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Review Paper

Foreign exchange reserves in India and China

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Professor Irma Glicman Adelman, an Irish Economist working in California University at Berkely, in her research work on 'Development Over Two Centuries', which is published in the Journal of Evolutionary Economics, 1995, has identified that India, along with China, would be one of the largest economies in this 21st Century. She has stated that the period 1700 - 1820 is the period of Netherlands, the period 1820 - 1890 is the period of England the period 1890 - 2000 is the period of America and this 21st Century is the century of China and India. World Bank has also identified India as one of the leading players of this century after China. India will be third largest economy after USA and China. India will challenge the Global Economic Order in the next 15 years. India will overtake Italian economy in 2015, England economy in 2020, Japan economy in 2025 and USA economy in 2050 (China will overtake Japan economy in 2016 and USA economy in 2027). India has the following advantages compared with other economies. India is 4th largest GDP in the world in terms of Purchasing Power. India is third fastest growing economy in the world after China and Vietnam. Service sector contributes around 57% of GDP. The share of agriculture is around 17% and Manufacture is 16% in 2005 - 2006. This is a character of a developed country. Expected GDP growth rate is 10% shortly (It has come down from 9.2% in 2006 - 2007 to 6.2% during 2008 - 2009 due to recession. It is only a temporary phenomenon). India has $284 billion as Foreign Exchange Reserve as on today. India had just $1 billion as Foreign Exchange Reserve when it opened its economy in the year 1991. In this research paper an attempt has been made to study the two booming economies of the globe with respect to their foreign exchange reserves. This study mainly based on secondary data published by respective governments and various studies done on this area.

Key words: People's Bank of China, Reserve Bank of India, foreign exchange reserve, international exchange reserve, gold, currency assets.

INTRODUCTION

Over the last decade, central banks around the world have quadrupled the size of their foreign exchange reserves. The case of China, which multiplied its own stock by a factor of ten, is often mentioned as an example of these excesses, but China is not alone. Total reserves of sub-Sahara African countries have also risen by a factor of ten. The only exceptions to this worldwide phenomenon are the developed countries and a few odd developing countries. It might seem surprising that developing countries, which badly need every penny that they can save to improve their production capacities, accumulate such a stockpile of low-yield assets (Wyplosz, 2007).

Foreign exchange reserves (also called Forex reserves) in a strict sense are only the foreign currency deposits and bonds held by central banks and monetary authorities. However, the term in popular usage commonly includes foreign exchange and gold, SDRs and IMR reserve positions. This broader figure is more readily available, but it is more accurately termed official international reserves or international reserves (Figure 2). These are assets of the central bank held in different reserve currencies, mostly the US dollar and to a lesser extent the euro, the UK pound and the Japanese yen are used to back its liabilities, e.g. the local currency issued and the various bank reserves deposited with the central

Abbreviation: SDR, Special drawing rights; **NRI,** non-resident Indians special drawing rights; **IMF,** international monetary fund; **WMA,** ways and means advances; **RBI,** Reserve Bank of India FDI.

Table 1. On monetary authorities with the largest foreign reserves in 2009.

Rank	Country/Monetary Authority	billion USD (end of month 2009)
1	People's Republic of China	2273 (Sep)
2	Japan	1019 (Jun)
-	Eurozone	531 (Feb)
3	Russia	429 (Oct)
4	Taiwan	321.09 (Apr)
5	India	281 (Sep)
6	South Korea	254 (Sep)
7	Hong Kong	233 (Aug)
8	Brazil	233 (Oct)
9	Germany	184 (Sep)
10	Singapore	182 (Sep)

Source: Wikipedia*en*.wikipedia.org/wiki/Foreign_exchange_reserves –

bank, by the government or financial (Wikipedia). Foreign Exchange Reserve is the total of a country's gold holdings and convertible foreign currencies held in its banks, plus Special Drawing Rights (SDR) and exchange reserve balances with the International Monetary Fund (IMF) (Business Dictionary). It is deposits of a foreign currency held by a central bank. Holding the currencies of other countries as assets allow governments to keep their currencies stable and reduce the effect of economic shocks. The use of foreign exchange reserves became popular after the decline of the gold standard (Investors world).

Foreign exchange reserves (also called Forex reserves) in a strict sense are only the foreign currency deposits and bonds held by central banks and monetary authorities. However, the term in popular usage commonly includes gold, SDRs and IMF reserve positions. This broader figure is more readily available, but it is more accurately termed official international reserves or international reserves. Official international reserves, the means of official international payments, formerly consisted only of gold and occasionally silver. But under the Bretton Woods System, the US dollar functioned as a reserve currency, so it too became part of a nation's official international reserve assets. From 1944 - 1968, the US dollar was convertible into gold through the Federal Reserve System, but after 1968 only central banks could convert dollars into gold from official gold reserves and after 1973 no individual or institution could convert US dollars into gold from official gold reserves. Since 1973, all major currencies have not been convertible into gold from official gold reserves. Individuals and institutions must now buy gold in private markets, just like other commodities. Even though US dollars and other currencies are no longer convertible into gold from official gold reserves, they still can function as official international reserves. In a flexible exchange rate system, official international reserve assets allow a central bank to purchase the domestic currency , which is considered a liability for the central bank (since it prints the money itself as IOUs). This action can stabilise the value of the domestic currency. Central banks throughout the world have sometimes cooperated in buying and selling official international reserves to attempt to influence exchange rates.

Foreign exchange comes into a country in the form of investments, payments for exports, loans and bilateral aid among other things. It goes out as payments for imports, payment of interest, repayment of loans and repatriation of investments and profits. Foreign exchange comes into a country in the form of investments, payments for exports, loans and bilateral aid among other things. It goes out as payments for imports, payment of interest, repayment of loans and repatriation of investments and profits. Developed countries in comparison tend to have lower forex reserves. The reason for not accumulating large reserves is that their currencies are often reserve currencies themselves and therefore, are highly liquid, so there do not exist that high a precautionary motive for them. Also these economies have export sectors that are not driven by exchange rates. So they do not have to manage their exchange rates in order to support their domestic industry (Manu Gupta, 2009).

There has been a very rapid rise since the early 1990s in foreign reserves held by developing countries. These reserves have climbed to almost 30% of developing countries' GDP (Rodrik, 2006). In varying degrees, China, India and many other developing countries have accumulated large foreign exchange reserves that are then invested abroad. The reasons for such large hoards of foreign exchange with Asian central banks are to be found in the skewed nature of world trade and in the direction of foreign capital flows. China and many other East and South-East Asian countries, following a policy of export led growth, have been enjoying highly favorable trade balances with the U.S. and other developed countries (Table 1). In India, the accumulation of reserves has been primarily due to the large foreign portfolio

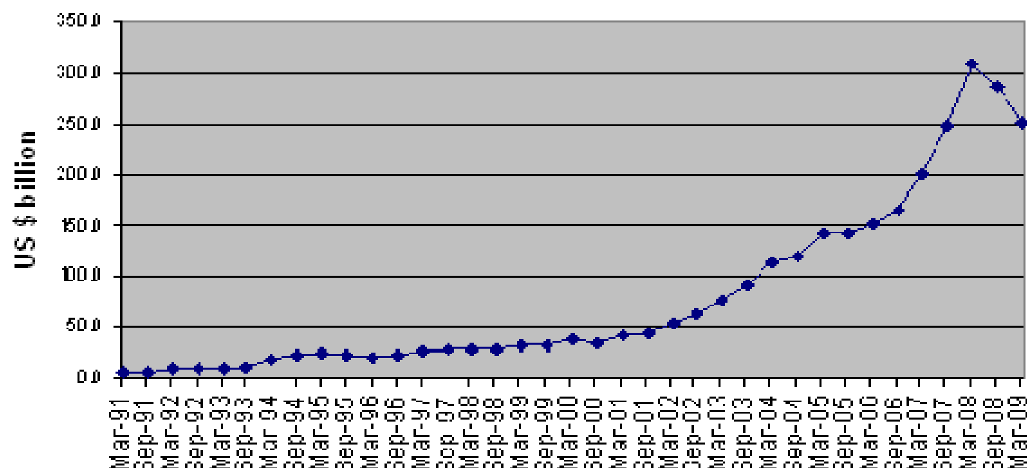

Figure 1. Movements in foreign exchange reserves.
Source: RBI, India

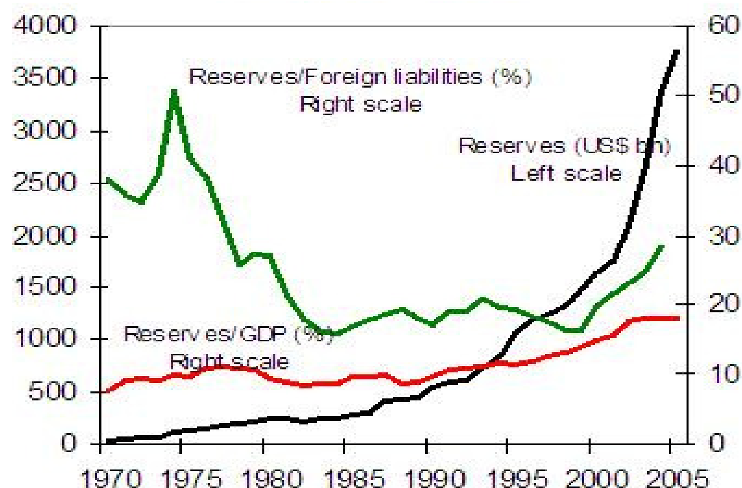

Figure 2. World reserves.
Source: www.voxeu.org/index.php?q=node/182 -

inflows into the stock markets. In the normal course, the abundant dollar supply would have made the domestic currency appreciate. For many countries including India and China this is not a happy prospect. Hence their central banks have mopped up the dollars which mostly go into their reserves kitty. Most central banks, which handle investments of such reserves, have traditionally favored the American dollar and the world's reserve currency. Since their overriding concerns were safety and liquidity rather than return, they have been content to deploy them mostly in U.S. government paper. That action, while guaranteeing safety and liquidity, has however led to low yields. The rationale for building up reserves is to stave off financial crisis caused by sudden and large outflow of capital (Narayanan, 2007).

For the first time in its history, India came perilously close to defaulting on its international payments in 1991 when the foreign exchange reserves plummeted to a billion dollars. In 1991, India's main headache was meeting import commitments with a paltry $1 billion.

India’s foreign exchange reserves have grown significantly since 1991 (Figure 1). The reserves, increased gradually to US$ 25.2 billion by end-March 1995. The growth continued in the second half of the 1990s with the reserves touching the level of US$ 38.0 billion by end-March 2000. Subsequently, the reserves rose to US$ 113.0 billion by end-March 2004, US$ 199.2 billion by end-March 2007 and further to US$ 309.7 billion by end-March 2008. Thereafter the reserves declined to US$ 252.0 billion by end-March 2009. During the third week of October, the foreign exchange reserves with the RBI amounted to $285 billion and they were held in foreign

currency assets, gold and special drawing rights (SDRs) with the IMF. Like most other central banks, the RBI has kept the bulk of its reserves in U.S. government securities. Gold has so far accounted for just $10 billion or less than 4% of the reserves which will now constitute 6%. The RBI is set to become one of the largest holders of gold reserves among central banks.

Although both US dollar and Euro are intervention currencies and the foreign currency assets are maintained in major currencies like US Dollar, Euro, Pound Sterling, Australian Dollar, Japanese Yen etc., the foreign exchange reserves are denominated and expressed in US Dollar only. The foreign exchange reserve data prior to 2002 - 2003 do not include the reserve tranche position (RTP) in the international monetary fund (IMF). Movements in the FCA occur mainly on account of purchases and sales of foreign exchange by RBI in the foreign exchange market in India. In addition, income arising out of the deployment of foreign exchange reserves is also held in the portfolio of the reserves. External aid receipts of the Central Government also flow into the reserves. The movements of the US dollar against other currencies in which FCA are held also impact the level of reserves in US dollar terms.

An analysis of the sources of reserves accretion during the entire reform period from 1991 onwards reveals that the increase in foreign exchange reserves has been facilitated by an increase in net foreign direct investment (FDI) from US $ 129 million in 1991 - 1992 to US$ 17.5 billion in 2008 - 2009. FII investments in the Indian capital market, which commenced in January 1993, have shown significant increase over the subsequent years. Cumulative net FII investments increased from US$ 1 million at end-March 1993 to US$ 51.6 billion at end-March 2009. The net outflows of US$ 15.0 billion by FIIs led to decline in cumulative portfolio stock to US$ 79.4 billion at end-March 2009 from US$ 94.5 billion at end-March 2008. Outstanding NRI deposits increased from US$ 14.0 billion at end-March 1991 to US$ 43.7 billion as at end-March 2008. As at end-March 2009, the outstanding NRI deposit stood at US$ 41.3 billion.

Foreign Exchange Reserves has increased to $1.5 billion during the week ended October 2009, largely on account of revaluation of non dollar assets reserves vis-a-vis the dollar. The latest figures released by the Reserve Bank of India indicate that the total foreign exchange reserves, including gold and special drawing rights (SDR—reserves currency with the International Monetary Fund), rose $1.521 million to touch $281.86 billion during the week ended October 2009. Almost the entire rise in reserves was on account of a rise in foreign currency assets, which has increased to $1.477 million. The value of SDR and the reserves with the IMF has increased to $35 million and $9 million respectively during the week. “The dollar had weakened sharply against major global currencies in the last two weeks.

This could have resulted in revaluation of non-dollar assets in reserves,” said a senior treasury official with a private bank. Almost 40% of the reserves is believed to have comprised in non-dollar assets including the sterling pound, yen, euro and the yuan, though no central bank makes their currency composition of reserves public. In the other developments, both the central and the state governments have kept their ways and means advances (WMA) account with the RBI vacant during the week ended October 2009. WMA is a facility under which the government (state as well as the centre) can borrow from the central bank to meet its daily revenue mismatches. While borrowings within the limit are at the prevailing repo rate, borrowings above the agreed limit (between the government and RBI) is at 2% higher than the repo rate.

Of the total foreign exchange reserves of $286 billion as on October 23, the RBI holds gold valued at $10 billion. With the latest purchase, the RBI’s gold holding will touch 557.7 ton. India has come a long way since 1991, when foreign currency reserves shrank to almost nothing and default on external borrowings appeared imminent. The then Prime Minister, P. V. Narasimha Rao and the Finance Minister, Dr Manmohan Singh’s immediate response was to secure an emergency loan of $2.2 billion from the IMF. The Government had to offer the country’s gold reserves as collateral. According to the World Gold Council’s report, the RBI has become the 11th largest gold holder among various central banks, placing it ahead of the European Central Bank but behind Russia’s. (The Reserve Bank of India has purchased 200 ton of gold valued at Rs 31,490 crore ($6.7 billion) from the international monetary fund (IMF) under the latter’s limited gold sales programme).

The wheel has turned the full circle for India in 19 years. Looking at some of the domestic and external economic indicators, India seems to have come a long way since the 1991 balance of payment crisis. The liberalization process started in the 1980s giving an impetus to exports and oil imports. This lead to trade and current account deficits which were mainly financed by high-cost short-term external commercial loans. Medium and long-term external commercial loans also rose. By 1990, the debt-service ratio rose to 35.3% while the ratios of short-term debt to foreign exchange reserves and debt to current receipts reached highs of 382.1 and 328.9%. In 1991, political instability at home and a global oil price spike led to further deterioration in the trade and current account deficits, falling to -3 and -3.1% of GDP, even as export growth and remittances declined. Downgraded credit ratings harmed investor sentiment as short-term investors and Non-Resident Indians (NRI) withdrew money from the country and foreign banks were reluctant to roll-over debt. Trying to defend the currency, the Reserve Bank of India’s (RBI) foreign currency assets fell from $3.1 billion in August 1990 to $975 mllion in July 1991, insufficient to fund even three weeks of imports.

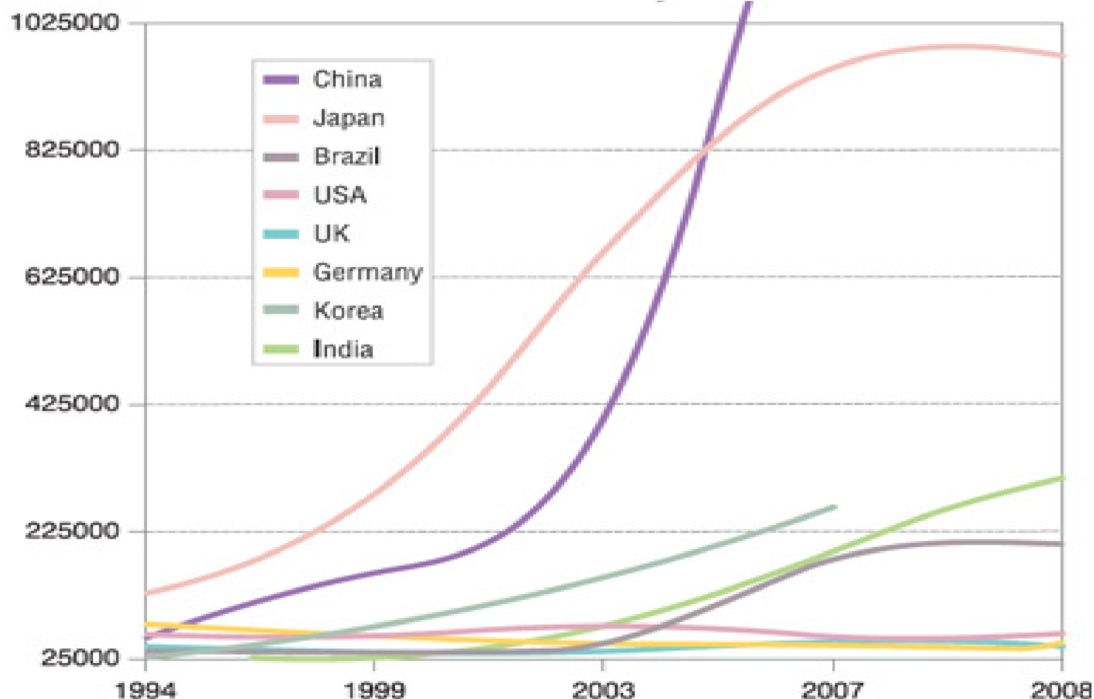

Figure 3. Forex reserves of major economies.
Source: www.dare.co.in/.../understanding-foreign-exchange-reserves.htm -

Economic growth and industrial output slowed and inflation surged. India pledged gold to the Bank of England to finance its imports and also sought bilateral and IMF assistance to repay its debt to avoid rescheduling. For a country that pledged 67 to 70 ton of gold with Bank of England and Bank of Switzerland to support its crude imports in 1991, (In June 1991, India's foreign exchange reserves had depleted to its worst level of $600 million, forcing the minority government of the day to pledge gold and invite public condemnation), bought 200 ton of the precious metal from the International Monetary Fund (IMF) on 3 November, 2009. In a display of the nation's confidence in its own economic muscle, the Reserve Bank of India (RBI) concluded the $6.7 billion deal with IMF over the second fortnight of last month. Finance Minister Pranab Mukherjee told a meeting with economic editors in the capital: "This goes to show that we have the money to buy gold and meet our import requirements. Despite the world economy stumbling, India and China were the only two economies to register growth. The world output increased due to India and China. India has the fifth largest gold reserves in the world. India's Finance Minister, Pranab Mukherjee, says the country's comfortable foreign exchange reserves prompted the Reserve Bank or RBI to invest in the precious metal. "Naturally as a finance minister my advice to the governor of RBI would be that if you are in a position keeping in view the availability of the foreign exchange you buy that and from that perspective it has been bought," he said. Economists say India has bought gold to diversify its assets and hold fewer dollars at a time when the U.S. currency is weakening against other currencies. Gold, whose prices have surged in the past year, is seen as a hedge against a slumping dollar.

COMPONENTS OF FOREIGN EXCHANGE RESERVES

Today, the foreign exchange reserves are a healthy $285.5 billion. After the purchase, RBI's gold reserves account for $17.71 billion (or 6.2 %) of the total foreign exchange reserves, up from $10.3 billion (3.7 %) now. Gold's share by value of global foreign exchange reserves is currently about 10%. This is not co-incidentally similar to what is often said to be the right amount of gold and just 5% lower than what the European Central Bank decided its gold holdings would be as a percentage of total reserves when it was formed, the only recent example of a central bank deciding on a gold share. RBI's foreign exchange reserves consist of foreign currency assets, gold, special drawing rights (SDRs) an international reserve currency floated by IMF and funds kept with IMF. The biggest chunk of these reserves is in the form of foreign currency assets ($268.3 billion). SDRs at $5.267 billion and funds kept with IMF at $1.589 billion are the other components of the reserves. China has the largest forex reserves in the world. India, Korea and Brazil are also building up huge forex reserves (Figure 3).

The central bank stated that the reserves increased to $285.520 billion as at October 23 in its weekly statistical

Table 2. On foreign exchange reserves (US $ m) 1995 to 2007 – 2008.

	Reserves				
	Gold	RTP	SDRs	Foreign currency assets	Total (2+3+4)
1990-91	3496	-	102	2234	5834
1991-92	3499	-	90	5631	9220
1992-93	3380	-	18	6434	9832
1993-94	4078		108	15068	19254
1994-95	4370		7	20809	25186
1995-96	4561		82	17044	21687
1996-97	4054	-	2	22367	26423
1997-98	3391	-	1	25975	29367
1998-99	2960	-	8	29522	32490
1999-00	2974	-	4	35058	38036
2000-01	2725	-	2	39554	42281
2001-02	3047	-	10	51049	54106
2002-03	3534	672	4	71890	75428
2003-04	4198	1311	2	107448	112959
2004-05	4500	1438	5	135571	141514
2005-06	5755	756	3	145108	151622
2006-07	6784	469	2	191924	199179
2007-08	10039	436	18	299230	309723
April	9427	485	18	304225	314155
May	9202	526	11	304875	314614
June	9208	528	11	302340	312087
July	9735	512	11	295918	306176
August	8692	496	4	286117	295309
September	8565	467	4	277300	286336
October	8382	447	9	244045	252883
November	7861	854	3	238968	247686
December	8485	877	3	246603	255968
Jan,2009	8884	830	3	238894	248611
Feb,2009	9746	816	1	238715	249278
March,2009	9577	981	1	241426	251985

Source: exim.indiamart.com/foreign-trade-in-India/ft19.html -

supplement. Changes in foreign currency assets, expressed in dollar terms, include the effect of appreciation or depreciation of other currencies held in its reserves such as the euro, pound sterling and yen, the central bank said. Foreign exchange reserves include India's Reserve Tranche position in the International Monetary Fund, the central bank stated (Table 2).

China’s massive foreign exchange reserves are the largest in the world, comprising a total of $2,132 billion or $2.1 trillion dollars’ worth. Of this amount, $1.5 trillion are held in US Dollar-denominated assets such as cash, bonds and treasuries. About 71% of China’s total foreign reserves are in US Dollars**.** As you can see, it is not very diversified.

The overall holdings of foreign exchange reserves by Asian central banks surged by $111.63 billion in September to a record $4.96 trillion, central bank data shows. China’s foreign exchange reserves, the world’s biggest, topped $2.273 trillion (the People’s Bank of China) (Figure 4) for the first time as the nation’s economic recovery prompted overseas investors to pump money into stocks and property. About 65% of China’s reserves are in dollar assets, with the rest mostly in Euros, yen and sterling, estimates Wang Tao, an economist with UBS AG in Beijing. It is “difficult to stop buying U.S. treasuries when markets for most other assets are too small and too illiquid,”

At the start of the reform era at the end of 1978, China's foreign exchange reserves were minimal, but enough to cover the requirements of a country with a very small import bill. In the early 1980s, export growth contributed to an initial rise in reserves to a peak of US$17.4 billion by 1984. High trade eroded the reserves in those years. In 1987 the surplus on trade in services slightly exceeded the merchandise trade deficit, produc-ing a small current-account surplus and a comfortable net

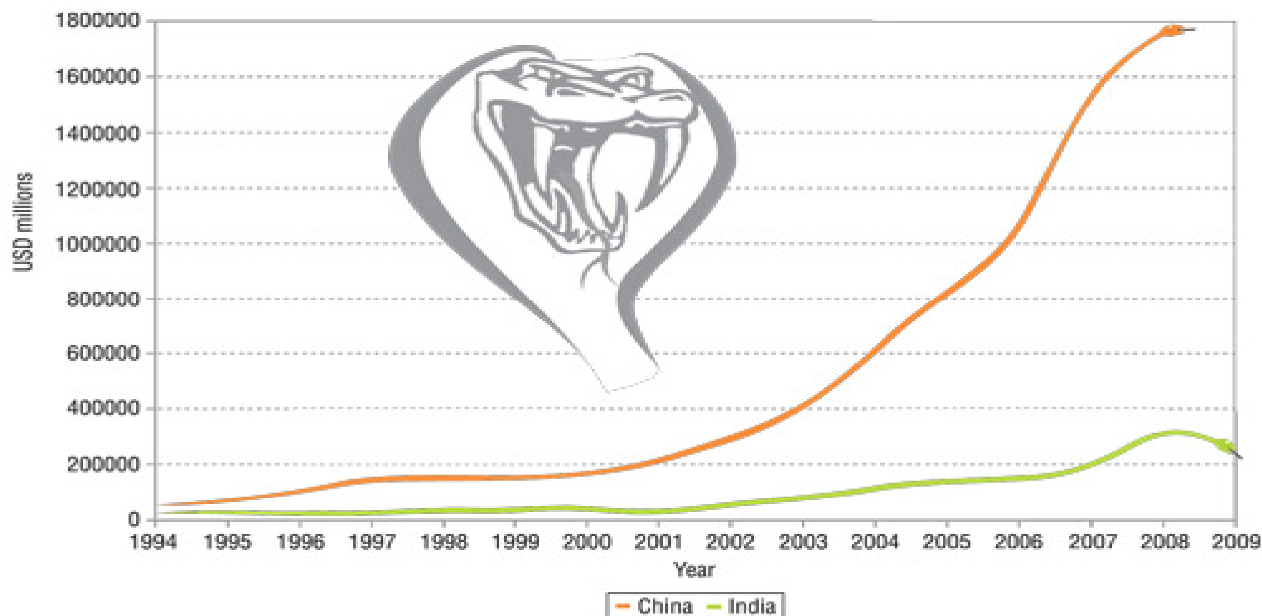

Figure 4. Forex reserves over time.
Source www.dare.co.in/.../understanding-foreign-exchange-reserves.htm -

capital inflow helped push up reserves to US$16.3 billion. The reserves were held above this level for another two years. The economic slowdown of 1989 - 1991 produced a sharp fall in imports in 1990, while exports continued to rise, producing a merchandise trade surplus for that year of US$ 9.2 billion, which was gradually eroded in the next three years as imports rose faster than exports. By 1993 the trade and current accounts were in deficit, but the acceleration in inward FDI flows kept foreign exchange reserves rising for most of the rest of the decade. Joining the World Trade Organization (WTO) in 2001 contributed to rapid growth in imports, but exports also expanded at a fast pace, while FDI inflows exceeded US$ 60 billion a year by 2004 - 2006. In October 2006, China's foreign exchange reserves exceeded USD 1 trillion for the first time. By the end of September 2008, the reserves topped US $ 1.9 trillion, equal to nearly US $ 1, 500 per head for the entire population of China. It remained around this level until the end of 2008 as trade growth slowed and foreign investment inflows declined. Then, as 2009 progressed, the upward march resumed, with reserves rising above US $ 2 trillion in April and reaching a record US $ 2, 272.585 billion at the end of September (Table 3).

The announcement in April from the Chinese State Administration of Foreign Exchange (SAFE) that China had increased its gold reserves by 454 to 1,054 t, has rekindled gold market hopes that China is to become a large purchaser of bullion. The bullish case is quite simple. Gold is considered to be one of the main foreign assets held by countries, along with foreign exchange reserves and IMF balances, but its value in China's reserves, even after the additional 454 t, is less than 2%. This is lower than the optimum amount thought to offer diversification benefits and what the developed countries have and therefore China needs to (and will) buy substantially more gold. But this begs several key questions. What proportion of gold in international reserves is correct? Does that proportion vary between countries? Is that metric the right way in which to view it at all? Gold's share has declined sharply since the 1950s and 1960s, but has stabilized in the last decade, despite a huge increase in foreign exchange reserves. After the US dollar and the euro it is easily the third largest asset by value. And there would be enough gold to go around, even if every country wanted to have 10% of its foreign reserves in gold. The countries with the highest and lowest percentages hare of gold in their reserves. The highest are all European except the US and with a percentage gold share ranging from 40% for Switzerland and Spain to 90% for Greece. The countries with the lowest share of gold in their reserves, ranging from 0 to 3% include large foreign exchange holders such as China, Japan, Korea, Hong Kong, Brazil Singapore. and Canada, which sold most of its gold off between 1982 and 2003, Norway, which sold its gold reserves in 2004 and Israel, which reports that it does not have any.

The People's Republic of China celebrated her 60 years on October 1, 2009 with pomp and pride. The stated achievement was due to China's vigorous pursuance of a strategy or model that featured high speed socio-economic development. China has metamorphosed from agricultural country to an industrial nation with the result that the country is now ranked the third largest manufacturing country in the world. The

Table 3. On foreign reserves minus gold in China (US$ billion, end-month).

1991	43.7
1992	*20.6
1993	22.4
1994	52.9
1995	75.4
1996	107.0
1997	142.8
1998	149.2
1999	146.2
2000	165.6
2001	212.2
2002	286.4
2003	403.3
Jan 2004	415.7
Feb 2004	426.6
Mar 2004	439.8
Apr 2004	449.0
May 2004	458.6
Jun 2004	470.6
Jul 2004	483.0
Aug 2004	496.2
Sep 2004	514.5
Oct 2004	542.4
Nov 2004	573.9
Dec 2004	609.9
Jan 2005	623.6
Feb 2005	642.6
Mar 2005	659.1
Apr 2005	670.8
May 2005	691.0
Jun 2005	711.0
Sep 2005	769.0
Dec 2005	818.9
Jan 2006	845.2
Feb 2006	853.7
Mar 2006	875.1
Apr 2006	895.0
May 2006	925.0
Jun 2006	941.1
Jul 2006	954.6
Aug 2006	972.0
Sep 2006	987.9
Oct 2006	1,009.6
Nov 2006	1,038.8
Dec 2006	1,066.3
Jan 2007	1,104.7
Feb 2007	1,157.4
Mar 2007	1,202.0
Apr 2007	1,246.6
May 2007	1,292.7
Jun 2007	1,332.6
Jul 2007	1,385.2

Table 3. Cont'd.

Aug 2007	1,408.6
Sep 2007	1,433.6
Oct 2007	1,454.9
Nov 2007	1,497.0
Dec 2007	1,528.2
Jan 2008	1,589.8
Feb 2008	1,647.1
Mar 2008	1,682.2
Apr 2008	1,756.7
May 2008	1,797.0
Jun 2008	1,808.8
Jul 2008	1,845.2
Aug 2008	1,884.2
Sep 2008	1,905.6
Oct 2008	1,879.7
Nov 2008	1,884.7
Dec 2008	1,946.0
Jan 2009	1,913.5
Feb 2009	1,912.1
Mar 2009	1,952.7
Apr 2009	2,008.9
May 2009	2,089.5
Jun 2009	2,131.6
Jul 2009	2,174.6
Aug 2009	2,210.8
Sep 2009	2,272.6

* The 1992 figure is lower than the 1991 figure because reserves were redefined in 1992 to exclude foreign-exchange deposits of state-owned entities with the Bank of China.
Source: State Administration of Foreign Exchange, People's Republic of China.

large reserve position of China could affect Indian businesses in two ways. It may put pressure on the Chinese yuan to appreciate. This may allow an opportunity for the Indian export sector to expand as Indian businesses can tap into the share of Chinese export businesses. Also, in such a situation India could increase its exports to China. However, at the same time Indian importers who are importing from China may be on the losing side. On the other side, such large reserves held by China make it more investment friendly and the Indian economy may not see that much foreign direct investment. Indian businesses in that case may not enjoy linkages that might have come through those investments (Manu Gupta, 2009).

FOREIGN EXCHANGE RESERVE MANAGEMENT

Foreign exchange reserve management refers narrowly to the allocation of foreign exchange reserves across currencies, asset classes and instruments. Reserve management practices have evolved substantially over the first decade of the twenty-first century, with a tendency for processes to converge to those in the private asset management industry. There has been a greater tendency to focus on return, a more structured allocation process and a greater focus on risk management, including reputation as well as pure financial risks. Decisions on the currencies in which to hold reserves and to designate as numeraire (currency of account) are also receiving increasing attention (Durlauf and Blume, 2009). Now that other countries have started using their reserves to acquire stakes in developed/developing country firms, start a stabilization fund, pension fund, etc, one may suggest that India (which is now the world's fourth largest reserve holder) shift its reserve allocation from the low-risk low-yield treasuries to some high-risk and high-yield assets. The main argument against setting up such a fund is that the recent surge in reserves is mostly a result of speculative capital inflows on the capital account rather than oil/commodity windfall, export boom or current account surplus. Rather than 'sovereign wealth', these inflows are 'liabilities' created by sound domestic macro conditions and global liquidity boom and are therefore vulnerable to sudden outflows by foreign investors amid an increase in domestic or global risk aversion.

Given the pace at which the reserves are increasing, there may be a case to invest a small fraction of these (after meeting all the adequacy norms especially with respect to short-term volatile speculative inflows) in the capital deficit sectors of the economy, especially in infrastructure and social sectors. Infrastructure deficiency has been one of the reasons for economic overheating and government investment in this sector is constrained by the need to reduce fiscal deficit/interest rates and improve the country’s credit ratings. The returns in these sectors may be higher than what the RBI gets from foreign treasuries (especially when non-monetary returns are considered) and thereby imposing another social opportunity cost of holding forex reserves (in addition to the costs discussed earlier). Such investments may also help raise the economy’s absorptive capacity, sustain higher growth rates with spillover effects on different sectors (especially via improved agriculture and manufacturing productivity, rural development and urbanization) and help attract non-debt creating FDI inflows. There may also be a case for investing these reserves so that the returns can be used for government’s infrastructure /social spending programs or save the returns for a ‘rainy day’ (say to deal with pensions for an ageing population, oil shocks, capital outflows, worsening external deficit, export slump, slowdown in investment/capital inflows, etc). Since investing the reserves domestically, it may exacerbate the current situation of liquidity and inflation, some suggest the investment and the subsequent returns be kept abroad, at least till inflationary concerns subside. Others argue that while investing them in the domestic economy may have inflationary impact in the short-run, they might nevertheless help raise the country’s long-run growth sustainability (Bykere, 2008).

In 2004 the Planning Commission Deputy Chairman, Mr Montek Singh Ahluwalia, floated the idea that a part of the foreign exchange reserves, then at $120 billion could be used to fund the critical infrastructure sector. In his 2005 Budget, the former Finance Minister, Mr P. Chidambaram, picked up the suggestion, conferring upon it a kind of formal acceptance as a policy initiative. Nothing came of it even as the reserves mounted steadily but the idea gathered momentum with a senior World Bank official airing it publicly. In the latest Budget, the Finance Minister once again referred to it; a committee chaired by Mr Deepak Parekh of HDFC on infrastructure funding has suggested using a small part of the reserves "without the risk of monetary expansion," a fear already anticipated by Mr Ahluwalia in a more refined version of his initial suggestion nearly three years ago. The Parekh Committee, according to Mr Chidambaram, had recommended the setting up of two wholly-owned subsidiaries of the special purpose vehicle for infrastructure, the India Infrastructure Finance Corporation Limited (IIFCL), itself a brainchild of Mr Chidambaram, with the objective of borrowing from the RBI and lending to Indian companies engaged in infrastructure projects. Alternatively, to co-finance their External Commercial Borrowings solely for capital expenditure outside India and to place funds borrowed from the RBI in "highly rated collateral securities".

The subsidiary would also provide "credit wrap" insurance to infrastructure projects in India for raising resources in global markets. The RBI, according to the Minister, was being asked to study the legal and regulatory implications of using the reserves in such a manner. The view that a part of the reserves should be used for infrastructure is unique to India. Singapore has its own pioneering model of investing reserves in world equity markets alongside safe securities in order to earn higher returns, a system now followed by Korea. China with its trillion dollars (end-December, 2006) used its dollar earnings to recapitalize its banks; alongside it has used its reserves to create markets and buy oil in Africa. Easy loans, buyers' credit, private investments are not in the developed nations so much. China has only 20% of its entire Africa investments in South Africa, but in the poorest nations from Cameroon to sub-Saharan Africa and the Congo, China is using its vast reserves to fund a sustained growth over the long term. In contrast, India would like to invest its reserves, which by many adequacy ratios, barring import cover, are still not impressive, in a sector that is notorious for its lack of transparency, archaic labour laws and a history of negative returns (Upadhyay, 2007).

In India and elsewhere, there has been a growing clamour for higher returns from the investment of reserves. In the context of the Chinese investment in a private equity firm, should India adopt a less conservative strategy than followed so far? Answers to such questions are not easy. One reason is that no two countries' situations, whether it is India, China or some other country, are identical. Obviously China has been better prepared: a substantial portion of its trade surplus has gone into its domestic equity markets. Hence policy makers may be both familiar with and probably comfortable with the market mechanism. In any case, for quite some time now, its monetary authorities have been contemplating alternative investment avenues for its reserves. For all that, China's choice of a private equity firm for investment is significant. Private equity firms are redefining the corporate landscape in many developed countries including the U.S. One of them acquired the American automobile icon Chrysler from Daimler-Benz with which it was merged in a spectacular, but failed, trans-Atlantic deal a few years ago. Private equity firms have often exerted tremendous pressures on traditional managements and owners of companies to deliver results. In many instances, they have forced a restructuring of the companies they have bought into. Quite often they have bought the public shareholding in the target companies and taken them private. As a rule, privately held companies have fewer accountability issues to reckon with and are far more opaque than a listed company (Narasimhan, 2007).

With likely reserves of around $ 300 billion by March next year and a weakening dollar against other major currencies, the Finance Ministry as well as the RBI has thought it desirable to reduce dollar holdings. The gold content is thus being increased by 200 ton to 557.8 ton by taking

advantage of the opportunity to buy from the IMF. These purchases involved using $6.7 billion out of reserves even though the purchase price is only slightly below the current market quotation in rupee terms. While it is not clear how much will be the rise in gold prices from the current levels, the RBI will still have the benefit of lower average prices in respect of earlier holdings.

CONCLUSION

Foreign exchange reserves are important indicators of ability to repay foreign debt and for currency defense and are used to determine credit ratings of nations, however, other government funds that are counted as liquid assets that can be applied to liabilities in times of crisis include stabilization funds, otherwise known as sovereign wealth funds. If those were included, Norway and Persian Gulf States would rank higher on these lists and UAE's $1.3 trillion Abu Dhabi Investment Authority would be second after China. Singapore also has significant government funds including Temasek Holdings and Government of Singapore Investment Corporation is also planning to create its own investment firm from its foreign exchange reserves. Ten years ago, almost to the day, Robert Mundell, the Economics Nobel laureate for 1999 predicted that, over the next decade, gold would play a very major role in the world's central bank reserve systems. As it turned out, the world took almost that many years to realize the importance of his forecast; today, most European central banks and the US Fed hold more than 60% of their foreign currency reserves in gold. Mundell made his prognosis against the grain because, all through the previous two decades, the central banks of developed countries had been selling their gold; in 1999 the Bank of England sold half its official gold reserves, as did its European peers. That trend has reversed only of late as the volatility of the dollar, the official reserve currency has forced central banks to review gold as a stabilizing reserve currency. One of the paradoxes of India's hugely successful efforts since 1991 to shore up its reserves is that they are mostly in a basket of foreign currencies that are subject to volatility and disruptions. With the dollar increasingly under stress since the huge build-up in the US economy's deficits and the Fed's pump-priming, most central banks and particularly those of the emerging economies, have been looking to hedge their reserves. Gold prices move inversely to dollar values, which is why the Chinese and Russian central banks have been steadily building up positions in the yellow metal.

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