

INCREASING STABILITY IN THE MIX OF EXCHANGE-RATE POLICIES

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ABSTRACT

This paper is an examination of the experience of exchange-rate policy systems since 1996 and a comparison with the experience of 1978 to 1995. Exchange-rate policy has become more stable than it was in the earlier period. In addition, it has become polarized, with almost all countries choosing either a fixed exchange-rate régime (especially in low-GDP countries) or a floating exchange-rate régime (especially in high-GDP countries). Limited-flexibility exchange-rate systems have become unimportant.

I. INTRODUCTION

The importance of fixed exchange rates has been decreasing since the collapse of the Bretton Woods system in the early 1970s. Dornbusch *et al* (1998) and Mushin (1999, 2002) are among the textbook authors that explain the causes and consequences of this.

In a recent article, Mushin (2004) described and analyzed, using data published by the International Monetary Fund [IMF], the international experience of exchange-rate policies from 1978 to 1995. He showed that many countries' exchange-rate policies changed frequently; only 25% of IMF members retained the same type of exchange-rate policy for the whole of the period of the data. He also showed that there is a correlation between a country's Gross Domestic Product [GDP] and the probability of its use of a floating exchange-rate system,

but that this is a weak relationship. Further, he showed that international experience from 1978 to 1995 is consistent with the classification of the reasons for the adoption of fixed exchange-rate systems devised by Mushin (2001). This taxonomy identified eight reasons (which are frequently not mutually exclusive): small economy, historical connection, significant economic integration with a larger neighbor, political integration, evolving economic integration, perceived high risk, acute crisis, and recent independence.

The proportion of IMF members that used a floating exchange-rate system increased substantially between 1978 and 1995. However, Mushin (2004) showed that, although it increased the apparent importance of floating exchange-rate systems, the use of GDP-weighted data decreased the rate of increase in the level of their importance. The proportion of IMF members using fixed

exchange-rate systems decreased between 1978 and 1995 but it remained substantial. Using GDP-weighted data, however, this proportion was small and decreasing.

The purpose of this article is to examine the experience of exchange-rate policies since 1996. As in the earlier article by Mushin (2004), the source of information is the IMF. Almost all countries were members of the IMF from 1996; notable exceptions are Cuba, People's Democratic Republic of Korea (North Korea), and (since 1981) Republic of China (Taiwan). The IMF now has 185 members and, since it lists Hong Kong and Macau separately from China, and Aruba and Netherlands Antilles separately from Netherlands, publishes data for 189 countries and territories. Between 1996 and 2004, the number of countries and territories listed by the IMF increased from 184 to 187. The additional members are Palau (from 1997), São Tomé and Príncipe (from 2000), and Timor-Leste (from 2002). The membership of the IMF during the period of the previous study was much less stable. From 1978 to 1995, the number of countries and territories listed by the IMF increased from 135 to 182, although a large part of this net increase was the result of changes in boundaries. Additional countries were created by the dismembering of Czechoslovakia, of Yugoslavia, and of the Union of Soviet Socialist Republics, and by the separation of Eritrea from Ethiopia. During the same period, the number of IMF members decreased when the former People's Democratic Republic of Yemen (Aden) merged with the former Arab Republic of Yemen (Sana'a).

The classification of exchange-rate policies has changed. This complicates

the comparison of the results of this study with earlier work in this area. From 1996, the categories of exchange-rate policies, and their definitions, that are used in IMF publications are:

[i] Exchange Arrangements with No Separate Legal Tender

The currency of another country circulates as the sole legal tender, or the country is a member of a currency union in which the members share the same legal tender.

[ii] Currency Board Arrangements

The country uses a monetary régime based on an explicit commitment to exchange domestic currency for a specified foreign currency at a fixed exchange rate.

[iii] Other Conventional Fixed-Peg Arrangements

The country pegs its currency at a fixed rate to another currency or to a basket of currencies. The exchange rate might fluctuate within narrow limits of $\pm 1\%$ around a central rate or the maximum and minimum values of the exchange rate might remain with a margin of 2%. The monetary authority maintains the parity directly (through buying and selling of foreign currency) and/or indirectly (through interest-rate policy, foreign exchange regulations, etc).

[iv] Pegged Exchange Rates within Horizontal Bands

The value of the currency is maintained within margins of at least $\pm 1\%$ of a fixed central exchange rate or the margin between its maximum and minimum values exceeds 2%.

[v] Crawling Pegs

The value of the currency is adjusted periodically in small amounts at a fixed

rate or in response to changes in selected indicators.

[vi] Exchange Rates within Crawling Bands

The value of the currency is maintained within margins of at least $\pm 1\%$ or the margin between its maximum and minimum values exceeds 2% and the central rate or margins are adjusted periodically at a fixed rate or in response to changes in selected indicators,

[vii] Managed Floating with No Predetermined Path for the Exchange Rate

The country attempts to influence the exchange rate without having a target exchange rate. Intervention may be direct or indirect and might not be automatic.

[viii] Independently Floating

The exchange rate is market-determined. Official intervention is aimed at moderating the rate of change and preventing extreme fluctuations, in the exchange rate.

The classification used in IMF publications before 1996 is summarized in the Appendix.

II. ANALYSIS OF EXCHANGE - RATE SYSTEMS USING NON-WEIGHTED DATA

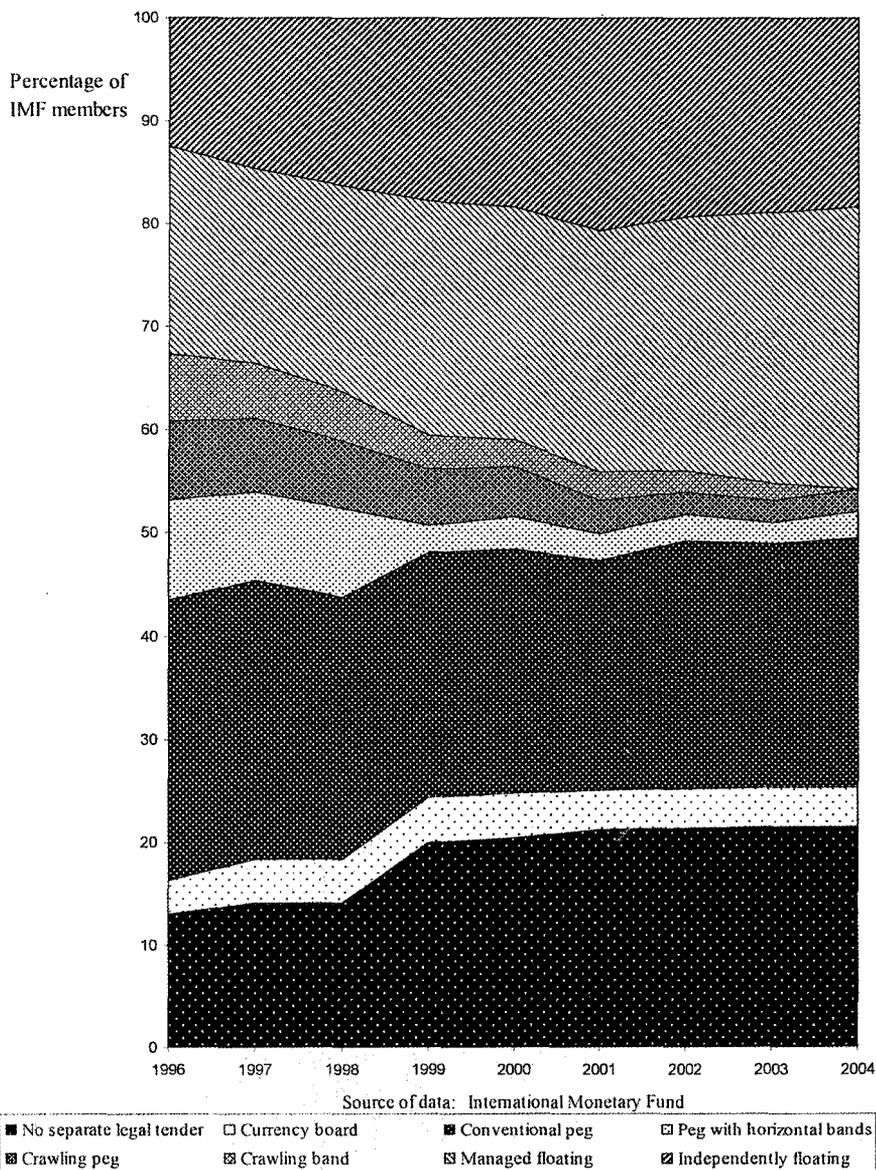
Figure 1 shows the proportion of IMF members using each of the types of exchange-rate system. The data refer to the end of each year from 1996 to 2004 and describe each country's actual (or *de facto*) exchange-rate régime, which, as described by Calvo and Reinhart (2002), is sometimes different from its officially announced (or *de jure*) position. In particular, countries

that claim to operate a managed floating exchange-rate system frequently aim to stabilize their currencies with respect to the United States dollar. Information on exchange-rate policies in earlier years that is published by the IMF describes each country's *de jure* policy and is therefore not always consistent with recent data.

The data show that, compared to 1978-95, 1996-2004 was a period of relative stability of exchange-rate régimes. The proportion of IMF members using independently floating exchange rates [viii] increased from 12.5% to 18.3% and the proportion using managed floating exchange rates [vii] increased from 20.1% to 27.4%. There was a marked decrease in the proportion using pegs with horizontal bands [iv], from 9.8% to 2.7%, which is explained by the introduction of the euro in 1999. When they adopted this new currency, countries changed from using pegs with horizontal bands to using no separate legal tender [i], and the proportion of IMF members in this category increased from 13.0% to 21.5%. The incidence of currency board arrangements [ii] and of conventional pegs [iii] remained fairly stable, with proportions of 3.3% and 27.2% in 1996 and of 3.8% and 24.2% in 2004. The proportions of countries using crawling pegs [v] and crawling bands [vi] fell markedly from 7.6% and 6.5% in 1996 and to 2.2% and 0.0% in 2004, and these two types of exchange-rate policy are now of little importance.

The increased stability of exchange-rate policies in 1996-2004, compared to 1978-95, is probably related to increased political stability. The earlier period saw major political changes including the expansion of the German Federal Republic to incorporate

FIGURE 1 Exchange-Rate Policies, 1996-2004



the former German Democratic Republic, the dismantling of Czechoslovakia, of Yugoslavia, and of the Union of Soviet Socialist Republics, and significant changes of political régime in Argentina, Chile, Hungary, Poland, Romania, South Africa, and other countries especially in eastern Europe, Latin America, and Asia. In addition,

the United States became increasingly sympathetic to increases in the volume of its trade with China. All of these had significant macroeconomic consequences. There have been few such major changes since 1996. Even the Asian economic crisis of 1997-98, which led to the introduction of floating exchange-rate systems in Thailand and

in Indonesia and of a fixed exchange-rate system in Malaysia, did not lead to a major disturbance to the overall distribution of exchange-rate policies.

Exchange-rate policy experience from 1996 to 2004 is summarized in a different way in Table 1. Using end-year data, this table shows the number of IMF members that operated each type of policy for various amounts of time (which is not always continuous). The proportion of IMF members that retained the same type of exchange-rate policy for the whole of the period of the data is 49.7%. There was much greater stability of exchange-rate policy between 1996 and 2004 than between 1978 and 1995.

TABLE 1 Duration of Exchange-Rate Policies, 1996-2004

Policy	Years of policy duration (x)	
	$x = 9$	$9 > x > 0$
	Number of IMF members	
[i]	22	17
[ii]	5	3
[iii]	31	35
[iv]	2	20
[v]	3	15
[vi]	0	15
[vii]	15	58
[viii]	14	38

Source of data: International Monetary Fund
 End-year data are used in this table.
 The information used in the preparation of this table can be obtained from the author.

The number of IMF members that operated exchange arrangements with no separate legal tender [i] increased from 24 in 1996

to 40 in 2004. In 1999, when the euro was established, the number increased from 26 to 37. However, these figures are difficult to interpret because this category is heterogeneous. Four sub-groups within it can be identified.

In the first sub-group are the dollarized countries. In these countries, the currency of some other country is the sole legal tender. Ecuador, El Salvador, Marshall Islands, Micronesia, Palau, Panama, and Timor-Leste use the United States dollar. Kiribati uses the Australian dollar. San Marino used the Italian lira until 1999, when it was replaced by the euro. The US dollar is also used in the overseas possessions of the United States (American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and the US Virgin Islands), which are not IMF members. The euro is also used in Monaco and in Vatican City, which are not IMF members, where it has replaced the French franc and the Italian lira. In Andorra, which is not an IMF member, the euro has replaced the French franc and the Spanish peseta. The euro has replaced the German mark in Kosovo and in Montenegro. The Turkish lira is used in North Cyprus, which is not an IMF member. The second sub-group comprises the countries that replaced their individual currencies with the euro: Austria, Belgium, Finland, France, Germany, Greece (from 2001), Irish Republic, Italy, Luxembourg, Netherlands, Portugal, and Spain. These twelve countries have higher values of GDP per person than the other countries that are listed by the IMF as having no separate legal tender. In the third sub-group are the members of the Eastern Caribbean Currency Union, which issues the Eastern Caribbean dollar and has a currency board arrangement in terms of the United

States dollar: Antigua-Barbuda, Dominica, Granada, St Kitts-Nevis, St Lucia, and St Vincent-Grenadines. Additional members of the Eastern Caribbean Currency Union, which are not IMF members, are Anguilla and Montserrat. The fourth sub-group consists of the countries that use the *Communauté Financière Africaine* [CFA] franc: Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo Republic, Côte d'Ivoire, Equatorial Guinea, Gabon, Guinea-Bissau, Mali, Niger, Sénégal, and Togo. The value of the CFA franc is pegged to the euro (which, in 1999, replaced the French franc).

The number of IMF members using currency board arrangements [ii] increased from six in 1996 to seven in 2004, reaching a maximum of eight from 1997 to 2000. The countries using this exchange-rate régime in 2004 were Bosnia-Herzegovina, Brunei Darussalem, Bulgaria, Djibouti, Estonia, Hong Kong, and Lithuania. The other country that used this system during the data period is Argentina.

The number of IMF members using other conventional fixed-peg arrangements [iii] decreased from 50 in 1996 to 45 in 2004, reaching a minimum of 41 in 2001¹. In 2004, in addition to a large number of small economies, this category included Bahrain, China, Kuwait, Libya, Malaysia, Oman, Qatar, Saudi Arabia, and United Arab Emirates.

The number of IMF members using pegged exchange rates within horizontal bands [iv] decreased from 18 in 1996 to five in 2004, reaching a minimum of four in 2003. In 1999, when the euro was established, the number decreased from 16 to five. The countries

using this exchange-rate régime in 2004 were Cyprus (South), Denmark, Hungary, Sierra Leone, and Tonga. Other countries, in addition to those that have adopted the euro, that have used this system since 1996 are Croatia, Czech Republic, Egypt, Iceland, Seychelles, Sierra Leone, Solomon Islands, Suriname, Ukraine, and Vietnam.

The number of IMF members using crawling pegs [v] decreased from 14 in 1996 to four in 2004. The countries using this exchange-rate régime in 2004 were Bolivia, Costa Rica, Honduras, and Nicaragua. Additional countries that have used this system since 1996 are Azerbaijan, Belarus, Brazil, Greece, Guinea-Bissau, Kazakhstan, Lebanon, Paraguay, Romania, Russia, Singapore, Tunisia, Turkey, and Uzbekistan.

The number of IMF members using exchange rates within crawling bands [vi] decreased from 12 in 1996 to zero in 2004. Countries that used this system in 1996 are Chile, Colombia, Ecuador, Honduras, Hungary, Indonesia, Israel, Poland, Sri Lanka, Uruguay, Venezuela, and Zimbabwe. Other countries that used this system during the data period are Slovenia and Romania.

The number of IMF members using managed floating with no predetermined path for the exchange rate [vii] increased from 37 in 1996 to 51 in 2004, with a minimum of 35 in 1997². In 2004, this category included Algeria, Bangladesh, Czech Republic, Ghana, India, Jamaica, Kenya, Nigeria, Pakistan, Russia, Singapore, Slovakia, and Thailand.

The number of IMF members using independently floating exchange-rate

systems [viii] increased from 23 in 1996 to 34 in 2004, reaching a maximum of 38 in 2001³. In 2004, this category included Australia, Brazil, Canada, Chile, Japan, Korea (South), Mexico, New Zealand, Norway, Philippines, Poland, South Africa, Sri Lanka, Sweden, Switzerland, UK, and United States.

A weakness of the IMF classification of exchange-rate systems is that it does not clearly identify the group of countries, which might be identified as the “greater euro zone”, that use the euro or that have linked the value of their currencies to the euro. As explained by Mundell (1998) and others, this is a large and significant currency bloc that is likely to become larger and more significant. The twelve countries that used the euro in 2004 are listed as having no separate legal tender [i], as are San Marino, which also uses the euro, and the fourteen countries that use the CFA franc, whose value is pegged to the euro. Other countries whose exchange rates were linked to the value of the euro in 2004 are Cape Verde, Macedonia, Malta, and Comoros, whose exchange-rate policies are classified as conventional fixed-peg systems [iii], Denmark, Cyprus (South), and Hungary, whose exchange-rate systems are classified as pegged within horizontal bands [iv], Bosnia-Herzegovina, Bulgaria, Estonia, and Lithuania, whose exchange-rate systems are classified as currency board arrangements [ii], and Serbia and Slovakia, whose exchange-rate systems are classified as managed floating with no predetermined path for the exchange rate [vii]. The euro is the currency of French Guiana, Guadeloupe, Martinique, Mayotte, Réunion, and St Pierre-Miquelon that, as *départements d'outre-mer*, are constitutionally part of France. One of the currencies that are

not mentioned in IMF publications is the *Comptoirs Français du Pacifique* [CFP] franc, which is used in the three French territories in the south Pacific (Wallis and Futuna Islands, French Polynesia, and New Caledonia) and whose value is defined in terms of the euro. The members of the greater euro zone exhibit a marked absence of macroeconomic commonality. Within this bloc, macroeconomic indicators, including the values of GDP and of GDP per person, have a wide range of values. The degree of financial integration with international markets also varies substantially in these countries. [Countries, including China, Fiji, Mauritania, Morocco, Russia, Samoa (Western) and Seychelles, that stabilize their exchange rates with respect to baskets of currencies that include the euro have adjustment systems that are less closely related to its value and should not be regarded as part of the greater euro zone.]

The establishment of the euro, which was explained by Mushin (2007) and Trichet (2006) is a remarkable development whose economic effects, especially in the long term, are uncertain. As explained by Aldcroft and Oliver (1998), this type of exercise, involving the rigid fixing of certain exchange rates, has not been attempted elsewhere in the recent past. The expansion of the greater euro zone, which is likely to continue with the economic integration of the new members of the European Union [EU], has enhanced the importance of the euro. For example, after the end of the period of the data analyzed in this study, Slovenia (2007), Cyprus (South) (2008), and Malta (2008) adopted the euro. Bulgaria and Slovakia are likely to adopt the euro in 2009. However, this expansion is unlikely to make the greater euro zone into a major

currency bloc comparable to, for example, the Sterling Area even at the time of its collapse in 1972. The development of the greater euro zone is especially noteworthy at a time when floating exchange-rate systems predominate. Mundell (2003) has predicted that the establishment of the euro will be the model for a new currency bloc in Asia, but Mushin (2006) has explained that this is neither likely nor necessarily desirable. There is no evidence yet of any significant movement in this direction. Eichengreen *et al* (1995) also argued that monetary unification in the emerging industrial economies of Asia is unlikely to occur.

III. ANALYSIS OF EXCHANGE-RATE SYSTEMS USING GDP-WEIGHTED DATA

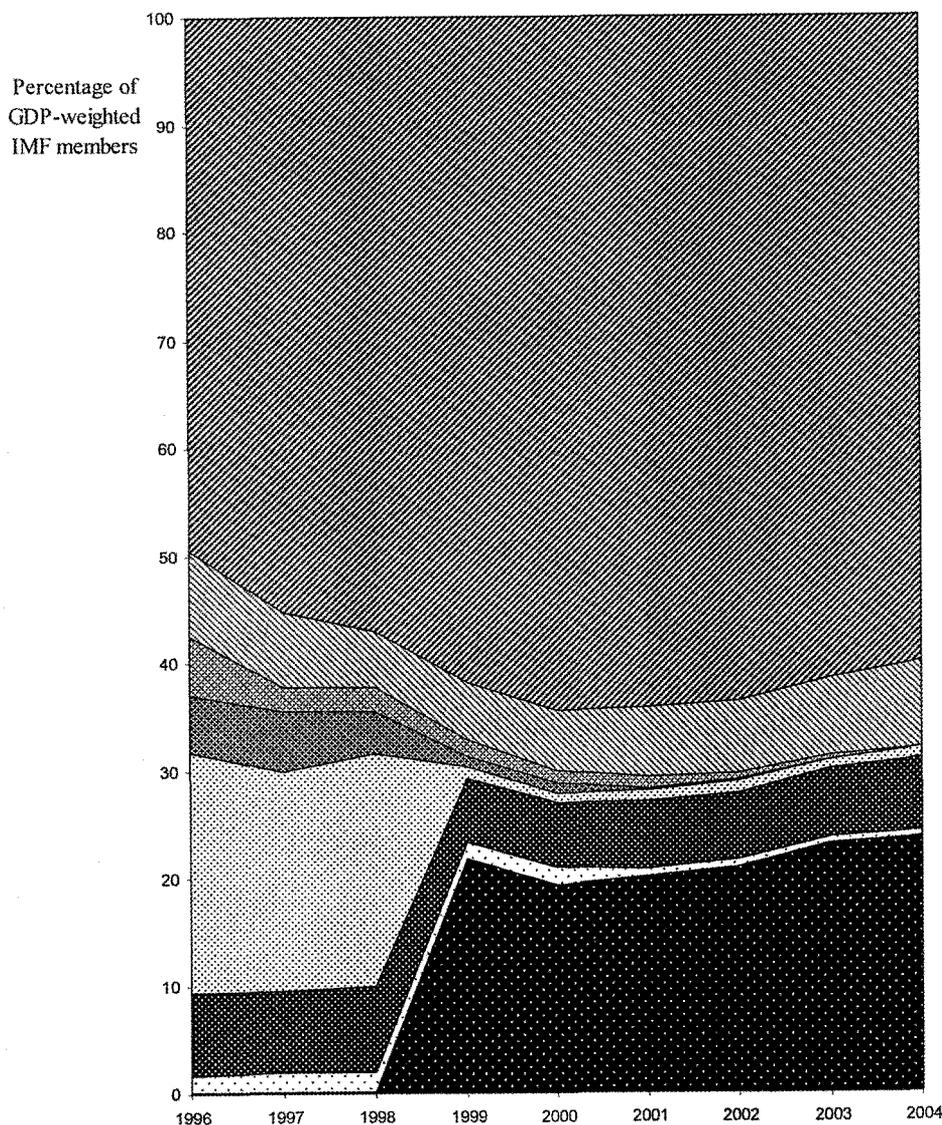
Figure 1 is based on the number of IMF members using each type of exchange-rate policy. Since the definition of each country is derived from an arbitrary combination of historical, geographical, social, and political accidents, analysis based on this graph is deficient. If the intention is to identify the relative importance of several exchange-rate systems, it is unsound to allocate the same weight to economies of different size and of different importance in international trade and capital movements. Figure 2, which, like Figure 1, is comparable to a graph drawn by Mushin (2004), is an attempt to deal with this weakness. In this case, each country has been weighted by the annual value, in United States dollars, of its GDP. Data have been obtained from the United Nations. Data for China does not include Hong Kong and Macau, which are listed separately. Data for Netherlands does not include Aruba and Netherlands Antilles,

which are listed separately. The use of GDP data is, of course, an imperfect proxy for the importance of each exchange-rate policy. International GDP data are likely, despite the diligence of United Nations statisticians, to be both inaccurate and inconsistent. In addition, the importance of international trade and payments varies substantially and is unlikely to be proportional to the value of the GDP of each country. Exchange rates have been used to convert values from local currencies to United States dollars. This is also imperfect because its exchange rate might not indicate the domestic purchasing power of a currency. Further, currencies whose values are pegged to the United States dollar, or to composites that include the United States dollar, are likely to show greater variation between their exchange rates (in terms of the United States dollar) and their domestic purchasing power than currencies whose values are not defined in terms of the United States dollar.

In addition to measuring of the size of each country's economy, GDP data indicate the heterogeneity of the membership of the IMF and, therefore, the importance of using weighted data. In 2004, for example, GDP values ranged from US\$11,713,000m (in the United States) and US\$4,669,322m (in Japan) to US\$79m (in Kiribati) and US\$68m (in São Tomé and Príncipe).

Figure 2 shows that, when GDP-weighted data are used, independently floating exchange-rate systems predominate. Comparison with Figure 1 indicates that high-GDP countries are clearly over-represented among users of independently floating exchange-rate systems [viii] and (until 1999) pegs within horizontal bands [iv] and clearly

FIGURE 2 Exchange-Rate Policies, 1996-2004



Source of data: International Monetary Fund (exchange rates), United Nations (GDP)

■ No separate legal tender	□ Currency board	■ Conventional peg	▨ Peg with horizontal bands
▨ Crawling peg	▨ Crawling band	▨ Managed floating	▨ Independently floating

under-represented among users of managed floating exchange-rate systems [vii], conventional fixed-peg arrangements [iii], currency board arrangements [ii], and (until 1999) exchange arrangements with no separate legal tender [i].

The proportion of GDP-weighted IMF members using independently floating exchange rates [viii] increased from 49.5% in 1996 to 60.1% in 2004, and the proportion using managed floating exchange rates [vii] decreased slightly from



8.0% to 7.9%. The countries that adopted the euro in 1999 have high GDP values, and this explains the marked increase in the proportion of GDP-weighted countries with no separate legal tender [i] from 0.2% in 1996 to 23.7% in 2004, and the marked decrease in the proportion of GDP-weighted IMF members using pegs with horizontal bands [iv] from 22.4% in 1996 to 1.0% in 2004. The overwhelming majority of these changes occurred in 1999. Greater stability is shown in the use of conventional fixed-peg arrangements [iii] where the proportion of GDP-weighted IMF members decreased from 7.7% in 1996 to 6.7% in 2004. The remaining three systems were even less important in 2004 than they were in 1996. The proportion of GDP-weighted IMF members using currency board arrangements [ii], crawling pegs [v], and exchange rates within crawling bands [vi] was 1.5%, 5.2%, and 5.6% in 1996, and 0.6%, 0.1%, and 0.0% in 2004.

Figures 1 and 2 show that, throughout the period of the data, unadjusted data overstates the importance of countries with conventional fixed-peg arrangements [iii] and with managed floating exchange-rate systems [vii]. In addition, before 1999, unadjusted data overstates the importance of countries with no separate legal tender [i].

IV. A SUGGESTION TO IMPROVE THE CLASSIFICATION OF EXCHANGE-RATE SYSTEMS

The information published by the IMF is perhaps confused by excess detail. It might improve comprehensibility to compress the eight categories of exchange-rate régimes

into three: fixed exchange-rate systems [A] (comprising exchange arrangements with no separate legal tender, currency board arrangements, other conventional fixed-peg arrangements, and pegged exchange rates within horizontal bands), exchange-rate systems with limited flexibility [B] (comprising crawling pegs and exchange rates within crawling bands), and floating exchange-rate systems [C] (comprising managed floating and independently floating). This new classification may be defined:

$$[A] \equiv [i] + [ii] + [iii] + [iv]$$

$$[B] \equiv [v] + [vi]$$

$$[C] \equiv [vii] + [viii]$$

Using this classification, the experience of exchange-rate policy from 1996 to 2004 has been summarized in Table 2. This shows clearly that the importance of fixed exchange-rate systems [A] has been stable. The creation of the euro has shifted countries within this category but has not altered its overall importance. The importance of floating exchange-rate systems [C] has shown a significant increase. Both in 1996 and in 2004, fixed exchange-rate systems [A] dominate if unweighted data are used and floating exchange-rate systems [C] dominate if GDP-weighted data are used. This confirms that small economies are over-represented among users of fixed exchange-rate systems and that large economies are over-represented among users of floating exchange-rate systems. Exchange-rate systems with limited flexibility [B] are now insignificant, especially if GDP-weighted data are used. Exchange-rate policies have become polarized, moving away, in both directions, from limited flexibility, which can be regarded as a compromise

between fixed exchange-rate and floating exchange-rate systems. Fischer (2007) reached a similar conclusion. If this trend continues, limited-flexibility exchange-rate systems are likely to disappear altogether.

other IMF members whose currencies are linked to the euro (the other members of the greater euro zone) have not been changed in this exercise. These countries are still included in fixed exchange-rate systems [A]

TABLE 2 Distribution of Exchange-Rate Policies, 1996-2004

	Percentage of IMF members			Percentage of GDP-weighted IMF members		
	1996	2004		1996	2004	
		IMF classification	revised euro classification		IMF classification	revised euro classification
[A]	53.3	52.2	45.8	31.8	32.0	12.7
[B]	14.1	2.2	2.2	10.8	0.1	0.1
[C]	32.6	45.7	52.1	57.4	67.9	87.2

Sources of data: International Monetary Fund (exchange rates), United Nations (GDP)
End-year data are used in this table.

The information used in the preparation of this table can be obtained from the author.

Another unofficial approach to the classification of exchange-rate régimes, which is intended to make the data more meaningful, is to regard the euro as the currency of a supra-national monetary authority that uses a floating exchange-rate system. Like the other countries that operate fixed exchange-rate systems, the members of this group of countries have abandoned their monetary sovereignty, but the euro does not have a fixed exchange rate with any other country's currency (or with a basket of other countries' currencies). This means that each country that uses the euro has a common currency with each of the other countries that use the euro, but a floating exchange rate with the currencies of other countries. In this modification of the data published by the IMF, the twelve countries that used the euro in 2004 [e] would be transferred from fixed exchange-rate systems [A] to floating exchange-rate systems [C]. The exchange-rate policy classifications of the

because they have retained their distinct currencies and the relationships between these and the euro could easily be changed. The revised definitions are:

$$[A] = [i] + [ii] + [iii] + [iv] - [e]$$

$$[B] = [v] + [vi]$$

$$[C] = [vii] + [viii] + [e]$$

The effect of this re-classification of the countries that use the euro is included in Table 2. In 2004, the twelve euro countries comprised 6.5% of the members of the IMF and 19.3% of the GDP-weighted members of the IMF. The data for 1996 are unaffected, because the euro was established in 1999. Under this modification of the IMF classification, the dominant type of exchange-rate policy régime is now a floating exchange-rate system [C]. This is especially marked if GDP-weighted data are used, which means that fixed exchange-rate systems [A], of which there remain many,

are concentrated among low-GDP countries and that floating exchange-rate systems [C], which include the euro where this has replaced national currencies, are concentrated among high-GDP countries. The taxonomy of the reasons for the introduction of fixed exchange-rate régimes described by Mushin (2001) remains valid.

V. CONCLUSIONS

Inconsistencies in the published data complicate the comparison of the distribution of exchange-rate régimes in 1978-95 and in 1996-2004. The IMF has introduced a new classification of policy types. In addition, it now records each country's *de facto* policy and not its *de jure* policy. However, the increased stability of IMF membership has improved the consistency of the data within the period of this study.

A weakness of the IMF classification is that it clearly identifies neither the group of countries that use the euro nor the members of the greater euro zone.

Exchange-rate policies were much more stable in 1996-2004 than they were in 1978-95. The principal determinants of changes in the mix of exchange-rate policy régimes are probably the macroeconomic effects of major political changes. Greater political stability is correlated with greater stability of exchange-rate systems.

Floating exchange-rate systems are now dominant, especially in high-GDP countries, although fixed exchange-rate systems are still important, especially in low-GDP countries. Exchange-rate systems with limited flexibility are now of very little importance and it is possible that this type of policy will no longer be used by any countries.

Despite the increasing stability, exchange-rate policies have continued to evolve.

ENDNOTE

The unofficial use of currencies, especially the United States dollar, outside their countries of issue is not within the scope of this article.

This article does not refer to the exchange-rate policies of many of the countries and territories that are not IMF members. However, most of the information provided by Mushin (2004) remains current.

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APPENDIX

In IMF publications issued before 1996, the classification of exchange-rate régimes is:

1. Pegged to the currency of another country (United States dollar, British pound, French franc, Spanish peseta, South African rand, Australian dollar, Indian rupee, German mark, Russian rouble, Italian lira, Singapore dollar, Portuguese escudo).
2. Pegged to the Special Drawing Right [SDR].
3. Pegged to another basket of currencies.
4. Regular adjustment according to a set of indicators that is defined in advance.
5. Membership of the European Snake (1972-79) and of the European Monetary System (1979-98).
6. Independently floating.
7. Managed floating (including limited flexibility in terms of the US dollar)

Short Bio of Jerry Mushin

Jerry Mushin is a Senior Lecturer at Victoria University of Wellington. He has also held posts at the New Zealand Institute of Economic Research and at UK universities. His academic publications are principally in the areas of macroeconomic policy and exchange rates.