | 11.96 | 10.87 | 10.93 |
| Intermediate | 76.73 | 60.11 | 62.70 | 52.72 | 52.72 | 54.10 |
| Floating | 15.72 | 28.96 | 25.41 | 35.33 | 36.41 | 34.97 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 159 | 183 | 185 | 184 | 184 | 183 |
| **Advanced countries** | | | | | | |
| Hard Pegs | 0.00 | 3.70 | 3.57 | 3.03 | 5.56 | 5.56 |
| Intermediate | 73.91 | 55.56 | 10.71 | 9.09 | 5.56 | 5.56 |
| Floating | 26.09 | 40.74 | 85.71 | 87.88 | 88.89 | 88.89 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 23 | 27 | 28 | 33 | 36 | 36 |
| **Emerging market countries** | | | | | | |
| Hard Pegs | 7.41 | 11.11 | 10.71 | 11.11 | 10.34 | 9.68 |
| Intermediate | 74.07 | 59.26 | 57.14 | 37.04 | 34.48 | 45.16 |
| Floating | 18.52 | 29.63 | 32.14 | 51.85 | 55.17 | 45.16 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 27 | 27 | 28 | 27 | 29 | 31 |
| **Developing countries** | | | | | | |
| Hard Pegs | 9.17 | 12.40 | 13.95 | 14.52 | 12.61 | 12.93 |
| Intermediate | 77.98 | 61.24 | 75.19 | 67.74 | 71.43 | 71.55 |
| Floating | 12.84 | 26.36 | 10.85 | 17.74 | 15.97 | 15.52 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 109 | 129 | 129 | 124 | 119 | 116 |

Notes: Hard pegs include arrangements with no separate legal tender, currency boards and currency unions. Intermediate regimes include conventional pegs, pegged exchange rate within horizontal bands, stabilized arrangements, crawling pegs, crawl-like arrangements, tightly managed, managed floating with no preannounced path for the exchange rate and other managed regimes. Floating regimes include managed floating, floating and freely floating. The country categorization changes over time. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time. From 2006, Eurozone members and currency unions in Africa are reclassified in this table.
Source: Authors' estimates using IMF de facto classification.

Table 8. Transition probabilities and forecasts: IMF de facto classification. Country classification varies throughout the sample, Euro Area members reclassified as floats, and African currency union members reclassified as conventional pegs.

| | Estimated probability of regime in *t+1* | | | |
|---|---|---|---|---|
| Regime in period *t* | Hard Pegs | Intermediate | Floating | Total observations |
| **All countries** | | | | |
| Hard Peg | 0.9829 | 0.0062 | 0.0109 | 644 |
| Intermediate | 0.0013 | 0.9216 | 0.0771 | 3176 |
| Floating | 0.0015 | 0.0990 | 0.8996 | 2001 |
| Total | | | | 5821 |
| Share in the exchange rate distribution | | | | |
| Distribution in 2022 | 10.93 | 54.10 | 34.97 | |
| Forecast 2025 | 10.07 | 62.06 | 27.87 | |
| Forecast 2045 | 9.70 | 50.63 | 39.67 | |
| **Advanced countries** | | | | |
| Hard Peg | 1.0000 | 0.0000 | 0.0000 | 37 |
| Intermediate | 0.0000 | 0.8615 | 0.1385 | 195 |
| Floating | 0.0000 | 0.0110 | 0.9890 | 729 |
| Total | | | | 961 |
| Share in the exchange rate distribution | | | | |
| Distribution in 2022 | 5.56 | 5.56 | 88.89 | |
| Forecast 2025 | 3.57 | 13.14 | 83.28 | |
| Forecast 2045 | 5.56 | 6.90 | 87.55 | |
| **Emerging market countries** | | | | |
| Hard Peg | 0.9896 | 0.0104 | 0.0000 | 96 |
| Intermediate | 0.0024 | 0.8717 | 0.1259 | 421 |
| Floating | 0.0052 | 0.1008 | 0.8941 | 387 |
| Total | | | | 904 |
| Share in the exchange rate distribution | | | | |
| Distribution in 2022 | 9.68 | 45.16 | 45.16 | |
| Forecast 2025 | 18.63 | 55.37 | 25.98 | |
| Forecast 2045 | 14.61 | 38.58 | 46.81 | |
| **Developing countries** | | | | |
| Hard Peg | 0.9804 | 0.0059 | 0.0137 | 511 |
| Intermediate | 0.0012 | 0.9344 | 0.0645 | 2560 |
| Floating | 0.0011 | 0.1706 | 0.8282 | 885 |
| Total | | | | 3956 |
| Share in the exchange rate distribution | | | | |
| Distribution in 2022 | 12.93 | 71.55 | 15.52 | |
| Forecast 2025 | 9.90 | 72.31 | 17.78 | |

| | | | |
|---|---|---|---|
| Forecast 2045 | 10.13 | 64.87 | 25.00 |

Notes: Forecast obtained using the original sample, 1990-2004, and allowing the country groups to change.

Hard pegs include arrangements with no separate legal tender, currency boards and currency unions. Intermediate regimes include conventional pegs, pegged exchange rate within horizontal bands, stabilized arrangements, crawling pegs, crawl-like arrangements, tightly managed, managed floating with no preannounced path for the exchange rate and other managed regimes. Floating regimes include managed floating, floating and freely floating. The country categorization changes over time. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time. From 2006, Eurozone members and currency unions in Africa are reclassified in this table.

Source: Authors' estimates using IMF de facto classification.

Table 9. Evolution of capital controls: Chinn and Ito binary component and new country categorization (percentage of members in each category)

| | Shares | | | | | |
|---|---|---|---|---|---|---|
| | 1990 | 1997 | 2004 | 2011 | 2018 | 2022 |
| **All countries** | | | | | | |
| Closed | 77.63 | 66.12 | 60.77 | 60.44 | 58.79 | 62.22 |
| Open | 22.37 | 33.88 | 39.23 | 39.56 | 41.21 | 37.78 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 152 | 183 | 181 | 182 | 182 | 180 |
| **Advanced countries** | | | | | | |
| Closed | 42.86 | 19.23 | 11.11 | 9.38 | 8.57 | 8.57 |
| Open | 57.14 | 80.77 | 88.89 | 90.63 | 91.43 | 91.43 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 21 | 26 | 27 | 32 | 35 | 35 |
| **Emerging market countries** | | | | | | |
| Closed | 77.78 | 81.48 | 60.71 | 74.07 | 68.97 | 77.42 |
| Open | 22.22 | 18.52 | 39.29 | 25.93 | 31.03 | 22.58 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 27 | 27 | 28 | 27 | 29 | 31 |
| **Developing countries** | | | | | | |
| Closed | 84.62 | 72.31 | 71.43 | 70.73 | 71.19 | 74.56 |
| Open | 15.38 | 27.69 | 28.57 | 29.27 | 28.81 | 25.44 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 104 | 130 | 126 | 123 | 118 | 114 |

Notes: Each component is equal to zero when restrictions are present or 1 otherwise. The country categorization changes over time. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time.

Source: Authors' calculations using one of the binary components of the Chinn and Ito index (capital account restrictions).

Table 10. Transition probabilities and forecasts using Chinn-Ito binary component and new country categorization.

| | Estimated probability of regime in *t+1* | | |
|---|---|---|---|
| Regime in period t | Closed | Open | Total observations |
| **All countries** | | | |
| Closed | 0.9742 | 0.0258 | 3678 |
| Open | 0.0314 | 0.9686 | 2071 |
| Total | | | 5749 |
| Share in the capital controls distribution | | | |
| Distribution in 2022 | 62.22 | 37.78 | |
| Forecast 2025 | 53.11 | 46.89 | |
| Forecast 2045 | 56.76 | 43.24 | |
| **Advanced countries** | | | |
| Closed | 0.8560 | 0.1440 | 125 |
| Open | 0.0087 | 0.9913 | 802 |
| Total | | | 927 |
| Share in the capital controls distribution | | | |
| Distribution in 2022 | 8.57 | 91.43 | |
| Forecast 2025 | 6.87 | 93.13 | |
| Forecast 2045 | 5.78 | 94.22 | |
| **Emerging market countries** | | | |
| Closed | 0.9741 | 0.0259 | 656 |
| Open | 0.0645 | 0.9355 | 248 |
| Total | | | 904 |
| Share in the capital controls distribution | | | |
| Distribution in 2022 | 77.42 | 22.58 | |
| Forecast 2025 | 61.27 | 38.73 | |
| Forecast 2045 | 72.03 | 27.97 | |
| **Developing countries** | | | |
| Closed | 0.9793 | 0.0207 | 2897 |
| Open | 0.0411 | 0.9589 | 1021 |
| Total | | | 3918 |
| Share in the capital controls distribution | | | |
| Distribution in 2022 | 74.56 | 25.44 | |
| Forecast 2025 | 64.78 | 35.22 | |
| Forecast 2045 | 68.37 | 31.63 | |

Notes: Forecast obtained using the original sample, 1990-2004, and allowing the country groups to change.

Each component is equal to zero when restrictions are present or 1 otherwise. The country categorization changes over time. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time.
Source: Authors' calculations using one of the binary components of the Chinn and Ito index (capital account restrictions).

Table 11. Prevalence of capital controls and exchange rate regimes: Chinn and Ito Index, IMF de facto classifications, new country categorization, and some regimes reclassified (percentage of members in each category)

| | Capital controls | Exchange rate regime | Shares | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1990 | 1997 | 2004 | 2011 | 2018 | 2022 |
| **All countries** | | | | | | | | |
| I | Open | Hard Pegs | 3.31 | 4.44 | 6.11 | 3.93 | 2.81 | 2.29 |
| II | Open | Intermediate | 14.57 | 18.89 | 18.89 | 15.73 | 16.85 | 13.71 |
| III | Open | Floating | 4.64 | 11.11 | 14.44 | 20.22 | 21.35 | 21.71 |
| IV | Closed | Hard Pegs | 3.97 | 5.56 | 5.00 | 7.30 | 7.30 | 7.43 |
| V | Closed | Intermediate | 63.58 | 41.67 | 44.44 | 38.20 | 38.20 | 41.71 |
| VI | Closed | Floating | 9.93 | 18.33 | 11.11 | 14.61 | 13.48 | 13.14 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 151 | 180 | 180 | 178 | 178 | 175 |
| **Advanced countries** | | | | | | | | |
| I | Open | Hard Pegs | 0.00 | 3.85 | 3.70 | 3.13 | 2.86 | 2.86 |
| II | Open | Intermediate | 33.33 | 42.31 | 11.11 | 9.38 | 5.71 | 5.71 |
| III | Open | Floating | 23.81 | 34.62 | 74.07 | 78.13 | 82.86 | 82.86 |
| IV | Closed | Hard Pegs | 0.00 | 0.00 | 0.00 | 0.00 | 2.86 | 2.86 |
| V | Closed | Intermediate | 42.86 | 11.54 | 0.00 | 0.00 | 0.00 | 0.00 |
| VI | Closed | Floating | 0.00 | 7.69 | 11.11 | 9.38 | 5.71 | 5.71 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 21 | 26 | 27 | 32 | 35 | 35 |
| **Emerging market countries** | | | | | | | | |
| I | Open | Hard Pegs | 7.41 | 3.70 | 10.71 | 7.41 | 6.90 | 3.23 |
| II | Open | Intermediate | 14.81 | 11.11 | 25.00 | 14.81 | 13.79 | 12.90 |
| III | Open | Floating | 0.00 | 3.70 | 3.57 | 3.70 | 10.34 | 6.45 |
| IV | Closed | Hard Pegs | 0.00 | 7.41 | 0.00 | 3.70 | 3.45 | 6.45 |
| V | Closed | Intermediate | 59.26 | 48.15 | 32.14 | 22.22 | 20.69 | 32.26 |
| VI | Closed | Floating | 18.52 | 25.93 | 28.57 | 48.15 | 44.83 | 38.71 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 27 | 27 | 28 | 27 | 29 | 31 |
| **Developing countries** | | | | | | | | |
| I | Open | Hard Pegs | 2.91 | 4.72 | 5.60 | 3.36 | 2.63 | 1.83 |
| II | Open | Intermediate | 10.68 | 15.75 | 19.20 | 17.65 | 20.18 | 16.51 |
| III | Open | Floating | 1.94 | 7.87 | 4.00 | 8.40 | 5.26 | 6.42 |
| IV | Closed | Hard Pegs | 5.83 | 6.30 | 7.20 | 10.08 | 8.77 | 9.17 |
| V | Closed | Intermediate | 68.93 | 46.46 | 56.80 | 52.10 | 52.63 | 57.80 |
| VI | Closed | Floating | 9.71 | 18.90 | 7.20 | 8.40 | 10.53 | 8.26 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 103 | 127 | 125 | 119 | 114 | 109 |

Notes: The k3 component of Chinn and Ito index is equal to zero when restrictions are present or 1 otherwise. Hard pegs include arrangements with no separate legal tender, currency boards and currency unions. Intermediate regimes include conventional pegs, pegged exchange rate within horizontal bands, stabilized arrangements, crawling pegs, crawl-like arrangements, tightly managed, managed floating with no preannounced path for the exchange rate and other managed regimes. Floating regimes include managed floating, floating and freely floating. The country categorization changes over time. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time. From 2006, Eurozone members and currency unions in Africa are reclassified in this table.

Source: Authors' estimates using IMF de facto exchange rate regime classification and one of the binary components of the Chinn and Ito binary component (capital account restrictions).

Table 12. Transition probabilities and forecasts: Chinn and Ito Index, IMF de facto classifications, new country categorization and some exchange rate regimes reclassified

| | | | Estimated probability of regime in t+1 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Capital controls | Exchange rate regime | I | II | III | IV | V | VI | Total observations |
| **All countries** | | | | | | | | | |
| I | Open | Hard Pegs | 0.9478 | 0.0000 | 0.0040 | 0.0482 | 0.0000 | 0.0000 | 249 |
| II | Open | Intermediate | 0.0022 | 0.8879 | 0.0706 | 0.0000 | 0.0381 | 0.0011 | 892 |
| III | Open | Floating | 0.0000 | 0.0508 | 0.9294 | 0.0011 | 0.0044 | 0.0143 | 906 |
| IV | Closed | Hard Pegs | 0.0210 | 0.0000 | 0.0000 | 0.9521 | 0.0150 | 0.0120 | 334 |
| V | Closed | Intermediate | 0.0004 | 0.0211 | 0.0024 | 0.0008 | 0.9273 | 0.0479 | 2462 |
| VI | Closed | Floating | 0.0000 | 0.0049 | 0.0296 | 0.0012 | 0.1284 | 0.8358 | 810 |
| Total | | | | | | | | | 5653 |
| Share in the bivariate distribution | | | | | | | | | |
| Distribution in 2022 | | | 2.29 | 13.71 | 21.71 | 7.43 | 41.71 | 13.14 | |
| Forecast 2025 | | | 6.65 | 20.40 | 18.86 | 4.56 | 36.90 | 12.63 | |
| Forecast 2045 | | | 3.09 | 17.77 | 23.65 | 5.38 | 34.55 | 15.53 | |
| **Advanced countries** | | | | | | | | | |
| I | Open | Hard Pegs | 1.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 26 |
| II | Open | Intermediate | 0.0000 | 0.8414 | 0.1448 | 0.0000 | 0.0138 | 0.0000 | 145 |
| III | Open | Floating | 0.0000 | 0.0111 | 0.9810 | 0.0000 | 0.0000 | 0.0079 | 631 |
| IV | Closed | Hard Pegs | 0.0000 | 0.0000 | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 11 |
| V | Closed | Intermediate | 0.0000 | 0.2174 | 0.0217 | 0.0000 | 0.6739 | 0.0870 | 46 |
| VI | Closed | Floating | 0.0000 | 0.0000 | 0.1029 | 0.0000 | 0.0147 | 0.8824 | 68 |
| Total | | | | | | | | | 927 |
| Share in the bivariate distribution | | | | | | | | | |
| Distribution in 2022 | | | 2.86 | 5.71 | 82.86 | 2.86 | 0.00 | 5.71 | |
| Forecast 2025 | | | 3.70 | 11.73 | 74.79 | 0.00 | 1.83 | 7.94 | |
| Forecast 2045 | | | 2.86 | 6.41 | 81.48 | 2.86 | 0.53 | 5.85 | |
| **Emerging market countries** | | | | | | | | | |
| I | Open | Hard Pegs | 0.9531 | 0.0000 | 0.0000 | 0.0469 | 0.0000 | 0.0000 | 64 |
| II | Open | Intermediate | 0.0000 | 0.8800 | 0.0640 | 0.0000 | 0.0560 | 0.0000 | 125 |
| III | Open | Floating | 0.0000 | 0.0678 | 0.8305 | 0.0169 | 0.0339 | 0.0508 | 59 |
| IV | Closed | Hard Pegs | 0.0938 | 0.0000 | 0.0000 | 0.8750 | 0.0313 | 0.0000 | 32 |
| V | Closed | Intermediate | 0.0000 | 0.0267 | 0.0030 | 0.0030 | 0.8516 | 0.1157 | 337 |
| VI | Closed | Floating | 0.0000 | 0.0000 | 0.0139 | 0.0035 | 0.1080 | 0.8746 | 287 |
| Total | | | | | | | | | 904 |
| Share in the bivariate distribution | | | | | | | | | |
| Distribution in 2022 | | | 3.23 | 12.90 | 6.45 | 6.45 | 32.26 | 38.71 | |
| Forecast 2025^ | | | 16.41 | 15.78 | 6.63 | 5.32 | 37.29 | 18.58 | |
| Forecast 2045 | | | 8.45 | 11.82 | 7.88 | 5.62 | 32.46 | 33.77 | |
| **Developing countries** | | | | | | | | | |
| I | Open | Hard Pegs | 0.9371 | 0.0000 | 0.0063 | 0.0566 | 0.0000 | 0.0000 | 159 |
| II | Open | Intermediate | 0.0032 | 0.9003 | 0.0547 | 0.0000 | 0.0402 | 0.0016 | 622 |
| III | Open | Floating | 0.0000 | 0.1620 | 0.8056 | 0.0000 | 0.0093 | 0.0231 | 216 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| IV | Closed | Hard Pegs | 0.0137 | 0.0000 | 0.0000 | 0.9588 | 0.0137 | 0.0137 | 291 |
| V | Closed | Intermediate | 0.0005 | 0.0159 | 0.0019 | 0.0005 | 0.9452 | 0.0361 | 2079 |
| VI | Closed | Floating | 0.0000 | 0.0088 | 0.0286 | 0.0000 | 0.1582 | 0.8044 | 455 |
| Total | | | | | | | | | 3822 |
| | | | | | | | | | |
| Share in the bivariate distribution | | | | | | | | | |
| Distribution in 2022 | | | 1.83 | 16.51 | 6.42 | 9.17 | 57.80 | 8.26 | |
| Forecast 2025 | | | 6.02 | 21.03 | 5.98 | 4.87 | 49.32 | 12.78 | |
| Forecast 2045 | | | 2.67 | 21.18 | 7.98 | 5.87 | 47.99 | 14.18 | |

Notes: Forecast obtained using the original sample, 1990-2004, and allowing the country groups to change.

The k3 component of Chinn and Ito index is equal to zero when restrictions are present or 1 otherwise. Hard pegs include arrangements with no separate legal tender, currency boards and currency unions. Intermediate regimes include conventional pegs, pegged exchange rate within horizontal bands, stabilized arrangements, crawling pegs, crawl-like arrangements, tightly managed, managed floating with no preannounced path for the exchange rate and other managed regimes. Floating regimes include managed floating, floating and freely floating. The country categorization changes over time. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time. From 2006, Eurozone members and currency unions in Africa are reclassified in this table.

Source: Authors' estimates using IMF de facto exchange rate regime classification and one of the binary components of the Chinn and Ito binary component (capital account restrictions).

## 4. Conclusion

In a paper written 20 years ago, we analyzed the evolution of the international monetary system, defined as prevailing combinations of exchange rate regimes and capital account arrangements, over the preceding 20 years, and then projected its evolution 20 years into the future, on the assumption of unchanged transition probabilities. Here we compare those projections with outcomes and provide new projections, again 20 years into the future. The world as a whole has seen financial opening and movement away from intermediate exchange rate regimes, much as projected, although this movement has been slower than foreseen on the basis of observed transition probabilities in the 20 years preceding our earlier forecast.

New projections again based on unchanged transition probabilities but now allowing countries to shift between advanced, emerging and developing country groupings and reclassifying exchange rate regimes to accord with current practice suggest that policy regimes again will be modestly different in 2045 than today. There will be a continued decline in intermediate exchange rate arrangements, while there will be gains for hard pegs, emerging markets move in this direction, and for more freely floating rates, driven by developing countries. Similarly, there will be a further increase in the share of countries with open capital accounts, driven mainly by emerging markets and developing countries.

The picture is thus one where advanced countries have settled into a stable equilibrium of floating exchange rates and open capital accounts, but where there is a continued evolution of exchange rate and capital account arrangements in emerging markets and developing countries. While change is gradual rather than abrupt, the pattern for the world as a whole is broadly consistent with what we have dubbed the bipolar view.

## Appendix A. Robustness to Alternative Exchange Rate Regime Classification

This appendix uses the de facto exchange rate regime classification of Ilzetski, Reinhart, and Rogoff (hereafter IRR) in place of the IMF classification. We find broadly similar global trends but a few noteworthy differences. Both classifications show a decline in intermediate regimes since 2004, though the IRR data indicate a smaller drop and a shift toward hard pegs rather than to both hard pegs and floating regimes. For advanced economies, the IRR classification shows more countries retaining intermediate regimes. For developing countries both classifications show, a decline in intermediate regimes but diverge on floating regimes—these become somewhat more frequent after 2004 according to the IMF classification but slightly less frequent according to IRR. For emerging markets, the IRR classification indicates a decline in floating regimes after 2004, in contrast to the IMF's rise in floating regimes.

Looking ahead to 2045, both classifications (with fixed groupings) forecast intermediate regimes as remaining the most common globally, followed by hard pegs. However, when eurozone countries are reclassified as floaters and groupings are allowed to change, IMF data project floating regimes as the second most common.

Using the Chinn-Ito capital account openness binary measure and the IRR exchange rate classification, the most common combination in the last two decades at the global level has been a closed capital account and an intermediate exchange rate regime, though its prevalence has declined in recent years. By 2045, this mix is projected to fall to the second most common globally, overtaken by a hard peg with a closed capital account. This result that contrasts with IMF-based projections.

Among advanced economies, the adoption of the euro, classified by IRR as a hard peg, explains the continued prevalence of a hard peg with an open capital account; result that we also discussed in Section 3. For emerging markets, both IRR and IMF classifications show preferences for closed capital accounts with an intermediate regime or floating rates. For developing countries, the results vary more by classification. For these countries, the IRR classification and the IMF classification with fixed groupings show preferences for an intermediate regime or hard peg with closed accounts, while IMF data with dynamic grouping favor intermediate regimes with closed and open capital accounts.

Despite these differences, both classifications agree that developing and emerging economies are likely to maintain capital controls and favor less flexible exchange rate regimes through 2045.

## A.1. The Strict Comparison: Chinn and Ito and Ilzetzki, Reinhart, and Rogoff

Table A.1.1 Evolution of exchange rate regimes: Ilzetzki, Reinhart, and Rogoff classification (percentage of members in each category)

| | Shares | | | | | |
|---|---|---|---|---|---|---|
| | 1990 | 1997 | 2004 | 2011 | 2018 | 2019 |
| **All countries** | | | | | | |
| Hard Pegs | 39.78 | 34.39 | 40.63 | 44.27 | 44.32 | 44.81 |
| Intermediate | 34.95 | 46.56 | 47.92 | 45.31 | 43.24 | 43.72 |
| Floating | 10.22 | 8.47 | 9.90 | 8.85 | 7.03 | 7.10 |
| Freely Falling | 15.05 | 10.58 | 1.56 | 1.56 | 5.41 | 4.37 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 186 | 189 | 192 | 192 | 185 | 183 |
| **Advanced countries** | | | | | | |
| Hard Pegs | 12.50 | 16.67 | 58.33 | 62.50 | 58.33 | 58.33 |
| Intermediate | 66.67 | 54.17 | 16.67 | 12.50 | 16.67 | 16.67 |
| Floating | 20.83 | 29.17 | 25.00 | 25.00 | 25.00 | 25.00 |
| Freely Falling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 24 | 24 | 24 | 24 | 24 | 24 |
| **Emerging market countries** | | | | | | |
| Hard Pegs | 10.00 | 12.90 | 15.63 | 15.63 | 15.63 | 16.13 |
| Intermediate | 56.67 | 51.61 | 53.13 | 53.13 | 53.13 | 54.84 |
| Floating | 10.00 | 16.13 | 28.13 | 28.13 | 21.88 | 22.58 |
| Freely Falling | 23.33 | 19.35 | 3.13 | 3.13 | 9.38 | 6.45 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 30 | 31 | 32 | 32 | 32 | 31 |
| **Developing countries** | | | | | | |
| Hard Pegs | 51.52 | 42.54 | 43.38 | 47.79 | 48.84 | 49.22 |
| Intermediate | 24.24 | 44.03 | 52.21 | 49.26 | 45.74 | 46.09 |
| Floating | 8.33 | 2.99 | 2.94 | 1.47 | 0.00 | 0.00 |
| Freely Falling | 15.91 | 10.45 | 1.47 | 1.47 | 5.43 | 4.69 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Members | 132 | 134 | 136 | 136 | 129 | 128 |

Notes: Hard pegs include No separate legal tender or currency union, pre-announced peg or currency board arrangement and pre-announced horizontal band that is narrower than or equal to +/-2%. Intermediate regimes comprise De facto peg, pre-announced crawling peg; de facto moving band narrower than or equal to +/-1%, pre-announced crawling band that is narrower than or equal to +/-2% or de facto horizontal band that is narrower than or equal to +/-2%, de facto crawling peg, de facto crawling band that is narrower than or equal to +/-2%, pre-announced crawling band that is wider than or equal to +/-2%, de facto crawling band that is narrower than or equal to +/-5%, moving band that is narrower than or equal to +/-2%. Floating regimes include de facto moving band +/-5%/managed floating and freely floating.

Source: Authors' estimates using Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification.

Table A.1.2. Transition probabilities and 2045 forecasts: Itzelzki, Reinhart and Rogoff de facto classification

| | Estimated probability of regime in t+1 | | | | |
|---|---|---|---|---|---|
| Regime in period t | Hard Pegs | Intermediate | Floating | Freely Falling | Total observations |
| **All countries** | | | | | |
| Hard Peg | 0.9826 | 0.0059 | 0.0005 | 0.0110 | 2185 |
| Intermediate | 0.0117 | 0.9619 | 0.0073 | 0.0190 | 2470 |
| Floating | 0.0041 | 0.0496 | 0.9050 | 0.0413 | 484 |
| Freely Falling | 0.0336 | 0.2017 | 0.0560 | 0.7087 | 357 |
| Total | | | | | 5496 |
| Share in the exchange rate distribution | | | | | |
| Distribution in 2019 | 44.81 | 43.72 | 7.10 | 4.37 | |
| Forecast 2025 | 37.42 | 47.67 | 7.77 | 7.10 | |
| Forecast 2045 | 43.60 | 44.11 | 6.81 | 5.49 | |
| **Advanced countries** | | | | | |
| Hard Peg | 0.9968 | 0.0032 | 0.0000 | 0.0000 | 315 |
| Intermediate | 0.0542 | 0.9113 | 0.0246 | 0.0099 | 203 |
| Floating | 0.0057 | 0.0170 | 0.9773 | 0.0000 | 176 |
| Freely Falling | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 2 |
| Total | | | | | 696 |
| Share in the exchange rate distribution | | | | | |
| Distribution in 2019 | 58.33 | 16.67 | 25.00 | 0.00 | |
| Forecast 2025 | 77.36 | 6.16 | 16.40 | 0.08 | |
| Forecast 2045 | 72.30 | 8.47 | 19.15 | 0.08 | |
| **Emerging market countries** | | | | | |
| Hard Peg | 0.9771 | 0.0153 | 0.0000 | 0.0076 | 131 |
| Intermediate | 0.0020 | 0.9587 | 0.0177 | 0.0217 | 508 |
| Floating | 0.0051 | 0.0457 | 0.9340 | 0.0152 | 197 |
| Freely Falling | 0.0385 | 0.1154 | 0.0897 | 0.7564 | 78 |
| Total | | | | | 914 |
| Share in the exchange rate distribution | | | | | |
| Distribution in 2019 | 16.13 | 54.84 | 22.58 | 6.45 | |
| Forecast 2025 made in 2005 | 18.78 | 39.7 | 32.45 | 9.08 | |
| Forecast 2045 | 18.27 | 51.97 | 23.11 | 6.65 | |
| **Developing countries** | | | | | |
| Hard Peg | 0.9804 | 0.0058 | 0.0006 | 0.0132 | 1739 |
| Intermediate | 0.0097 | 0.9687 | 0.0023 | 0.0193 | 1759 |
| Floating | 0.0000 | 0.1081 | 0.7387 | 0.1532 | 111 |
| Freely Falling | 0.0325 | 0.2202 | 0.0469 | 0.7004 | 277 |
| Total | | | | | 3886 |
| Share in the exchange rate distribution | | | | | |
| Distribution in 2019 | 49.22 | 46.09 | 0.00 | 4.69 | |

| | | | | |
|---|---|---|---|---|
| Forecast 2025 | 33.52 | 57.16 | 2.40 | 6.92 |
| Forecast 2045 | 42.68 | 49.86 | 1.58 | 5.89 |

Notes: ^Forecast obtained using the original sample, 1990-2004.

Hard pegs include No separate legal tender or currency union, pre-announced peg or currency board arrangement and pre-announced horizontal band that is narrower than or equal to +/-2%. Intermediate regimes comprise de facto peg, pre-announced crawling peg; de facto moving band narrower than or equal to +/-1%, pre-announced crawling band that is narrower than or equal to +/-2% or de facto horizontal band that is narrower than or equal to +/-2%, de facto crawling peg, de facto crawling band that is narrower than or equal to +/-2%, pre-announced crawling band that is wider than or equal to +/-2%, de facto crawling band that is narrower than or equal to +/-5%, moving band that is narrower than or equal to +/-2%. Floating regimes include de facto moving band +/-5%/managed floating and freely floating.

Source: Authors' estimates using Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification.

Table A.1.3. Prevalence of capital controls and exchange rate regimes: Chinn and Ito Index, and Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification (percentage of members in each category)

| | | | Shares | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1990 | 1997 | 2004 | 2011 | 2018 | 2019 |
| **All countries** | | | | | | | | |
| I | Open | Hard Pegs | 6.76 | 9.09 | 14.69 | 16.85 | 17.54 | 17.16 |
| II | Open | Intermediate | 10.14 | 19.89 | 19.21 | 17.98 | 17.54 | 18.93 |
| III | Open | Floating Freely | 3.38 | 3.98 | 5.08 | 4.49 | 4.09 | 4.14 |
| IV | Open | Falling | 2.70 | 1.70 | 0.56 | 0.00 | 1.75 | 1.18 |
| V | Closed | Hard Pegs | 20.95 | 22.16 | 23.16 | 24.72 | 23.98 | 24.85 |
| VI | Closed | Intermediate | 31.08 | 28.98 | 31.07 | 29.21 | 27.49 | 26.63 |
| VII | Closed | Floating Freely | 9.46 | 5.11 | 5.08 | 5.06 | 3.51 | 3.55 |
| VIII | Closed | Falling | 15.54 | 9.09 | 1.13 | 1.69 | 4.09 | 3.55 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 148 | 176 | 177 | 178 | 171 | 169 |
| **Advanced countries** | | | | | | | | |
| I | Open | Hard Pegs | 9.52 | 9.09 | 54.55 | 59.09 | 54.55 | 54.55 |
| II | Open | Intermediate | 23.81 | 50.00 | 18.18 | 9.09 | 13.64 | 18.18 |
| III | Open | Floating Freely | 23.81 | 27.27 | 18.18 | 22.73 | 27.27 | 27.27 |
| IV | Open | Falling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| V | Closed | Hard Pegs | 0.00 | 4.55 | 0.00 | 0.00 | 0.00 | 0.00 |
| VI | Closed | Intermediate | 42.86 | 4.55 | 0.00 | 4.55 | 4.55 | 0.00 |
| VII | Closed | Floating Freely | 0.00 | 4.55 | 9.09 | 4.55 | 0.00 | 0.00 |
| VIII | Closed | Falling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 21 | 22 | 22 | 22 | 22 | 22 |
| **Emerging countries** | | | | | | | | |
| I | Open | Hard Pegs | 6.90 | 6.45 | 12.50 | 9.38 | 9.38 | 6.45 |
| II | Open | Intermediate | 10.34 | 16.13 | 21.88 | 21.88 | 21.88 | 22.58 |
| III | Open | Floating Freely | 0.00 | 3.23 | 6.25 | 6.25 | 3.13 | 3.23 |
| IV | Open | Falling | 3.45 | 0.00 | 3.13 | 0.00 | 3.13 | 0.00 |
| V | Closed | Hard Pegs | 3.45 | 6.45 | 3.13 | 6.25 | 6.25 | 9.68 |
| VI | Closed | Intermediate | 44.83 | 35.48 | 31.25 | 31.25 | 31.25 | 32.26 |
| VII | Closed | Floating Freely | 10.34 | 12.90 | 21.88 | 21.88 | 18.75 | 19.35 |
| VIII | Closed | Falling | 20.69 | 19.35 | 0.00 | 3.13 | 6.25 | 6.45 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 29 | 31 | 32 | 32 | 32 | 31 |
| **Developing Countries** | | | | | | | | |
| I | Open | Hard Pegs | 6.12 | 9.76 | 8.13 | 11.29 | 12.82 | 12.93 |
| II | Open | Intermediate | 7.14 | 15.45 | 18.70 | 18.55 | 17.09 | 18.10 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| III | Open | Floating Freely | 0.00 | 0.00 | 2.44 | 0.81 | 0.00 | 0.00 |
| IV | Open | Falling | 3.06 | 2.44 | 0.00 | 0.00 | 1.71 | 1.72 |
| V | Closed | Hard Pegs | 30.61 | 29.27 | 32.52 | 33.87 | 33.33 | 33.62 |
| VI | Closed | Intermediate | 24.49 | 31.71 | 36.59 | 33.06 | 30.77 | 30.17 |
| VII | Closed | Floating Freely | 11.22 | 3.25 | 0.00 | 0.81 | 0.00 | 0.00 |
| VIII | Closed | Falling | 17.35 | 8.13 | 1.63 | 1.61 | 4.27 | 3.45 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 98 | 123 | 123 | 124 | 117 | 116 |

Notes: ^Forecast obtained using the original sample, 1990-2004.

Hard pegs include no separate legal tender or currency union, pre-announced peg or currency board arrangement and pre-announced horizontal band that is narrower than or equal to +/-2%. Intermediate regimes comprise de facto peg, pre-announced crawling peg; de facto moving band narrower than or equal to +/-1%, pre-announced crawling band that is narrower than or equal to +/-2% or de facto horizontal band that is narrower than or equal to +/-2%, de facto crawling peg, de facto crawling band that is narrower than or equal to +/-2%, pre-announced crawling band that is wider than or equal to +/-2%, de facto crawling band that is narrower than or equal to +/-5%, moving band that is narrower than or equal to +/-2%. Floating regimes include de facto moving band +/-5%/managed floating and freely floating.

Source: Authors' estimates using Chinn and Ito index and Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification.

Table A.1.4. Transition probabilities and 2045 forecasts: Itzelzki, Reinhart and Rogoff de facto classification

| | | | Estimated probability of regime in t+1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Regime in period t | | | I | II | III | IV | V | VI | VII | VIII | Total observations |
| **All countries** | | | | | | | | | | | |
| I | Open | Hard Pegs | 0.9681 | 0.0029 | 0.0000 | 0.0014 | 0.0275 | 0.0000 | 0.0000 | 0.0000 | 690 |
| II | Open | Intermediate | 0.0202 | 0.9348 | 0.0079 | 0.0101 | 0.0000 | 0.0258 | 0.0000 | 0.0011 | 890 |
| III | Open | Floating | 0.0047 | 0.0427 | 0.9194 | 0.0000 | 0.0000 | 0.0000 | 0.0332 | 0.0000 | 211 |
| IV | Open | Freely Falling | 0.0222 | 0.2000 | 0.0222 | 0.5556 | 0.0222 | 0.0444 | 0.0222 | 0.1111 | 45 |
| V | Closed | Hard Pegs | 0.0111 | 0.0000 | 0.0000 | 0.0000 | 0.9718 | 0.0085 | 0.0000 | 0.0085 | 1171 |
| VI | Closed | Intermediate | 0.0000 | 0.0360 | 0.0000 | 0.0000 | 0.0045 | 0.9287 | 0.0071 | 0.0238 | 1557 |
| VII | Closed | Floating | 0.0000 | 0.0035 | 0.0351 | 0.0000 | 0.0035 | 0.0561 | 0.8351 | 0.0667 | 285 |
| VIII | Closed | Freely Falling | 0.0000 | 0.0126 | 0.0000 | 0.0283 | 0.0252 | 0.1761 | 0.0629 | 0.6950 | 318 |
| Share in the exchange rate distribution | | | | | | | | | | | |
| Distribution in 2019 | | | 17.16 | 18.93 | 4.14 | 1.18 | 24.85 | 26.63 | 3.55 | 3.55 | |
| Forecast 2025 | | | 20.63 | 19.37 | 4.15 | 0.62 | 23.74 | 23.56 | 3.38 | 4.54 | |
| Forecast 2045 | | | 20.18 | 19.67 | 3.67 | 0.74 | 25.85 | 23.05 | 3.25 | 3.60 | |
| **Advanced countries** | | | | | | | | | | | |
| I | Open | Hard Pegs | 0.9925 | 0.0038 | 0.0000 | 0.0000 | 0.0038 | 0.0000 | 0.0000 | 0.0000 | 265 |
| II | Open | Intermediate | 0.0671 | 0.8993 | 0.0201 | 0.0134 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 149 |
| III | Open | Floating | 0.0064 | 0.0192 | 0.9615 | 0.0000 | 0.0000 | 0.0000 | 0.0128 | 0.0000 | 156 |
| IV | Open | Freely Falling | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 2 |
| V | Closed | Hard Pegs | 0.3333 | 0.0000 | 0.0000 | 0.0000 | 0.6667 | 0.0000 | 0.0000 | 0.0000 | 3 |
| VI | Closed | Intermediate | 0.0000 | 0.1786 | 0.0000 | 0.0000 | 0.0000 | 0.7857 | 0.0357 | 0.0000 | 56 |
| VII | Closed | Floating | 0.0000 | 0.0000 | 0.1154 | 0.0000 | 0.0000 | 0.0385 | 0.8462 | 0.0000 | 26 |
| VIII | Closed | Freely Falling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0 |
| Share in the exchange rate distribution | | | | | | | | | | | |
| Distribution in 2019 | | | 54.55 | 18.18 | 27.27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Forecast 2025 | | | 76.15 | 6.51 | 11.92 | 0.13 | 2.73 | 0.00 | 2.56 | 0.00 | |
| Forecast 2045 | | | 71.96 | 8.72 | 16.53 | 0.12 | 0.80 | 0.30 | 1.59 | 0.00 | |
| **Emerging market countries** | | | | | | | | | | | |
| I | Open | Hard Pegs | 0.9647 | 0.0000 | 0.0000 | 0.0000 | 0.0353 | 0.0000 | 0.0000 | 0.0000 | 85 |
| II | Open | Intermediate | 0.0000 | 0.9532 | 0.0058 | 0.0117 | 0.0000 | 0.0234 | 0.0000 | 0.0058 | 171 |
| III | Open | Floating | 0.0000 | 0.0811 | 0.8108 | 0.0000 | 0.0000 | 0.0000 | 0.1081 | 0.0000 | 37 |
| IV | Open | Freely Falling | 0.0000 | 0.0714 | 0.0000 | 0.5714 | 0.0714 | 0.0714 | 0.0714 | 0.1429 | 14 |
| V | Closed | Hard Pegs | 0.0625 | 0.0000 | 0.0000 | 0.0000 | 0.8750 | 0.0417 | 0.0000 | 0.0208 | 48 |
| VI | Closed | Intermediate | 0.0000 | 0.0174 | 0.0000 | 0.0000 | 0.0029 | 0.9360 | 0.0233 | 0.0203 | 344 |
| VII | Closed | Floating | 0.0000 | 0.0000 | 0.0435 | 0.0000 | 0.0062 | 0.0373 | 0.8944 | 0.0186 | 161 |
| VIII | Closed | Freely Falling | 0.0000 | 0.0282 | 0.0000 | 0.0423 | 0.0282 | 0.0704 | 0.0986 | 0.7324 | 71 |
| Share in the exchange rate distribution | | | | | | | | | | | |
| Distribution in 2019 | | | 6.45 | 22.58 | 3.23 | 0.00 | 9.68 | 32.26 | 19.35 | 6.45 | |
| Forecast 2025 | | | 15.91 | 23.53 | 4.80 | 0.66 | 4.62 | 30.12 | 14.25 | 6.11 | |
| Forecast 2045 | | | 9.84 | 24.16 | 4.82 | 1.17 | 6.23 | 30.91 | 17.63 | 5.24 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Developing countries** | | | | | | | | | | |
| I | Open | Hard Pegs | 0.9500 | 0.0029 | 0.0000 | 0.0029 | 0.0441 | 0.0000 | 0.0000 | 0.0000 | 340 |
| II | Open | Intermediate | 0.0140 | 0.9386 | 0.0053 | 0.0088 | 0.0000 | 0.0333 | 0.0000 | 0.0000 | 570 |
| III | Open | Floating | 0.0000 | 0.1667 | 0.7778 | 0.0000 | 0.0000 | 0.0000 | 0.0556 | 0.0000 | 18 |
| IV | Open | Freely Falling | 0.0345 | 0.2069 | 0.0345 | 0.5862 | 0.0000 | 0.0345 | 0.0000 | 0.1034 | 29 |
| V | Closed | Hard Pegs | 0.0080 | 0.0000 | 0.0000 | 0.0000 | 0.9768 | 0.0071 | 0.0000 | 0.0080 | 1120 |
| VI | Closed | Intermediate | 0.0000 | 0.0346 | 0.0000 | 0.0000 | 0.0052 | 0.9334 | 0.0009 | 0.0259 | 1157 |
| VII | Closed | Floating | 0.0000 | 0.0102 | 0.0000 | 0.0000 | 0.0000 | 0.0918 | 0.7347 | 0.1633 | 98 |
| VIII | Closed | Freely Falling | 0.0000 | 0.0081 | 0.0000 | 0.0243 | 0.0243 | 0.2065 | 0.0526 | 0.6842 | 247 |
| Share in the exchange rate distribution | | | | | | | | | | |
| Distribution in 2019 | | | 12.93 | 18.10 | 0.00 | 1.72 | 33.62 | 30.17 | 0.00 | 3.45 | |
| Forecast 2025 | | | 9.43 | 20.24 | 6.36 | 0.36 | 29.02 | 29.41 | 0.96 | 4.22 | |
| Forecast 2045 | | | 11.92 | 20.53 | 0.60 | 0.75 | 33.61 | 27.73 | 0.98 | 3.89 | |

Notes: ^Forecast obtained using the original sample, 1990-2004, and allowing the country groups to change.

Hard pegs include no separate legal tender or currency union, pre-announced peg or currency board arrangement and pre-announced horizontal band that is narrower than or equal to +/-2%. Intermediate regimes comprise de facto peg, pre-announced crawling peg; de facto moving band narrower than or equal to +/-1%, pre-announced crawling band that is narrower than or equal to +/-2% or de facto horizontal band that is narrower than or equal to +/-2%, de facto crawling peg, de facto crawling band that is narrower than or equal to +/-2%, pre-announced crawling band that is wider than or equal to +/-2%, de facto crawling band that is narrower than or equal to +/-5%, moving band that is narrower than or equal to +/-2%. Floating regimes include de facto moving band +/-5%/managed floating and freely floating.
Source: Authors' estimates using Chinn and Ito binary component and Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification

## A.2. New Categories, New Taxonomies, New Forecasts: Ilzetzki, Reinhart, and Rogoff

Table A.2.1 Evolution of exchange rate regimes: Ilzetzki, Reinhart, and Rogoff classification and new country categorization (percentage of members in each category)

| | Shares | | | | | |
|---|---|---|---|---|---|---|
| | 1990 | 1997 | 2004 | 2011 | 2018 | 2019 |
| **All countries** | | | | | | |
| Hard Pegs | 39.78 | 34.39 | 40.63 | 44.27 | 44.32 | 44.81 |
| Intermediate | 34.95 | 46.56 | 47.92 | 45.31 | 43.24 | 43.72 |
| Floating | 10.22 | 8.47 | 9.90 | 8.85 | 7.03 | 7.10 |
| Freely Falling | 15.05 | 10.58 | 1.56 | 1.56 | 5.41 | 4.37 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 186 | 189 | 192 | 192 | 185 | 183 |
| **Advanced countries** | | | | | | |
| Hard Pegs | 8.70 | 14.81 | 50.00 | 60.61 | 62.16 | 62.16 |
| Intermediate | 69.57 | 51.85 | 25.00 | 18.18 | 18.92 | 18.92 |
| Floating | 21.74 | 29.63 | 25.00 | 21.21 | 18.92 | 18.92 |
| Freely Falling | 0.00 | 3.70 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 23 | 27 | 28 | 33 | 37 | 37 |
| **Emerging countries** | | | | | | |
| Hard Pegs | 12.00 | 12.00 | 11.11 | 11.54 | 17.86 | 17.86 |
| Intermediate | 56.00 | 56.00 | 55.56 | 53.85 | 50.00 | 53.57 |
| Floating | 8.00 | 16.00 | 29.63 | 30.77 | 21.43 | 21.43 |
| Freely Falling | 24.00 | 16.00 | 3.70 | 3.85 | 10.71 | 7.14 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 25 | 25 | 27 | 26 | 28 | 28 |
| **Developing Countries** | | | | | | |
| Hard Pegs | 50.00 | 42.34 | 44.53 | 46.62 | 45.00 | 45.76 |
| Intermediate | 25.36 | 43.80 | 51.09 | 50.38 | 49.17 | 49.15 |
| Floating | 8.70 | 2.92 | 2.92 | 1.50 | 0.00 | 0.00 |
| Freely Falling | 15.94 | 10.95 | 1.46 | 1.50 | 5.83 | 5.08 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | 138 | 137 | 137 | 133 | 120 | 118 |

Notes: Hard pegs include no separate legal tender or currency union, pre-announced peg or currency board arrangement and pre-announced horizontal band that is narrower than or equal to +/-2%. Intermediate regimes comprise De facto peg, pre-announced crawling peg; de facto moving band narrower than or equal to +/-1%, pre-announced crawling band that is narrower than or equal to +/-2% or de facto horizontal band that is narrower than or equal to +/-2%, de facto crawling peg, de facto crawling band that is narrower than or equal to +/-2%, pre-announced crawling band that is wider than or equal to +/-2%, de facto crawling band that is narrower than or equal to +/-5%, moving band that is narrower than or equal to +/-2%. Floating regimes include de facto moving band +/-5%/managed floating and freely floating. The country categorization changes over time. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time.

Source: Authors' estimates using Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification.

Table A.2.2. Transition probabilities and 2045 forecasts: Itzelzki, Reinhart and Rogoff de facto classification and new country categorization

| | Estimated probability of regime in t+1 | | | | |
|---|---|---|---|---|---|
| Regime in period t | Hard Pegs | Intermediate | Floating | Freely Falling | Total observations |
| **All countries** | | | | | |
| Hard Peg | 0.9826 | 0.0059 | 0.0005 | 0.0110 | 2185 |
| Intermediate | 0.0117 | 0.9619 | 0.0073 | 0.0190 | 2470 |
| Floating | 0.0041 | 0.0496 | 0.9050 | 0.0413 | 484 |
| Freely Falling | 0.0336 | 0.2017 | 0.0560 | 0.7087 | 357 |
| Total | | | | | 5496 |
| | | | | | |
| Share in the exchange rate distribution | | | | | |
| Distribution in 2019 | 44.81 | 43.72 | 7.10 | 4.37 | |
| Forecast 2025^ | 37.15 | 47.47 | 7.71 | 7.68 | |
| Forecast 2045 | 43.60 | 44.11 | 6.81 | 5.49 | |
| | | | | | |
| **Advanced countries** | | | | | |
| Hard Peg | 0.9974 | 0.0026 | 0.0000 | 0.0000 | 385 |
| Intermediate | 0.0556 | 0.9111 | 0.0222 | 0.0111 | 270 |
| Floating | 0.0050 | 0.0201 | 0.9749 | 0.0000 | 199 |
| Freely Falling | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 3 |
| Total | | | | | 857 |
| | | | | | |
| Share in the exchange rate distribution | | | | | |
| Distribution in 2019 | 62.16 | 18.92 | 18.92 | 0.00 | |
| Forecast 2025^ | 73.62 | 8.38 | 17.84 | 0.16 | |
| Forecast 2045 | 77.04 | 8.18 | 14.69 | 0.09 | |
| | | | | | |
| **Emerging market countries** | | | | | |
| Hard Peg | 0.9703 | 0.0198 | 0.0000 | 0.0099 | 101 |
| Intermediate | 0.0023 | 0.9577 | 0.0188 | 0.0211 | 426 |
| Floating | 0.0058 | 0.0407 | 0.9360 | 0.0174 | 172 |
| Freely Falling | 0.0282 | 0.0986 | 0.0986 | 0.7746 | 71 |
| Total | | | | | 770 |
| | | | | | |
| Share in the exchange rate distribution | | | | | |
| Distribution in 2019 | 17.86 | 53.57 | 21.43 | 7.14 | |
| Forecast 2025 | 15.02 | 49.46 | 26.56 | 8.96 | |
| Forecast 2045 | 16.75 | 50.33 | 25.50 | 7.43 | |
| | | | | | |
| **Developing countries** | | | | | |
| Hard Peg | 0.9800 | 0.0059 | 0.0006 | 0.0135 | 1699 |
| Intermediate | 0.0073 | 0.9707 | 0.0023 | 0.0197 | 1774 |
| Floating | 0.0000 | 0.1150 | 0.7345 | 0.1504 | 113 |
| Freely Falling | 0.0353 | 0.2191 | 0.0459 | 0.6996 | 283 |
| Total | | | | | 3869 |
| | | | | | |
| Share in the exchange rate distribution | | | | | |
| Distribution in 2019 | 45.76 | 49.15 | 0.00 | 5.08 | |

| | | | | |
|---|---|---|---|---|
| Forecast 2025 | 33.76 | 56.63 | 2.21 | 7.40 |
| Forecast 2045 | 38.90 | 53.49 | 1.58 | 6.04 |

Notes: ^Forecast obtained using the original sample, 1990-2004, and allowing the country groups to change.

Hard pegs include no separate legal tender or currency union, pre-announced peg or currency board arrangement and pre-announced horizontal band that is narrower than or equal to +/-2%. Intermediate regimes comprise De facto peg, pre-announced crawling peg; de facto moving band narrower than or equal to +/-1%, pre-announced crawling band that is narrower than or equal to +/-2% or de facto horizontal band that is narrower than or equal to +/-2%, de facto crawling peg, de facto crawling band that is narrower than or equal to +/-2%, pre-announced crawling band that is wider than or equal to +/-2%, de facto crawling band that is narrower than or equal to +/-5%, moving band that is narrower than or equal to +/-2%. Floating regimes include de facto moving band +/-5%/managed floating and freely floating. The country categorization changes over time. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time.
Source: Authors' estimates using Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification.

Table A.2.3. Prevalence of capital controls and exchange rate regimes: Chinn and Ito, and Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification, new country categorization, and some regimes reclassified (percentage of members in each category)

| | | | Shares | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1990 | 1997 | 2004 | 2011 | 2018 | 2019 |
| **All countries** | | | | | | | | |
| I | Open | Hard Pegs | 6.76 | 9.09 | 14.69 | 16.85 | 17.54 | 17.16 |
| II | Open | Intermediate | 10.14 | 19.89 | 19.21 | 17.98 | 17.54 | 18.93 |
| III | Open | Floating | 3.38 | 3.98 | 5.08 | 4.49 | 4.09 | 4.14 |
| IV | Open | Freely Falling | 2.70 | 1.70 | 0.56 | 0.00 | 1.75 | 1.18 |
| V | Closed | Hard Pegs | 20.95 | 22.16 | 23.16 | 24.72 | 23.98 | 24.85 |
| VI | Closed | Intermediate | 31.08 | 28.98 | 31.07 | 29.21 | 27.49 | 26.63 |
| VII | Closed | Floating | 9.46 | 5.11 | 5.08 | 5.06 | 3.51 | 3.55 |
| VIII | Closed | Freely Falling | 15.54 | 9.09 | 1.13 | 1.69 | 4.09 | 3.55 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 148 | 176 | 177 | 178 | 171 | 169 |
| **Advanced countries** | | | | | | | | |
| I | Open | Hard Pegs | 9.52 | 11.54 | 48.15 | 56.25 | 54.29 | 54.29 |
| II | Open | Intermediate | 23.81 | 46.15 | 22.22 | 15.63 | 17.14 | 20.00 |
| III | Open | Floating | 23.81 | 23.08 | 18.52 | 18.75 | 20.00 | 20.00 |
| IV | Open | Freely Falling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| V | Closed | Hard Pegs | 0.00 | 3.85 | 0.00 | 3.13 | 5.71 | 5.71 |
| VI | Closed | Intermediate | 42.86 | 3.85 | 3.70 | 3.13 | 2.86 | 0.00 |
| VII | Closed | Floating | 0.00 | 7.69 | 7.41 | 3.13 | 0.00 | 0.00 |
| VIII | Closed | Freely Falling | 0.00 | 3.85 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 21 | 26 | 27 | 32 | 35 | 35 |
| **Emerging countries** | | | | | | | | |
| I | Open | Hard Pegs | 7.69 | 3.85 | 10.71 | 7.41 | 13.79 | 10.34 |
| II | Open | Intermediate | 11.54 | 11.54 | 21.43 | 14.81 | 13.79 | 13.79 |
| III | Open | Floating | 0.00 | 3.85 | 3.57 | 3.70 | 0.00 | 0.00 |
| IV | Open | Freely Falling | 3.85 | 0.00 | 3.57 | 0.00 | 3.45 | 0.00 |
| V | Closed | Hard Pegs | 3.85 | 7.69 | 3.57 | 7.41 | 6.90 | 10.34 |
| VI | Closed | Intermediate | 42.31 | 42.31 | 32.14 | 37.04 | 34.48 | 37.93 |
| VII | Closed | Floating | 7.69 | 11.54 | 25.00 | 25.93 | 20.69 | 20.69 |
| VIII | Closed | Freely Falling | 23.08 | 19.23 | 0.00 | 3.70 | 6.90 | 6.90 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 26 | 26 | 28 | 27 | 29 | 29 |
| **Developing Countries** | | | | | | | | |
| I | Open | Hard Pegs | 5.94 | 9.68 | 8.20 | 8.40 | 6.54 | 6.67 |
| II | Open | Intermediate | 6.93 | 16.13 | 18.03 | 19.33 | 18.69 | 20.00 |
| III | Open | Floating | 0.00 | 0.00 | 2.46 | 0.84 | 0.00 | 0.00 |
| IV | Open | Freely Falling | 2.97 | 2.42 | 0.00 | 0.00 | 1.87 | 1.90 |
| V | Closed | Hard Pegs | 29.70 | 29.03 | 32.79 | 34.45 | 34.58 | 35.24 |
| VI | Closed | Intermediate | 25.74 | 31.45 | 36.89 | 34.45 | 33.64 | 32.38 |
| VII | Closed | Floating | 11.88 | 3.23 | 0.00 | 0.84 | 0.00 | 0.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| VIII | Closed | Freely Falling | 16.83 | 8.06 | 1.64 | 1.68 | 4.67 | 3.81 |
| Total | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Members | | | 101 | 124 | 122 | 119 | 107 | 105 |

Notes: Hard pegs include No separate legal tender or currency union, pre-announced peg or currency board arrangement and pre-announced horizontal band that is narrower than or equal to +/-2%. Intermediate regimes comprise De facto peg, pre-announced crawling peg; de facto moving band narrower than or equal to +/-1%, pre-announced crawling band that is narrower than or equal to +/-2% or de facto horizontal band that is narrower than or equal to +/-2%, de facto crawling peg, de facto crawling band that is narrower than or equal to +/-2%, pre-announced crawling band that is wider than or equal to +/-2%, de facto crawling band that is narrower than or equal to +/-5%, moving band that is narrower than or equal to +/-2%. Floating regimes include de facto moving band +/-5%/managed floating and freely floating. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time.

Source: Authors' estimates using Chinn and Ito binary component and Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification.

Table A.2.4. Transition probabilities and 2045 forecasts: Chinn and Ito and Itzelzki, Reinhart and Rogoff de facto classification

| | | | Estimated probability of regime in t+1 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Regime in period t | | | I | II | III | IV | V | VI | VII | VIII | Total observations |
| **All countries** | | | | | | | | | | | |
| I | Open | Hard Pegs | 0.9681 | 0.0029 | 0.0000 | 0.0014 | 0.0275 | 0.0000 | 0.0000 | 0.0000 | 690 |
| II | Open | Intermediate | 0.0202 | 0.9348 | 0.0079 | 0.0101 | 0.0000 | 0.0258 | 0.0000 | 0.0011 | 890 |
| III | Open | Floating | 0.0047 | 0.0427 | 0.9194 | 0.0000 | 0.0000 | 0.0000 | 0.0332 | 0.0000 | 211 |
| IV | Open | Freely Falling | 0.0222 | 0.2000 | 0.0222 | 0.5556 | 0.0222 | 0.0444 | 0.0222 | 0.1111 | 45 |
| V | Closed | Hard Pegs | 0.0111 | 0.0000 | 0.0000 | 0.0000 | 0.9718 | 0.0085 | 0.0000 | 0.0085 | 1171 |
| VI | Closed | Intermediate | 0.0000 | 0.0360 | 0.0000 | 0.0000 | 0.0045 | 0.9287 | 0.0071 | 0.0238 | 1557 |
| VII | Closed | Floating | 0.0000 | 0.0035 | 0.0351 | 0.0000 | 0.0035 | 0.0561 | 0.8351 | 0.0667 | 285 |
| VIII | Closed | Freely Falling | 0.0000 | 0.0126 | 0.0000 | 0.0283 | 0.0252 | 0.1761 | 0.0629 | 0.6950 | 318 |
| Share in the exchange rate distribution | | | | | | | | | | | |
| Distribution in 2019 | | | 17.16 | 18.93 | 4.14 | 1.18 | 24.85 | 26.63 | 3.55 | 3.55 | |
| Forecast 2025^ | | | 20.63 | 19.37 | 4.15 | 0.62 | 23.74 | 23.56 | 3.38 | 4.54 | |
| Forecast 2045 | | | 20.18 | 19.67 | 3.67 | 0.74 | 25.85 | 23.05 | 3.25 | 3.60 | |
| **Advanced countries** | | | | | | | | | | | |
| I | Open | Hard Pegs | 0.9881 | 0.0030 | 0.0000 | 0.0000 | 0.0090 | 0.0000 | 0.0000 | 0.0000 | 335 |
| II | Open | Intermediate | 0.0561 | 0.9133 | 0.0204 | 0.0102 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 196 |
| III | Open | Floating | 0.0057 | 0.0230 | 0.9540 | 0.0000 | 0.0000 | 0.0000 | 0.0172 | 0.0000 | 174 |
| IV | Open | Freely Falling | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 2 |
| V | Closed | Hard Pegs | 0.0870 | 0.0000 | 0.0000 | 0.0000 | 0.9130 | 0.0000 | 0.0000 | 0.0000 | 23 |
| VI | Closed | Intermediate | 0.0000 | 0.1739 | 0.0000 | 0.0000 | 0.0000 | 0.7971 | 0.0290 | 0.0000 | 69 |
| VII | Closed | Floating | 0.0000 | 0.0000 | 0.1667 | 0.0000 | 0.0000 | 0.0333 | 0.8000 | 0.0000 | 30 |
| VIII | Closed | Freely Falling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 1 |
| Share in the exchange rate distribution | | | | | | | | | | | |
| Distribution in 2019 | | | 54.29 | 20.00 | 20.00 | 0.00 | 5.71 | 0.00 | 0.00 | 0.00 | |
| Forecast 2025 | | | 74.51 | 8.13 | 12.49 | 0.15 | 2.45 | 0.02 | 2.25 | 0.00 | |
| Forecast 2045 | | | 69.88 | 9.07 | 12.83 | 0.09 | 6.69 | 0.21 | 1.22 | 0.00 | |
| **Emerging market countries** | | | | | | | | | | | |
| I | Open | Hard Pegs | 0.9589 | 0.0000 | 0.0000 | 0.0000 | 0.0411 | 0.0000 | 0.0000 | 0.0000 | 73 |
| II | Open | Intermediate | 0.0000 | 0.9435 | 0.0000 | 0.0161 | 0.0000 | 0.0323 | 0.0000 | 0.0081 | 124 |
| III | Open | Floating | 0.0000 | 0.1053 | 0.7368 | 0.0000 | 0.0000 | 0.0000 | 0.1579 | 0.0000 | 19 |
| IV | Open | Freely Falling | 0.0000 | 0.0714 | 0.0000 | 0.5714 | 0.0714 | 0.0714 | 0.0714 | 0.1429 | 14 |
| V | Closed | Hard Pegs | 0.0625 | 0.0000 | 0.0000 | 0.0000 | 0.8750 | 0.0417 | 0.0000 | 0.0208 | 48 |
| VI | Closed | Intermediate | 0.0000 | 0.0127 | 0.0000 | 0.0000 | 0.0032 | 0.9365 | 0.0254 | 0.0222 | 315 |
| VII | Closed | Floating | 0.0000 | 0.0000 | 0.0325 | 0.0000 | 0.0065 | 0.0325 | 0.9091 | 0.0195 | 154 |
| VIII | Closed | Freely Falling | 0.0000 | 0.0286 | 0.0000 | 0.0429 | 0.0286 | 0.0571 | 0.1000 | 0.7429 | 70 |
| Share in the exchange rate distribution | | | | | | | | | | | |
| Distribution in 2019 | | | 10.34 | 13.79 | 0.00 | 0.00 | 10.34 | 37.93 | 20.69 | 6.90 | |
| Forecast 2025 | | | 15.29 | 20.70 | 4.35 | 0.81 | 5.70 | 28.72 | 17.01 | 7.41 | |
| Forecast 2045 | | | 11.95 | 16.09 | 2.64 | 1.23 | 8.03 | 32.32 | 21.47 | 6.27 | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Developing countries** | | | | | | | | | | | |
| I | Open | Hard Pegs | 0.9468 | 0.0035 | 0.0000 | 0.0035 | 0.0461 | 0.0000 | 0.0000 | 0.0000 | 282 |
| II | Open | Intermediate | 0.0123 | 0.9404 | 0.0053 | 0.0088 | 0.0000 | 0.0333 | 0.0000 | 0.0000 | 570 |
| III | Open | Floating | 0.0000 | 0.1667 | 0.7778 | 0.0000 | 0.0000 | 0.0000 | 0.0556 | 0.0000 | 18 |
| IV | Open | Freely Falling | 0.0345 | 0.2069 | 0.0345 | 0.5862 | 0.0000 | 0.0345 | 0.0000 | 0.1034 | 29 |
| V | Closed | Hard Pegs | 0.0073 | 0.0000 | 0.0000 | 0.0000 | 0.9773 | 0.0073 | 0.0000 | 0.0082 | 1100 |
| VI | Closed | Intermediate | 0.0000 | 0.0341 | 0.0000 | 0.0000 | 0.0051 | 0.9344 | 0.0009 | 0.0256 | 1173 |
| VII | Closed | Floating | 0.0000 | 0.0099 | 0.0000 | 0.0000 | 0.0000 | 0.0990 | 0.7327 | 0.1584 | 101 |
| VIII | Closed | Freely Falling | 0.0000 | 0.0081 | 0.0000 | 0.0243 | 0.0243 | 0.2065 | 0.0526 | 0.6842 | 247 |
| | | | | | | | | | | | |
| Share in the exchange rate distribution | | | | | | | | | | | |
| Distribution in 2019 | | | 6.67 | 20.00 | 0.00 | 1.90 | 35.24 | 32.38 | 0.00 | 3.81 | |
| Forecast 2025 | | | 9.34 | 20.11 | 6.25 | 0.36 | 29.01 | 29.84 | 0.94 | 4.16 | |
| Forecast 2045 | | | 9.26 | 22.40 | 0.65 | 0.79 | 32.03 | 29.83 | 1.02 | 4.03 | |

Notes: ^Forecast obtained using the original sample, 1990-2004.

Hard pegs include No separate legal tender or currency union, pre-announced peg or currency board arrangement and pre-announced horizontal band that is narrower than or equal to +/-2%. Intermediate regimes comprise De facto peg, pre-announced crawling peg; de facto moving band narrower than or equal to +/-1%, pre-announced crawling band that is narrower than or equal to +/-2% or de facto horizontal band that is narrower than or equal to +/-2%, de facto crawling peg, de facto crawling band that is narrower than or equal to +/-2%, pre-announced crawling band that is wider than or equal to +/-2%, de facto crawling band that is narrower than or equal to +/-5%, moving band that is narrower than or equal to +/-2%. Floating regimes include de facto moving band +/-5%/managed floating and freely floating. The definition of advanced countries coincides with the definition of advanced countries in the IMF data set, so a country in this table is considered advanced only in the years in which that country is classified as advanced by the IMF. We define emerging markets as the countries included in the Emerging Market Bond Index plus (EMBI+) plus Singapore (only in the years it is not considered advanced by the IMF) and Hong Kong. A country is considered an emerging market in our sample from the first year in which that country is included in the EMBI+ for the very first time.

Source: Authors' estimates using Chinn and Ito binary component and Ilzetzki, Reinhart, and Rogoff de facto exchange rate regime classification.

## Appendix B. Country Categorization in Section 2

Table B.1. Advanced and emerging market countries in Section 2

| | Advanced | Emerging markets |
|---|---|---|
| 1 | Australia | Argentina |
| 2 | Austria | Brazil |
| 3 | Belgium | Bulgaria |
| 4 | Canada | Chile |
| 5 | Denmark | China |
| 6 | Finland | Colombia |
| 7 | France | Czech Republic |
| 8 | Germany | Ecuador |
| 9 | Greece | Egypt |
| 10 | Iceland | Hong Kong SAR |
| 11 | Ireland | Hungary |
| 12 | Italy | India |
| 13 | Japan | Indonesia |
| 14 | Luxembourg | Israel |
| 15 | Netherlands | Jordan |
| 16 | New Zealand | Republic of Korea |
| 17 | Norway | Malaysia |
| 18 | Portugal | Mexico |
| 19 | San Marino | Morocco |
| 20 | Spain | Nigeria |
| 21 | Sweden | Pakistan |
| 22 | Switzerland | Panama |
| 23 | United Kingdom | Peru |
| 24 | United States | Philippines |
| 25 | | Poland |
| 26 | | Russian Federation |
| 27 | | Singapore |
| 28 | | South Africa |
| 29 | | Sri Lanka |
| 30 | | Thailand |
| 31 | | Turkey |
| 32 | | Venezuela |

Table B.2. Developing countries in Section 2

| | | | |
|---|---|---|---|
| 1 | Afghanistan | Gabon | Oman |
| 2 | Albania | The Gambia | Palau |
| 3 | Algeria | Georgia | Papua New Guinea |
| 4 | Angola | Ghana | Paraguay |
| 5 | Antigua and Barbuda | Grenada | Qatar |
| 6 | Armenia | Guatemala | Romania |
| 7 | Aruba | Guinea | Rwanda |
| 8 | Republic of Azerbaijan | Guinea-Bissau | Samoa |
| 9 | The Bahamas | Guyana | São Tomé and Príncipe |
| 10 | Kingdom of Bahrain | Haiti | Saudi Arabia |
| 11 | Bangladesh | Honduras | Senegal |
| 12 | Barbados | Iran | Seychelles |
| 13 | Belarus | Iraq | Sierra Leone |
| 14 | Belize | Jamaica | Slovak Republic |
| 15 | Benin | Kazakhstan | Slovenia |
| 16 | Bhutan | Kenya | Solomon Islands |
| 17 | Bolivia | Kiribati | Somalia |
| 18 | Bosnia and Herzegovina | Kuwait | St. Kitts and Nevis |
| 19 | Botswana | Kyrgyz Republic | St. Lucia |
| 20 | Brunei Darussalam | Laos | St. Vincent and the Grenadines |
| 21 | Burkina Faso | Latvia | Sudan |
| 22 | Burundi | Lebanon | Suriname |
| 23 | Cambodia | Lesotho | Swaziland |
| 24 | Cameroon | Liberia | Syrian Arab Republic |
| 25 | Cape Verde | Libyan Arab Jamahiriya | Tajikistan |
| 26 | Central African Republic | Lithuania | Tanzania |
| 27 | Chad | Madagascar | Democratic Republic of Timor Leste |
| 28 | Comoros | Malawi | Togo |
| 29 | Dem. Republic of the Congo | Maldives | Tonga |
| 30 | Republic of Congo | Mali | Trinidad and Tobago |
| 31 | Costa Rica | Malta | Tunisia |
| 32 | Côte d'Ivoire | Marshall Islands | Turkmenistan |
| 33 | Croatia | Mauritania | Uganda |
| 34 | Cyprus | Mauritius | Ukraine |
| 35 | Djibouti | Micronesia | United Arab Emirates |
| 36 | Dominica | Moldova | Uruguay |
| 37 | Dominican Republic | Mongolia | Uzbekistan |
| 38 | El Salvador | Mozambique | Vanuatu |
| 39 | Equatorial Guinea | Myanmar | Vietnam |
| 40 | Eritrea | Namibia | Yugoslavia |
| 41 | Estonia | Nepal | Yemen Rep. |
| 42 | Ethiopia | Netherlands Antilles | Zambia |

| | | | |
|---|---|---|---|
| 43 | Fiji | Nicaragua | Zimbabwe |
| 44 | Gabon | Niger | |

## Appendix C. Countries Reclassified Between Groups (with Dates)

Table C.1. Section 3 changes in country categorization: advanced and emerging countries

| Country | Year added to the Advanced countries by the IMF | Country | Year added to the MSCI Emerging markets indexes |
|---|---|---|---|
| Cyprus | 2001 | China | 1996 |
| Czech Republic | 2009 | Czech Republic | 1996 |
| Estonia | 2011 | Hungary | 1996 |
| Hong Kong | 1997 | Egypt | 2001 |
| Israel | 1997 | Qatar | 2014 |
| Korea | 1997 | UAE | 2014 |
| Latvia | 2014 | Saudi Arabia | 2019 |
| Lithuania | 2015 | Kuwait | 2020 |
| Malta | 2008 | | |
| San Marino | 2012 | | |
| Singapore | 1997 | | |
| Slovak | 2009 | | |
| Slovenia | 2007 | | |
| Slovenia | 2007 | | |

Sources: IMF's World Economic Outlook (WEO) and MSCI.

Note: In Section 3, when the IMF includes a country in the advanced country group for the first time, it joins our group of advanced economies that same year. For example, in Section 3, Hong Kong moved from the emerging market group to the advanced country group in 1997. Similarly, when a country is included in the MSCI emerging market index for the first time, it is added to our emerging market group in that year. For example, we switched Czech Republic from the developing country group to the emerging market group in 1996.

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