

## THE BALANCE OF PAYMENTS AND THE EXCHANGE RATE

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### Contents

1. Introduction
  2. Evolution of the International Monetary System
    - 2.1 The Gold Standard and Bretton Woods
    - 2.2. The Generalized Float
  3. Alternative Exchange Rate Arrangements
    - 3.1. Pegged versus Floating Exchange Rates
  4. Determinants of the Balance of Payments and Exchange Rates
    - 4.1. Current Account Balances and Capital Flows
    - 4.2. Exchange Rate Determination
    - 4.3. Exchange Rates and Inflation
    - 4.4. Exchange Rates and the Terms of Trade
    - 4.5. Expectations and the Exchange Rate
    - 4.6. Currency Crises in Emerging Markets
  5. Macroeconomic Policy and the Exchange Rate
    - 5.1. Monetary Policy and Intervention
    - 5.2. Fiscal Policy
- Glossary  
Bibliography  
Biographical Sketch

### Summary

Economies that record persistent deficits on the current account matched by surpluses on the capital account are net borrowers of funds from the rest of the world. By contrast, economies that experience regular current account surpluses and capital account deficits are net lenders of funds to the rest of the world.

The exchange rate affects the prices at which a country trades with the rest of the world and is integral to open economy analysis and policy formulation. In the Bretton Woods era, exchange rates were fixed in terms of the US dollar. Today however, national governments can choose from a number of alternative exchange rate arrangements, ranging from independently floating to fixed. The ongoing debate over fixed versus floating exchange rates involves issues such as whether currency speculation is stabilizing or destabilizing and whether central banks possess superior economic knowledge. Decisions taken by national governments to float their exchange rates and abolish exchange controls are often inevitable in light of the increased integration of international capital markets.

The short-run flow approach to the exchange rate is based on relative movements in the supply and demand for currencies arising from external account transactions such as imports, exports, and foreign investment flows. Over longer periods, the most fundamental theory of exchange rate determination is purchasing power parity (PPP), which links relative price levels and inflation rates to movements in the nominal exchange rate. Countries with higher inflation rates tend to have depreciating currencies relative to countries with low inflation rates. PPP, as a long-run equilibrium condition, can be used to judge whether nominal exchange rates are at any time overvalued or undervalued.

## 1. Introduction

As the economic interdependence of countries around the world increases, it becomes increasingly important to understand the nature and significance of their international exchanges. The balance of payments accounts provide a detailed record of any economy's international economic transactions, and these accounts are central to understanding the degree of an economy's integration with the rest of the world.

Balance of payments accounts record monetary settlements between residents of an economy and foreigners, and are often referred to as the external accounts. However, in addition to monetary settlements, they also record transactions where goods only may be transferred, as is the case with some forms of foreign aid. There are two parts to the external accounts—the *current account* balance and the *capital account* balance. These accounts also form part of an economy's national accounts. In principle, under a floating exchange rate regime (discussed further below) the sum of these balances is zero. This is a result of the so-called double entry convention in balance of payments accounting, whereby transactions between residents of an economy and foreigners are paired as credit and debit entries. The record of international trade in assets, entered as flow items in the balance of payments accounts, also change an economy's *international investment position*, which is the difference between the value of a nation's external liabilities and its foreign asset holdings.

An important distinction in international investment statistics is that between *direct* and *portfolio* foreign investment. Direct foreign investment typically permits foreigners to exert significant influence over the management of a domestic enterprise in which their funds have been invested. By contrast, portfolio foreign investment typically involves acquiring partial ownership of foreign firms, in the form of financial assets such as equities, in proportions that are insufficient to cause loss of domestic management control over the firm's operations. *Exchange rates* play an important role in international trade and investment as they affect the price of internationally traded goods and services. An exchange rate is a price, the price of one currency in terms of another. Exchange rate movements reflect the economy-wide effects of changes in trade flows, world commodity prices, and capital flows between economies that are highly integrated, both with each other and with global goods, services, and financial markets. Exchange rate fluctuations therefore affect consumers and producers of internationally traded goods and services and firms with assets and liabilities denominated in foreign currencies. Since exchange rates are shared (macroeconomic) variables, such

fluctuations for any internationally integrated economy have counterpart effects in its trading partners.

An economy's supply of foreign exchange arises from export and asset sales to foreigners, as well as income received from abroad, whereas its demand for foreign currency stems from import and foreign asset demand and income payable abroad. The exchange rate equilibrates the supply and demand of foreign currency and for this reason is considered the single most important relative price in highly internationalized economies. If an economy adopts a pegged or a heavily managed exchange rate system, its central bank assumes responsibility for controlling its exchange rate. Because of the US dollar's status as the preferred currency of denomination in international transactions, the most often quoted bilateral exchange rate is that against the dollar.

A currency's nominal effective exchange rate is its value against a weighted average of the country's major trading partners' currencies. Individual bilateral currency weights used in the measure reflect the relative importance of each-way trade and are usually calculated using a base period with a value of 100. The *real effective exchange rate* is the nominal effective exchange rate adjusted for relative inflation, as measured by relative national price level movements, or alternatively by relative unit cost movements in major trading partners. Such measures are often used as indices of manufacturing industry competitiveness, because real depreciations tend to encourage exports by making local goods cheaper in foreign markets, and to check imports by making these more expensive at home. Exchange rate changes alter the prices of domestically produced goods and services relative to goods and services produced in other countries. Hence, they affect the profitability of exporting and the cost of importing from abroad. Competitiveness either improves or worsens over the short term because of nominal exchange rate movements or because domestic prices or costs change in relation to prices or costs of major trading partners. Since nominal exchange rates are far more variable than relative national price levels or labor costs, sharp nominal exchange rate swings account for most of the real exchange rate movements, which occur over short periods.

## **2. Evolution of the International Monetary System**

The worldwide liberalization of financial markets that began in the 1980s has facilitated a phenomenal rise in the movement of funds across national borders; to the extent that global currency turnover now averages over US\$ 1.3 trillion per day. Assisted by the major advances in information technology and reduced computing and communications costs, this greater international capital market integration has substantially improved access to the pool of global saving for both advanced and emerging economies.

### **2.1 The Gold Standard and Bretton Woods**

Financial globalization is not a phenomenon that first began in the late twentieth century, nor one that is exclusive to it. The world economy has previously experienced an era of globalization similar in many respects to the present one. This earlier period of globalization began in the second half of the last century, but was interrupted by the First World War (1914–1918) and its aftermath. The first era of financial globalization

coincided with the gold standard system, which then governed all international economic transactions. The gold standard originated in the later part of the nineteenth century, after the main industrial economies of Western Europe and North America had fixed the value of their currencies in terms of gold (some of these countries, and others in the world, had been using gold for international settlements from much earlier times). In the gold standard era, many economies became increasingly internationalized as a result of large trade and investment flows, which were in turn stimulated by the emergence of additional markets in other parts of the world.

At the beginning of the twentieth century, international capital flows between some nations, for example those between Britain and its former colonies, actually exceeded today's levels as a proportion of national production. In 1913 the share of exports in world output reached a peak that was not matched again until 1970. Moreover, in the first globalization era, migration rates and international labor mobility were also proportionately higher than they are today.

On the other hand, in the nineteenth century globalization was much less far-reaching geographically than it is now. Today, all parts of the globe, including Asia, Latin America, and Eastern Europe are affected. The gold standard was suspended during the First World War; afterwards, the currencies of the United Kingdom, France and many other imperial powers floated quite freely until the gold standard was partially restored in the mid-1920s. However, international goods markets generally disintegrated through the 1920s and this reversal of globalization continued through the 1930s and 1940s as a result of escalating tariffs on internationally traded goods, unstable exchange rates, the Great Depression, and the outbreak of the Second World War (1939–1945).

During this period, the international economy witnessed frequent competitive exchange rate devaluations. Near the end of Second World War, a new international institution, the International Monetary Fund (IMF) was established, with headquarters in Washington, DC, to oversee the so-called Bretton Woods system that lasted from 1945 until the early 1970s. This system was named after a small New Hampshire (USA) town, where, in 1944, an international conference agreed to establish a global system of fixed exchange rates to replace the disorderly international monetary arrangements that the world had experienced in the 1930s. The General Agreement on Tariffs and Trade (GATT), the precursor to the World Trade Organization (WTO), was also founded at this time for the purpose of scaling back tariffs and other protectionist measures that had restricted growth in international trade. Under the Bretton Woods system, exchange rates were officially managed. Currencies were allowed to fluctuate by a few percentage points either side of the formally established rates. Rates were usually fixed in terms of the US dollar, which in turn had its value fixed against gold. A wide range of *exchange controls*, designed to impede international financial flows, accompanied the Bretton Woods system. These restrictions prohibited certain forms of international borrowing and lending, and thereby made it easier for central banks to control their exchange rates. *Official intervention* in the foreign exchange market, which entails either net purchases or sales of foreign exchange by a central bank, is largely determined by the nature of a country's exchange rate regime. Under the Bretton Woods system of pegged exchange rates, all the major industrialized countries were supposed to have currencies that were convertible into foreign currencies at fixed exchange rates. Under such conditions,

official intervention was a passive act, because the monetary authorities had little choice but to ensure that their exchange rates did not vary beyond the pre-determined limits. The Bretton Woods system aimed to restore the exchange rate stability of the gold standard era. An important difference, however, was that international capital flows were heavily controlled, in order to assist central banks to maintain exchange rates at the pre-determined levels. A major reason why nations agreed to fix exchange rates was that this was seen as a way of minimizing the exchange rate uncertainty that was thought to deter international trade flows.

## **2.2. The Generalized Float**

The Bretton Woods system collapsed in the early 1970s because its pegged exchange rates could not be sustained in a new global financial environment in which international capital flows were continually growing and at times circumventing governments' official investment barriers. The irony here is that this strong growth in international capital flows was in part attributable to the re-emergence of large volumes of trade, which of course had to be financed.

Under the Bretton Woods system, domestic monetary authorities treated their economy's exchange rate either as a macroeconomic constraint, or else as a policy variable, to be altered (with IMF agreement) when necessary for balance of payments or inflation control purposes. With the floating of exchange rates following the breakdown of the Bretton Woods system, the nature and size of the global foreign exchange market changed dramatically, in part because many of the exchange controls that had impeded international financial transactions were abolished. The most noteworthy exchange controls abolished were those that limited outflows of funds abroad and those that prevented foreign borrowing by domestic financial institutions and enterprises.

From the early 1980s, access to international financial capital and services increased greatly for many economies. Combined with the removal of capital controls abroad and the development of international capital markets, this boosted many economies' external borrowing opportunities. In effect, the decisions to float currencies meant that exchange rates bore the pressure of external adjustment. This is because if, over any period, the net demand for foreign currency arising from current account transactions does not match the net supply from capital account transactions, the exchange rate must either depreciate or appreciate. Consequently, the goal of external balance as a macroeconomic policy objective should in theory have become less meaningful in the post-Bretton Woods era.

Similarly, the term "balance of payments" does not have the same meaning it had when exchange rates were generally pegged. Under the Bretton Woods system, balance of payments problems arose when there were unsustainable run-downs of the foreign currency reserves of a central bank. Reserve holdings were necessary in order to maintain the value of the exchange rate whenever the amount of foreign currency available from inflows fell short of residents' demand for it. This could stem, for instance, from an increased demand for imports, or a fall in the supply of foreign exchange coming from the sale of exports. Under the Bretton Woods system, when international capital markets were far less sophisticated than they are now, balance of

payments deficits usually arose for current account reasons. These balance of payments deficits effectively measured the depletion of official foreign exchange reserves required to meet the foreign exchange shortfalls. Hence, the availability of foreign reserves represented the ultimate external constraint on an economy's performance. In contrast, almost by definition, independently *floating exchange rates* do not demand intervention by the monetary authorities to maintain any particular exchange rate. Under the purest of floats, the overall balance of payments should in practice be zero, with the exchange rate itself bearing all the pressure of external adjustment.

While there is widespread agreement among economists and policymakers about the long-term benefits of free trade in goods and services, there is considerably less agreement about the benefits of international capital mobility. A dissenting view holds that speculative activity against currencies becomes excessive in this environment. Since the generalized float of exchange rates in the early 1970s, the most actively traded currencies in the world, as measured by daily turnover, are the US dollar, the euro, the Yen, the Pound sterling, and the Swiss franc. The foreign exchange market is a truly global market on which the sun literally never sets. Currencies are traded through the day, via the markets in London, New York, Tokyo, Hong Kong, Frankfurt, Sydney, and elsewhere. (See *Evolution of the International Monetary System*.)

### **3. Alternative Exchange Rate Arrangements**

The choice of exchange rate regime is one of the most significant macroeconomic policy decisions any national government must make, and the heterogeneity of existing exchange rate arrangements suggests that the kind of exchange rate regime that suits one economy may not be appropriate for another. At present, there is a wide range of exchange rate arrangements in place across the world. Governments can elect to have their economy's exchange rate determined in a variety of ways. At one extreme, under an independently floating exchange rate system, the value of the exchange rate can be established purely by the forces of demand and supply for a given currency in the foreign exchange market. The opposite extreme to an independently floating rate system is a pegged or managed exchange rate system in which one nation's currency is officially tied to one or more other currencies. It can either be irrevocably fixed against other currencies or can be pegged at a certain rate, but periodically manipulated - sometimes called adjustable peg arrangements. In essence, a pegged exchange rate differs from a floating exchange rate because the former is directly controlled by a country's central bank. Under pegged exchange rates, foreign exchange flows directly influence domestic monetary conditions. For instance, whenever interest rates rise foreign capital inflows rise, and central banks have to buy foreign currency in exchange for domestic currency, thereby adding local currency to their financial systems. This can make it difficult for central banks to control domestic money supplies. Countries with independently floating exchange rates are in the minority in the world as a whole; the vast majority prefers some form of exchange rate management. This is evident from Table 1 produced by the IMF, which shows the full range of exchange rate systems, including those in between the polar extremes of free floating and pegged.

Currency pegged to					Flexibility limited in terms of a single currency or group of currencies		More flexible	
US dollar	French franc	Other currency	SDR	Other composite <sup>2</sup>	Single currency <sup>3</sup>	Cooperative arrangement <sup>4</sup>	Other managed floating	Independently floating
Angola Antigua & Barbuda Argentina Bahamas, The Barbados Belize Djibouti Dominica Grenada Iraq Liberia Lithuania Marshall Islands Micronesia, Fed States Nigeria Oman Panama St. Kitts & Nevis St. Lucia St. Vincent & the Grenadines Syrian Arab Rep.	Benin Burkina Faso Cameroon C. African Rep. Chad Comoros Congo, Rep.  Côte d'Ivoire Equatorial Guinea Guinea-Bissau Mali Niger Senegal Togo	Bhutan (Indian rupee) Bosnia and Herzegovina (deutsche mark) Brunei Darussalam (Singapore dollar) Bulgaria (deutsche mark) Estonia (deutsche mark) Kiribati (Australian dollar) Lesotho (South African rand) Namibia (South African rand) Nepal (Indian rupee)	Libya Myanmar	Bangladesh Botswana Burundi Cape Verde Cyprus Fiji Iceland Jordan Kuwait Malta Morocco Samoa Seychelles Slovak Republic Solomon Islands Tonga Vanuatu	Bahrain Qatar Saudi Arabia United Arab Emirates	Austria Belgium Denmark Finland France Germany Ireland Italy Luxembourg Netherlands Portugal Spain	Algeria Belarus Brazil Cambodia Chile China, P.R. Colombia Costa Rica Croatia Czech Republic Dominican Rep. Ecuador Egypt El Salvador Eritrea Georgia Greece Honduras Hungary Iran, I.R. of Israel Korea Kyrgyz Rep. Lao P.D. Rep. Latvia Macedonia, FYR of Malaysia	Afghanistan, Islamic State Albania Armenia Australia Azerbaijan Bolivia Canada Congo, Dem.Rep Ethiopia Gambia, The Ghana Guatemala Guinea Guyana Haiti India Indonesia Jamaica Japan Kazakhstan Kenya Lebanon Madagascar Malawi Mauritania Mexico Moldova Mongolia

		San Marino (Italian lira) Swaziland (South African rand)					Maldives Nicaragua Norway Pakistan Poland Russia Singapore Slovenia Sri Lanka Sudan Suriname Thailand Tunisia Turkmenistan Turkey Ukraine Uruguay Uzbekistan Venezuela Vietnam	Mozambique New Zealand Papua New Guinea Paraguay Peru Philippines Romania São Tomé & Príncipe Sierra Leone Somalia South Africa Sweden Switzerland Tajikistan, Rep. Tanzania Trinidad and Tobago Uganda United Kingdom United States Yemen, Rep of Zambia Zimbabwe
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**Source:** International Monetary Fund, *International Financial Statistics*, 51, No. 1 (January 1998), p. 8.

Table 1. Global exchange rate arrangements



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### **Biographical Sketch**

**Anthony J. Makin** is a graduate of The University of Queensland and the Australian National University, and has been a senior economist in the Australian Federal Departments of Finance, Foreign Affairs and Trade, The Treasury, and The Prime Minister and Cabinet. He specializes in international finance, Asia-Pacific economies, and open economy macroeconomics, and has served as Australian convenor of the structural issues group of the Pacific Economic Co-operation Council. His publications have appeared in a wide range of international journals and he is the author of the books *Global Finance and the Macroeconomy* and *International Macroeconomics*.