

TOPIC 5: FOREIGN EXCHANGE MARKETS

The price of one currency in terms of another is called the **exchange rate**. It affects the economy and our daily lives, because when the Kenya Shilling becomes more valuable relative to foreign currencies, foreign goods become cheaper for Kenyans and Kenyan goods become more expensive for foreigners. When the Kenya Shilling falls in value, foreign goods become more expensive for Kenyans and Kenyan goods become cheaper for foreigners. We begin our study of international finance by examining the **foreign exchange market**, the financial market where exchange rates are determined. Exchange rates are highly volatile. What factors explain the rise and fall of exchange rates? Why are exchange rates so volatile from day to day?

Most countries of the world have their own currencies: The United States has its dollar; the European Monetary Union, the euro; Brazil, its real; and India, its rupee and Kenya, The Shilling. Trade between countries involves the mutual exchange of different currencies. When a Kenyan imports a second hand vehicle from Japan, for example, Kenya Shillings must be exchanged for the foreign currency, the Japanese Yen. The trading of currency and bank deposits denominated in particular currencies takes place in the foreign exchange market. Transactions conducted in the foreign exchange market determine the rates at which currencies are exchanged, which in turn determine the cost of purchasing foreign goods and financial assets.

What Are Foreign Exchange Rates?

There are two kinds of exchange rate transactions. The predominant ones, called **spot transactions**, involve the immediate (two-day) exchange of bank deposits. **Forward transactions** involve the exchange of bank deposits at some specified future date. The **spot exchange rate** is the exchange rate for the spot transaction, and the **forward exchange rate** is the exchange rate for the forward transaction.

When a currency increases in value, it experiences **appreciation**; when it falls in value and is worth fewer Shillings, it undergoes **depreciation**.

Example 1

At the beginning of 2009, for example, the Euro was valued at 1.18 US\$, and as indicated in the "Forex report" of NTV, on February 5, 2010, it was valued at 1.08 US\$. The euro *depreciated* by 8%:

$$x = \frac{1.08 - 1.18}{1.18} = 8\%$$

Example 2

The U.S. dollar, which went from a value of 0.85 Euros per dollar at the beginning of March 2010 to a value of 0.93 Euros per dollar on October 25, 2010, *appreciated* by 9%:

$$x = \frac{0.93 - 0.85}{0.85} = 9\%$$

Example 3

The value of one Kenyan shilling (Ksh) was Ugandan shilling (Ush) 25 in August 25, 2010. At the beginning of October, the Kenyan shilling was valued at Ush.26.10 at the start of October 2010. Determine the rate of appreciation/ depreciation.

Why Are Exchange Rates Important?

Exchange rates are important because they affect the relative price of domestic and foreign goods. The Kenya Shilling price of Kenyan goods to a Ugandan is determined by the interaction of two factors: the price of Kenyan goods in Kenya shillings and the Kenya Shilling/ Ugandan shilling exchange rate.

When a country's currency appreciates (rises in value relative to other currencies), the country's goods abroad become more expensive and foreign goods in that country become cheaper (holding domestic prices constant in the two countries). Conversely, when a country's currency depreciates, its goods abroad become cheaper and foreign goods in that country become more expensive.

Appreciation of a currency can make it harder for domestic manufacturers to sell their goods abroad and can increase competition at home from foreign goods, because they cost less.

How Is Foreign Exchange Traded?

You cannot go to a centralized location to watch exchange rates being determined; currencies are not traded on exchanges such as the Nairobi Stock Exchange. Instead, the foreign exchange market is organized as an over-the-counter (OTC) market in which several hundred dealers (mostly banks) stand ready to buy and sell deposits denominated in foreign currencies. Because these dealers are in constant telephone and computer contact, the market is very competitive; in effect, it functions no differently from a centralized market.

Exchange Rates in the Long Run

Like the price of any good or asset in a free market, exchange rates are determined by the interaction of supply and demand. We start by examining exchange rate determinants in the long run.

✓ **The Law of One Price**

If two countries produce an identical good, and transportation costs and trade barriers are very low, the price of the good should be the same throughout the world no matter which country produces it. Suppose that Kenyan coffee costs Ksh.1000 per ton and identical Ethiopian coffee costs 100 Birr per ton. For the law of one price to hold, the exchange rate between the shilling and The Birr must be 10 Shillings per Birr (Birr 0.1 per Shilling) so that one ton of Kenyan coffee sells for 100 Birr in Ethiopia (the price of Ethiopian coffee) and one ton of Ethiopian coffee sells for Ksh.1000 in Kenya (the price of Kenyan coffee).

✓ **Theory of Purchasing Power Parity**

One of the most prominent theories of how exchange rates are determined is the **theory of purchasing power parity (PPP)**. It states that exchange rates between any two currencies will adjust to reflect changes in the price levels of the two countries. The theory of PPP is simply an application of the law of one price to national price levels rather than to individual prices. Suppose, from the previous

example, the price of Kenyan coffee rises to Ksh. 1200 per ton. This means that from the law of one price, the exchange rate must be Ksh. 12 to One Ethiopian Birr.

Applying the law of one price to the price levels in the two countries produces the theory of purchasing power parity, which maintains that if the Kenyan price level rises 10% relative to the Ethiopian price level, The Birr will appreciate by 10%.

PPP theory often has been criticized for lack of predictive power in the short run.

The PPP conclusion that exchange rates are determined solely by changes in relative price levels rests on the assumption that all goods are identical in both countries and that transportation costs and trade barriers are very low. When this assumption is true, the law of one price states that the relative prices of all these goods (that is, the relative price level between the two countries) will determine the exchange rate. The assumption that goods are identical may not be too unreasonable for Kenyan and Ethiopian coffee, but is it a reasonable assumption for German cars (BMW's, Mercedes) and Indian Cars (Tata, Mahindra) cars?

PPP theory furthermore does not take into account that many goods and services (whose prices are included in a measure of a country's price level) are not traded across borders. Housing, land, and services such as restaurant meals, haircuts, and piano lessons are not traded goods. So even though the prices of these items might rise and lead to a higher price level relative to another country's, there would be little direct effect on the exchange rate.

Factors That Affect Exchange Rates in the Long Run

The basic reasoning proceeds along the following lines: Anything that increases the demand for domestic goods relative to foreign goods tends to appreciate the domestic currency because domestic goods will continue to sell well even when the value of the domestic currency is higher. Similarly, anything that increases the demand for foreign goods relative to domestic goods tends to depreciate the domestic currency because

Domestic goods will continue to sell well only if the value of the domestic currency is lower.

✓ **Relative Price Levels**

In line with PPP theory, when prices of Kenyan goods rise (holding prices of foreign goods constant), the demand for Kenyan goods falls and the Shilling tends to depreciate so that Kenyan goods can still sell well. By contrast, if prices of Ethiopian goods rise so that the relative prices of Kenyan goods fall, the demand for Kenyan goods increases, and the dollar tends to appreciate, because American goods will continue to sell well even with a higher value of the domestic currency. ***In the long run, a rise in a country's price level (relative to the foreign price level) causes its currency to depreciate, and a fall in the country's relative price level causes its currency to appreciate.***

✓ **Trade Barriers.**

Barriers to free trade such as **tariffs** (taxes on imported goods) and **quotas** (restrictions on the quantity of foreign goods that can be imported) can affect the

exchange rate. Suppose that Kenya increases its tariff or puts a lower quota on Ethiopian coffee. These increases in trade barriers increase the demand for Kenyan coffee, and the Shilling tends to appreciate because Kenyan coffee will still sell well even with a higher value of the shilling. ***Increasing trade barriers cause a country's currency to appreciate in the long run.***

✓ **Preferences for Domestic versus Foreign Goods.**

If the Kenyans develop an appetite for Japanese goods—say, for vehicles—the increased demand for Japanese goods (exports) tends to appreciate the Yen, because the Japanese goods will continue to sell well even at a higher value for the Yen. ***Increased demand for a country's exports causes its currency to appreciate in the long run; conversely, increased demand for imports causes the domestic currency to depreciate.***

✓ **Productivity.**

If one country becomes more productive than other countries, businesses in that country can lower the prices of domestic goods relative to foreign goods and still earn a profit. As a result, the demand for domestic goods rises, and the domestic currency tends to appreciate. If, however, its productivity lags behind that of other countries, its goods become relatively more expensive, and the currency tends to depreciate. ***In the long run, as a country becomes more productive relative to other countries, its currency appreciates.***

Exchange Rates in the short run

Exchange rates are determined in the short run by the **interest parity condition**, which states that the expected return on domestic deposits is equal to the expected return on foreign deposits.

$$1 + i_k = F / S * (1 + i_e), \text{ where}$$

S = Spot exchange-rate

F = Forward ex-rate, same maturity.

i_k = Interest rate in Kenya on bond or CD

i_e = Interest rate in Ethiopia on comparable bond/CD

Example 1:

The interest rates in Kenya currently stand at 8%, while those in Ethiopia stand at 12%. If the current exchange rate is 0.1 Birr to a Kenyan shilling, compute the forward rate between the shilling and the Birr.

Solution

$$1 + i_k = F / S * (1 + i_e)$$

$$1 + 8\% = F/0.1 *(1+0.12)$$

$$1.12 F = (1.08) * 0.1$$

$$1.12 F = 0.108$$

$F = 0.108 / 1.12 = 0.096$ Birr to a Kenyan shilling. This is an appreciation of the Birr and depreciation in The Shilling because investors will prefer to invest in Ethiopia where interest rates are higher. This drives up the demand for the Birr, hence its appreciation. Calculate the % appreciation/ Depreciation of the Birr/ Shilling.

We currently live in a world in which there is **capital mobility**: Foreigners can easily purchase Kenyan assets such as shilling deposits, and Kenyans can easily purchase foreign assets such as euro deposits. Because foreign bank deposits and Kenyan bank deposits have similar risk and liquidity and because there are few impediments to capital mobility, it is reasonable to assume that the deposits are perfect substitutes (that is, equally desirable). When capital is mobile and when bank deposits are perfect substitutes, if the expected return on Shilling deposits is above that on foreign deposits, both foreigners and Kenyans will want to hold only shilling deposits and will be unwilling to hold foreign deposits.

Forex quotations in Kenya

Local arbitrage

Triangular arbitrage

Managing forex exposure

Summary and conclusions

Any factor that changes the expected returns on domestic or foreign deposits will lead to changes in the exchange rate. Such factors include changes in the interest rates on domestic and foreign deposits as well as changes in any of the factors that affect the long-run exchange rate and hence the expected future exchange rate. Changes in the money supply lead to exchange rate overshooting, causing the exchange rate to change by more in the short run than in the long run.

CASE STUDIES ON THE EFFECTS OF EXCHANGE RATE POLICY ON WORLD TRADE

CASE 1: The Yuan-Dollar exchange rates

Nominally cheap or really dear?

China's exchange rate has risen faster than you think. Really

The Economist, Nov 4th 2010 | *Hong Kong*

AMERICAN manufacturers complain that China undervalues its exchange rate. But which one? The nominal exchange rate is now 6.67 Yuan to the dollar, having strengthened by almost 2% since September 5th (when Larry Summers, an adviser to President Barack Obama, flew to Beijing to complain about the currency in person) and by 24% since 2005.



But China's real exchange rate with America has strengthened by almost 50% since 2005, according to calculations by *The Economist* (see chart). A real exchange rate takes account of price movements in each country. If prices rise faster in China than in America, China's real exchange rate goes up, even if its nominal exchange rate stays the same. That's because higher prices at home make China's firms less competitive abroad, just as if their currency had gone up.

To calculate the real exchange rate, you need a gauge of prices in each country. Many economists use the consumer-price index (CPI). But the CPI contains lots of goods and services (such as housing rents) that cannot be traded across borders. Our measure of the real exchange rate, which we will regularly update, offers a more direct measure of competitiveness by looking instead at unit labor costs: the price of labor per widget. These costs go up when wages rise or productivity (widgets per worker) falls. In American manufacturing, unit labor costs have risen by less than 4% since the first quarter of 2005, according to the Bureau of Labor Statistics. In Chinese industry they have risen by 25% over that period, according to our sums.

Those estimates are rough and ready. There are no official statistics on China's unit labor costs. Our calculations are based on the value-added in industry (which extends beyond manufacturing) and the wage bill of urban factories, which does not count the town and

village enterprises that employ over two-thirds of China's metal-bashers. But the urban plants probably churn out a big share of the goodies that America buys.

The combination of a 24% rise in the Yuan against the dollar and a 21% increase in Chinese unit labor costs, relative to America's, explains the steep appreciation shown in the chart. The Yuan may well still be undervalued but our index suggests American manufacturing should have less to fear from Chinese competition than it did five years ago. Until June 2009 appreciation was largely because of the stronger Yuan. Since then it is largely because China's unit labor costs have grown much faster than America's. Employers in China's coastal factories have suffered labor shortages and strikes. America's factories have reported strong productivity gains as they have wrung more out of the workers that survived the recession (although those gains will be hard to repeat).

Of course, China and America do not trade only with each other. China's big surpluses and America's big deficits depend on the real exchange rate between them and all of their trading partners. But calculating that would require timely estimates of unit labor costs for all of China's trading partners. That is a bit too laborious.

CASE 2: The global monetary system

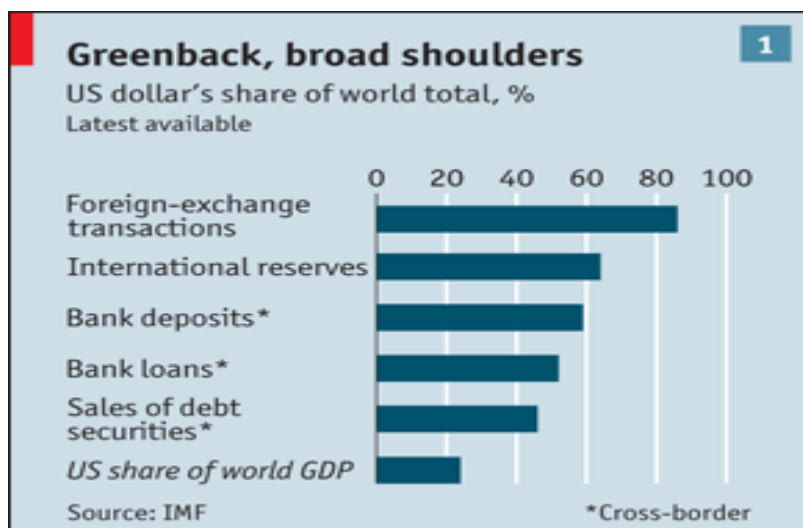
Beyond Breton Woods 2

Is there a better way to organize the world's currencies?

Nov 4th 2010 | *WASHINGTON, DC*

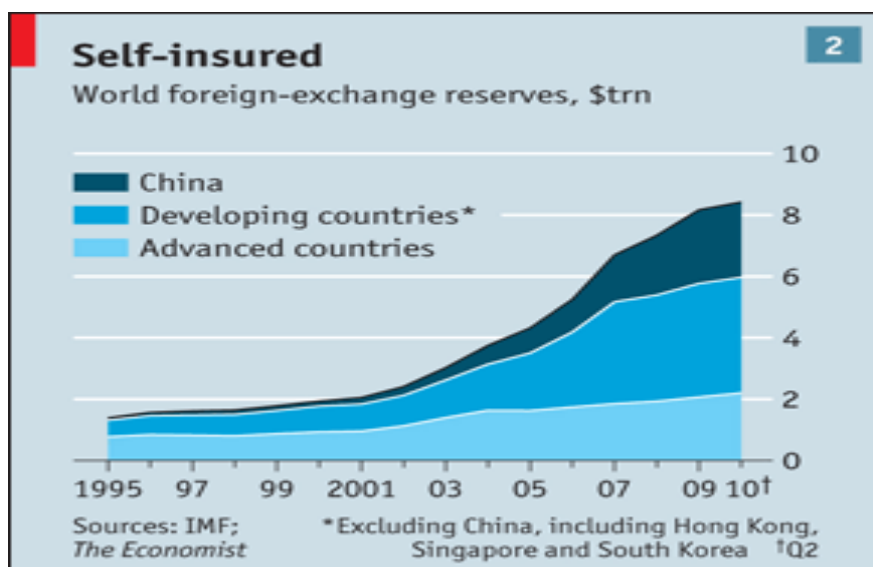
WHEN the leaders of the Group of Twenty (G20) countries meet in Seoul on November 11th and 12th, there will be plenty of backstage finger-pointing about the world's currency tensions. American officials blame China's refusal to allow the Yuan to rise faster. The Chinese retort that the biggest source of distortion in the global economy is America's ultra-loose monetary policy—reinforced by the Federal Reserve's decision on November 3rd to restart "quantitative easing", or printing money to buy government bonds (see [article](#)). Other emerging economies cry that they are innocent victims, as their currencies are forced up by foreign capital flooding into their markets and away from low yields elsewhere.

These quarrels signify a problem that is more than superficial. The underlying truth is that no one is happy with today's international monetary system—the set of rules, norms and institutions that govern the world's currencies and the flow of capital across borders.



There are three broad complaints. The first concerns the dominance of the dollar as a reserve currency and America's management of it. The bulk of foreign-exchange transactions and reserves are in Dollars, even though the United States accounts for only 24% of global GDP (see chart 1). A disproportionate share of world trade is conducted in Dollars. To many people the supremacy of the greenback in commerce, commodity pricing and official reserves cannot be sensible. Not only does it fail to reflect the realities of the world economy; it leaves others vulnerable to America's domestic monetary policy.

The second criticism is that the system has fostered the creation of vast foreign-exchange reserves, particularly by emerging economies. Global reserves have risen from US\$1.3 trillion (5% of world GDP) in 1995 to US\$8.4 trillion (14%) today. Emerging economies hold two-thirds of the total. Most of their hoard has been accumulated in the past ten years (see chart 2).



These huge reserves offend economic logic, since they mean poor countries, which should have abundant investment opportunities of their own, are lending cheaply to richer ones, mainly America. Such lending helped precipitate the financial crisis by pushing down America's long-term interest rates. Today, with Americans saving rather than spending, they represent additional thrift at a time when the world needs more demand.

The third complaint is about the scale and volatility of capital flows. Financial crises have become more frequent in the past three decades. Many politicians argue that a financial system in which emerging economies can suffer floods of foreign capital (as now) or sudden droughts (as in 1997-98 and 2008) cannot be the best basis for long-term growth.

France, which assumes the chairmanship of the G20 after the Seoul summit, thinks the world can do better. Nicolas Sarkozy, the country's president, wants to put international monetary reform at the top of the group's agenda for the next year. He wants a debate "without taboos" on how to improve an outdated system.

Such a debate has in fact been going on sporadically for decades. Ever since the post-war Breton Woods system of fixed but adjustable exchange rates fell apart in the 1970s, academics have offered Utopian blueprints for a new version. The question is: what improvements are feasible?

The shape of any monetary system is constrained by what is often called the "trilemma" of international economics. If capital can flow across borders, countries must choose between fixing their currencies and controlling their domestic monetary conditions. They cannot do both. Under the classical 19th-century gold standard, capital flows were mostly unfettered and currencies were tied to gold. The system collapsed largely because it allowed governments no domestic monetary flexibility. In the Breton Woods regime currencies were pegged to the dollar, which in turn was tied to gold. Capital mobility was limited, so that countries had control over their own monetary conditions. The system collapsed in 1971, mainly because America would not subordinate its domestic policies to the gold link.

Today's system has no tie to gold or any other anchor, and contains a variety of exchange-rate regimes and capital controls. Most rich countries' currencies float more or less freely—although the creation of the euro was plainly a step in the opposite direction. Capital controls were lifted three decades ago and financial markets are highly integrated.

Broadly, emerging economies are also seeing a freer flow of capital, thanks to globalization as much as to the removal of restrictions. Net private flows to these economies are likely to reach Ksh.340 billion this year, up from Ksh.81 billion a decade ago. On paper, their currency regimes are also becoming more flexible. About 40% of them officially float their currencies, up from less than 20% 15 years ago. But most of these floats are heavily managed. Countries are loth to let their currencies move freely. When capital pours in, central banks buy foreign exchange to stem their rise.

They do this in part because governments do not want their exchange rates to soar suddenly, crippling exporters. Many of them are worried about level as well as speed: they want export-led growth—and an undervalued currency to encourage it.

Just as important are the scars left by the financial crises of the late 1990s. Foreign money fled, setting off deep recessions. Governments in many emerging economies concluded that in an era of financial globalization safety lay in piling up huge reserves. That logic was reinforced in the crisis of 2008, when countries with lots of reserves, such as China or Brazil, fared better than those with less in hand. Even with reserves worth 25% of GDP, South Korea had to turn to the Fed for an emergency liquidity line of Shillings.

This experience is forcing a rethink of what makes a "safe" level of reserves. Economists used to argue that developing countries needed foreign exchange mainly for emergency imports and short-term debt payments. A popular rule of thumb in the 1990s was that countries should be able to cover a year's worth of debt obligations. Today's total far exceeds that.



Among emerging economies, China plays by far the most influential role in the global monetary system. It is the biggest of them, and its currency is in effect tied to the dollar. The Yuan is widely held to be undervalued, though it has risen faster in real than in nominal terms (see [article](#)). And because China limits capital flows more extensively and successfully than others, it has been able to keep the Yuan cheap without stoking consumer-price inflation.

China alone explains a large fraction of the global build-up of reserves (see chart 3). Its behaviour also affects others. Many other emerging economies, especially in Asia, are reluctant to risk their competitiveness by letting their currencies rise by much. As a result many of the world's most vibrant economies in effect shadow the dollar, in an arrangement that has been dubbed "Breton Woods 2".

History lessons

The similarities between this quasi-dollar standard and the original Breton Woods system mean that many of today's problems have historical parallels. Barry Eichengreen of the University of California, Berkeley, explores these in "Exorbitant Privilege", a forthcoming book about the past and future of the international monetary system.

Consider, for instance, the tension between emerging economies' demand for reserves and their fear that the main reserve currency, the dollar, may lose value—a dilemma first noted in 1947 by Robert Triffin, a Belgian economist. When the world relies on a single reserve currency, Triffin argued, that currency's home country must issue lots of assets (usually government bonds) to lubricate global commerce and meet the demand for reserves. But the more bonds it issues, the less likely it will be to honor its debts. In the end, the world's insatiable demand for the "risk-free" reserve asset will make that asset anything but risk-free. As an illustration of the modern thirst for Dollars, the IMF reckons that at the current rate of accumulation global reserves would rise from 60% of American GDP today to 200% in 2020 and nearly 700% in 2035.

If those reserves were, as today, held largely in Treasury bonds, America would struggle to sustain the burden. Unless it offset its Treasury liabilities to the rest of the world by acquiring

foreign assets, it would find itself ever deeper in debt to foreigners. Triffin's suggested solution was to create an artificial reserve asset, tied to a basket of commodities. John Maynard Keynes had made a similar proposal a few years before, calling his asset "Bancor". Keynes's idea was squashed by the Americans, who stood to lose from it. Triffin's was also ignored for 20 years.

But in 1969, as the strains between America's budget deficit and the dollar's gold peg emerged, an artificial reserve asset was created: the Special Drawing Right (SDR), run by the IMF. An SDR's value is based on a basket of the dollar, euro, pound and yen. The IMF's members agree on periodic allocations of SDRs, which countries can convert into other currencies if need be. However, use of SDRs has never really taken off. They make up less than 5% of global reserves and there are no private securities in SDRs.

Some would like that to change. Zhou Xiaochuan, the governor of China's central bank, caused a stir in March 2009 when he argued that the SDR should become a true global reserve asset to replace the dollar. Mr. Sarkozy seems to think similarly, calling for a multilateral approach to the monetary system. If commodities were priced in SDRs, the argument goes; their prices would be less volatile. And if countries held their reserves in SDRs, they would escape the Triffin dilemma.

For SDRs to play this role, however, they would have to be much more plentiful. The IMF agreed on a US\$.250 billion allocation among measures to fight the financial crisis, but global reserves are rising by about US\$.700 billion a year. Even if there were lots more SDRs it is not clear why governments would want to hold them. The appeal of the dollar is that it is supported by the most liquid capital markets in the world. Few countries are likely to use SDRs much until there are deep private markets in SDR-denominated assets.

Only if the IMF evolved into a global central bank able to issue them at speed could SDRs truly become a central reserve asset. This is highly unlikely. As Mr. Eichengreen writes: "No global government... means no global central bank, which means no global currency. Full stop."

Nor is it clear that the SDR is really needed as an alternative to the dollar. The euro is a better candidate. This year's fiscal crises notwithstanding, countries could shift more reserves into Euros if America mismanaged its finances or if they feared it would. This could happen fast. Mr. Eichengreen points out that the dollar had no international role in 1914 but had overtaken sterling in governments' reserves by 1925.

Alternatively, China could create a rival to the dollar if it let the Yuan be used in transactions abroad. China has taken some baby steps in this direction, for instance by allowing firms to issue Yuan-denominated bonds in Hong Kong. However, an international currency would demand far bigger changes. Some observers argue that China's championing of the SDR is a means to this end: if the Yuan, for instance, became part of the SDR basket, foreigners could have exposure to Yuan assets.

More likely, China is looking for a way to offload some of the currency risk in its stash of Dollars. As the Yuan appreciates against the dollar (as it surely will) those reserves will be worth less. If China could swap Dollars for SDRs, some exchange-rate risk would be shifted to the other members of the IMF. A similar idea in the 1970s foundered because the IMF's members could not agree on who would bear the currency risk. America refused then and surely would now.

Rather than try to create a global reserve asset, reformers might achieve more by reducing the demand for reserves. This could be done by improving countries' access to funds in a

crisis. Here the G20 has made a lot of progress under South Korea's leadership. The IMF's lending facilities have been overhauled, so that well-governed countries can get unlimited funds for two years.

Overcome your reserve

So far only a few emerging economies, such as Mexico and Poland, have signed up, not least because of the stigma attached to any hint of a loan from the IMF. Perhaps others could be persuaded to join (best of all, in a large group). Reviving and institutionalizing the swap arrangements between the Fed and emerging economies set up temporarily during the financial crisis might also reduce the demand for reserves as insurance. Also, regional efforts to pool reserves could be strengthened.

However, even if they have access to emergency money, governments will still want to hoard reserves if they are determined to hold their currencies down. That is why many reformers think the international monetary system needs sanctions, imposed by the IMF or the World Trade Organization (WTO), against countries that "manipulate" their currencies or run persistent surpluses.

This is another idea with a history. Along with Bancor, Keynes wanted countries with excessive surpluses to be fined, not least because of what happened during the Depression, when currency wars and gold-hoarding made the world's troubles worse. The idea went nowhere because America, then a surplus economy, called the shots at the Breton Woods conference in 1944. The same forces are evident today—except that America, as a deficit country, is on the other side of the argument. Like America in the 1940s, China would never agree to reforms that penalized surplus countries.

Such rules would probably be unenforceable anyway. Harsh penalties in international economic agreements are rarely effective: remember Europe's Stability and Growth Pact? Modest co-operation has better prospects. Just as the Plaza Accord in 1985 was designed to weaken the dollar and narrow America's current-account deficit, so the G20 could develop a plan for rebalancing the world economy, perhaps with target ranges for current-account balances and real exchange rates. These would be supported by peer pressure rather than explicit sanctions.

A rebalancing plan, which included faster real appreciation of the Yuan, would remove many of the tensions in the monetary system. But shifting the resources of China and other surplus countries from exports to consumption will take time.

Meanwhile, capital flows into emerging markets are likely to surge much faster. This is partly due to America's quantitative easing: cheap money will encourage investors to seek higher yields where they can find them. It is also partly due to the growth gap between vibrant emerging economies and stagnant rich ones. And it reflects the under-representation of emerging-market assets in investors' portfolios.

For the past decade emerging economies have responded to these surges largely by amassing reserves. They need other options. One, adopted by Brazil, South Korea, Thailand and others, and endorsed by the IMF, is to impose or increase taxes and regulations to slow down inflows. Some academics have suggested drawing up a list of permissible devices, much as the WTO has a list of legitimate trade barriers.

This is a sensible plan, but it has its limits. Capital-inflow controls can temporarily stem a flood of foreign cash. However, experience, notably Chile's in the 1990s, suggests that

controls alter the composition but not the amount of foreign capital; and they do not work indefinitely. As trade links become stronger, finance will surely become more integrated too.

Other tools are available. Tighter fiscal policy in emerging economies, for instance, could lessen the chance of overheating. Stricter domestic financial regulation would reduce the chances of a credit binge. Countries from Singapore to Israel have been adding, or tightening, prudential rules such as maximum loan-to-value ratios on mortgages.

But greater currency flexibility will also be needed. The trilemma of international economics dictates it: if capital is mobile, currency rigidity will eventually lead to asset bubbles and inflation. Unless countries are willing to live with such booms—and the busts that follow—Breton Woods 2 will have to evolve into a system that mirrors the rich world's, with integrated capital markets and floating currencies.

Although the direction is clear, the pace is not. The pressure of capital flows will depend on the prospects for rich economies, particularly America's, as well as the actions of the Fed. Emerging economies' willingness to allow their currencies to move will depend on what China does—and China, because its capital controls are more extensive and effective than others', can last with a currency peg for longest.

If America's economy recovers and its medium-term fiscal outlook improves, the pace at which capital shifts to the emerging world will slow. If China makes its currency more flexible and its capital account more open in good time, the international monetary system will be better able to cope with continued financial globalization and a wide growth gap between rich and emerging markets. But if the world's biggest economy stagnates and the second-biggest keeps its currency cheap and its capital account closed, a rigid monetary system will eventually buckle.

CASE 3: Global policymakers clash on currency policies

NEW YORK | Wed Oct 6, 2010 6:19pm EDT

(Reuters) - Global policymakers clashed over exchange rates on Wednesday as Western leaders warned China and other emerging markets that simultaneous efforts to weaken their currencies could derail economic recovery.

Treasury Secretary Timothy Geithner said countries with large trade surpluses must let their currencies rise lest they trigger a devastating round of competitive devaluations.

"When large economies with undervalued exchange rates act to keep the currency from appreciating, that encourages other countries to do the same," Geithner said Wednesday ahead of the weekend's semi-annual international Monetary Fund meeting.

Officials around the world fear such a "race to the bottom" will trigger trade tariffs and other measures that damage global economic growth.

Using exchange rates "as a policy weapon" to undercut other economies and boost a country's own exporters "would represent a very serious risk to the global recovery," IMF Managing Director Dominique Strauss-Kahn was quoted as saying in Wednesday's edition of the Financial Times.

But China, which the West accuses of keeping the Yuan artificially weak to promote exports, has rebuffed such calls. On Wednesday, Premier Wen Jiabao told the European Union to stop piling pressure on Beijing to revalue the Yuan, saying a rapid exchange rate shift could unleash disastrous social turmoil in China.

"Many of our exporting companies would have to close down, migrant workers would have to return to their villages," Wen said during a visit to Brussels. "If China saw social and economic turbulence, then it would be a disaster for the world."

RACE TO THE BOTTOM

The expectation that the Federal Reserve will expand the U.S. money supply again, lowering short term U.S. Treasury yields even further, has weighed on the U.S. dollar pushing the euro, yen and other emerging market currencies higher in recent months forcing some governments to take action.

The global exchange rate system and the issue of rebalancing world economic growth will likely be at the top of the agenda at the IMF meeting this weekend and at Friday's gathering of finance leaders from the Group of 20 economies.

Canadian Finance Minister Jim Flaherty said on Wednesday that officials would discuss currency intervention and inflexible exchange rates.

Despite disagreement among governments, IMF chief economist Olivier Blanchard said he was "optimistic" about a solution. "We are just at the beginning of the process, so it's much too early to declare it a failure."

Others, however, are less sure.

Brendan Brown, economist at Mitsubishi UFJ Securities International, said the IMF, which has the United States as its biggest stakeholder, would not try to prevent further U.S. monetary easing or a weaker dollar.

"That Washington institution has failed in its central mission to prevent currency war," he wrote in a report.

CASES STUDY DISCUSSION QNS

1. What is the difference between real and nominal exchange rates? Explain citing examples from the case study above and other relevant cases you know of?

It is customary to distinguish nominal exchange rates from real exchange rates. Nominal exchange rates are established on currency financial markets called "forex markets", which are similar to stock exchange markets. Rates are usually established in continuous quotation, with newspaper reporting daily quotation (as average or finishing quotation in the trade day on a specific market). Central bank may also fix the nominal exchange rate.

Real exchange rates are nominal rate corrected somehow by inflation measures. For instance, if a country A has an inflation rate of 10%, country B an inflation of 5%, and no changes in the nominal exchange rate took place, then country A has now a currency whose real value is $10\% - 5\% = 5\%$ higher than before. In fact, higher prices mean an appreciation of the real exchange rate, other things equal.

2. Why is exchange rate between the Yuan and the Dollar so important to America? Explain.

3. If Kenya were an export oriented economy, would it be advisable to have a strong or a weak currency relative to foreign currency? Explain citing relevant examples.

4. Discuss the different exchange rate regimes applied by governments.

The concept of exchange rate regime may be explained as the method that is employed by the governments in order to administer their respective currencies in the context of the other major currencies of the world. The foreign exchange market is pretty important in this case as well.

Exchange rate regime has often been likened to monetary policies and it may be concluded that both the processes are actually dependent on a lot of similar factors.

There are some basic exchange rate regimes that are used nowadays – the floating exchange rate, the pegged float exchange rate and the fixed or pegged exchange rate. In case of the floating exchange rate regime, the values of the currencies are influenced by the movements in the financial market.

FLOATING EXCHANGE RATES

The floating rates are extensively used in most countries of the world. Some common examples of the floating exchange rates would be the British pound, United States dollar, Japanese Yen and Euro.

Under the free float system, the Value of the currency is determined solely by market demand for and supply of the currency in the foreign exchange market.

- Trade flows and capital flows are the main factors affecting the exchange rate
- In the long run it is the macro economic performance of the economy (including trends in competitiveness) that drives the value of the currency
- No pre-determined official target for the exchange rate is set by the Government. The government and/or monetary authorities can set interest rates for domestic economic purposes rather than to achieve a given exchange rate target
- It is rare for pure free floating exchange rates to exist - most governments at one time or another seek to "manage" the value of their currency through changes in interest rates and other controls

The dirty float or a managed float is where the governments always step in to address any excesses in the changes of value.

There are three types of pegged floats – the crawling bands, pegging with horizontal bands and crawling bands. In case of the crawling bands the rate is permitted to fluctuate within a particular band or limit and the movements are based on a particular central value. This central value is adjusted at definite periods. The entire exercise is performed in a controlled manner. In case of the crawling pegs the rates of exchange stay fixed. In case the rates are pegged with horizontal bands the rate would be allowed to move within a specified limit or band, which is 1% more than the band.

FIXED EXCHANGE RATES SYSTEM

In case of the fixed exchange rate regimes or the pegged exchange rate, as it is also known, the rates are meant to be converting directly to some other currency. At times, in case of the pegged exchange rate, the currency may be attached to a group of currencies or even precious metals like gold.

Advantages of Fixed Exchange Rates (disadvantages of floating rates)

Fixed rates provide greater certainty for exporters and importers and under normally circumstances there is less speculative activity - although this depends on whether the dealers in the foreign exchange markets regard a given fixed exchange rate as appropriate

and credible. Sterling pound came under intensive speculative attack in the autumn of 1992 because the markets perceived it to be overvalued and ripe for devaluation.

Fixed exchange rates can exert a strong discipline on domestic firms and employees to keep their costs under control in order to remain competitive in international markets. This helps the government maintain low inflation - which in the long run should bring interest rates down and stimulate increased trade and investment.

Countries with different exchange rate regimes

Countries with fixed exchange rates often impose tight controls on capital flows to and from their economy. This helps the government or the central bank to limit inflows and outflows of currency that might destabilize the fixed exchange rate target,

The Chinese Yuan is essentially fixed using a basket of currencies- including the euro and the US dollar. Currency transactions involving trade in goods and services are allowed full currency convertibility. But capital account transactions are tightly controlled by the State Administration of Foreign Exchange.

The Hungarians have a semi-fixed exchange rate against the Euro with the forint allowed to move 2.5% above and below a central rate against the Euro. The Hungarian central bank must give permission for overseas portfolio investments on a case by case basis. The Russian rouble is in a managed floating system but there is a 1% tax on purchases of hard currency. In contrast, the Argentinean peso is pegged to the US dollar at parity (Ksh.1 = 1 peso) but international trade transactions (involving current and capital flows) are not subject to stringent government or central bank control.