Balance of Payment Crisis in India : What the Figures say

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Abstract

The balance of payment (BoP) position of India has been making headlines. There has been a large scale criticism of the general handling of the economic policies of the country and more specifically, the halt in the advancement of the reform process. It is in this backdrop that we felt that it would be relevant to see the issue from a historical perspective. This study, therefore, traces the balance of payment position from 1951 with regard to some variables like exports, imports, current account deficit, and so forth. We have also examined (in detail) the contents of balance of payment under various heads of account - like current account and capital account between the periods from 2001 to 2012. Furthermore, we have endeavored to investigate whether a relationship exists between some of the variables in the balance of payments like the flow of FDI and FPI, private transfers and bank's external liabilities, and between capital and current account inflows.

Keywords : **balance of payment, current account, capital account, FDI, FPI**

JEL Classification: F300, F320

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The balance of payments (BoP) of a country is a record of the economic transactions made by the residents and the Government of that country with the residents and the Government of another country. This record is maintained for specific periods generally on a yearly basis, and it gives a fair account of the capital movement and the movement of trade from and to the country. Any substantial imbalance in the BoP has a grave economic impact upon the economy of a nation. As long as the disequilibrium in BoP is within manageable limits, the impact on the economy would also be manageable. Otherwise, BoP would become a recipe for a financial crisis. The construction of the BoP is done by the Reserve Bank of India (RBI) by collating data provided by various agencies like the Director General of Foreign Trade, Commercial Banks, Ministry of Commerce, and so forth. The BoP released by the RBI gives data relating to the exports and imports of visibles and invisibles along with the capital inflows and outflows in monetary terms. These figures do not reveal the nature of the underlying goods and services exported and imported. The data relating to actual goods traded is maintained by the Director General of Foreign Trade. This paper brings into focus the major goods and services traded by India relative to the figures in the BoP published by RBI. Throughout this paper, the figures of BoP are taken at constant prices and have been quoted in USD to neutralize the effect of inflation.

In India, for the second time in a decade - once in 2008-09 and again in 2011 - 12 (Table 10) - the capital inflows under India's balance of payment (BoP) were insufficient to bridge the current account deficit. Many reasons for the present crises have been attributed to various factors, and have been extensively debated, especially in the media. With numerable ideas and views being expressed from various quarters, the discussions have become vague, politicized, and defocused. It is in this backdrop that a need was felt to study the actual reasons behind the crisis, given the precarious situation which India now finds itself in at least as far as the BoP position is concerned. This paper, therefore, studies the various components of the BoP, which will give an insight and provide a deeper understanding of the problem. Some of the revelations from the study are quite significant. For example, from 1951 to the present day, India has been having an adverse balance of trade. In other words, the merchandise exports of India have always

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been less than the merchandise imports right from 1951, and this deficit is increasing at a galloping rate year after year. The crisis of 1991, when the country had reserves to cover only around 25-days' import, can largely be attributed to this fact. The reforms unleashed during this period opened up the Indian markets to the world, and the dynamics of the Indian BoP have changed since then.

The major merchandise exports and imports from 2000 -2001 until 2011-12 are given in the Tables 1 and 2 respectively. Another interesting statistic is with regard to the 'invisibles' head under the balance of payments. It was observed that from 1951 till date, invisibles have always recorded a net positive balance, save during the following periods - 1968-69, 1970-71 to 1973-74, and in the year 1991-02 (see Figure 5). The deficit, though, was not very significant and ranged from a minimum of USD 7 mn in 1968 to a maximum of USD 242 mn in 1991. The current account deficit, which is an aggregate of balance of trade and invisibles, had a positive balance only in 10 out of the last 60 years. The years in which the current account showed a positive balance was in 1951, between the years 1953 to 1956, 1967, 1974, and between the years 2002 to 2004 as shown in the Figure 6.

Table 1 : Major Merchandise Exports from 2000-2001 till 2011-12

Year	AGRI & ALLIED PRODUCTS	GEMS & JEWELLERY	CHEMICALS & RELATED PRODUCTS	ENGINEERING GOODS	TEXTILES
2000-01	3,880.15	7,384.01	6,177.07	5,673.08	10,693.60
2001-02	4,065.43	7,306.28	6,371.39	5,746.73	9,688.57
2002-03	4,721.32	9,029.94	7,858.33	7,688.97	11,081.14
2003-04	5,406.66	10,573.31	9,960.06	10,516.38	12,204.63
2004-05	6,293.34	13,761.77	13,164.05	15,383.02	12,918.49
2005-06	7,218.85	15,529.06	15,618.58	19,303.23	15,545.04
2006-07	8,713.66	15,983.57	18,434.22	26,506.08	16,448.35
2007-08	13,556.04	19,691.58	22,376.57	33,736.81	18,483.66
2008-09	14,528.10	28,411.38	24,066.17	40,486.81	19,323.82
2009-10	12,617.05	29,081.11	24,410.36	32,554.30	19,142.83
2010-11	17,953.03	36,876.58	30,997.19	59,930.03	22,423.93
2011-12	27,364.77	46,956.95	39,494.41	58,225.99	27,184.22

Source: Ministry of Commerce and Industry (USD Million at Constant prices)

The inference drawn from the Table 1 and Table 2 is fairly simple. As far as the 'balance of trade' is concerned, India does not produce enough material resources to satisfy its needs. This also means that we are increasingly becoming dependent on the resources of other countries to satisfy these needs. Theoretically, this problem can be solved by either reducing our material needs or by increasing the sale of our products and services (i.e. export of goods and services). However, the objective of this paper is not to offer suggestions or remedial action, but to analyze the existing data and its components to arrive at the causes for the present crisis. Instead of dwelling on the reasons for the deficit, which always carries a subjective bias, we have focused on presenting the major items of the balance of payments under current and capital account and interpreting the data. Another inference which can be drawn is that the net invisibles of the country have been negative only in six years since 1951, the details of which are graphically represented in the Figure 5.

The paper is structured in a manner where the initial part gives a brief discussion on the international trade theories and their relevance to the Indian context and subsequently, the various likely scenarios of BoP are charted out. The paper then goes on to explain each component of the BoP in monetary terms as published by the RBI and the underlying goods or services they represent. Thereafter, we have tested whether a relationship exists between current and capital account, FDI and FPI, private transfers and bank liabilities using bivariate co-relation analysis.

Objectives of the Study

The primary objective of this paper is to study the balance of payments of India from a historical perspective and see what the figures reveal and how the present crisis brewed up. While some of the parameters like balance of trade and

Table 2 : Major Merchandise Imports from 2000-2001 till 2011-12					
Items	PETROLEUM, CRUDE PRODUCTS	GOLD	ELECTRONIC GOODS	PERLS PRCUS SEMIPRCS STONES	MACHRY EXCPT ELEC & & ELECTRONIC
2000-01	15,650.09	4,121.59	3,508.51	4,807.66	2,708.79
2001-02	14,000.25	4,170.35	3,782.03	4,622.59	2,970.83
2002-03	17,639.52	3,844.93	5,599.41	6,062.76	3,565.61
2003-04	20,569.47	6,516.89	7,506.13	7,128.66	4,743.56
2004-05	29,844.10	10,537.73	9,993.16	9,422.71	6,817.79
2005-06	43,963.09	10,830.52	13,241.75	9,134.42	10,009.81
2006-07	57,058.91	14,474.10	15,971.32	7,491.82	13,866.30
2007-08	79,779.87	16,601.30	20,661.71	7,953.93	19,901.62
2008-09	93,667.19	20,436.11	23,467.53	16,804.02	21,746.52
2009-10	87,135.90	28,815.65	20,952.49	16,298.82	19,710.55
2010-11	105,964.38	40,657.24	26,573.78	34,619.61	23,854.19
2011-12	154,905.67	56,434.28	32,676.40	30,666.67	30,195.86
Source: Ministry of Commerce and Industry					(USD Million on Constant prices)

invisibles have been studied from the year 1951 (for the sole reason that it provides a deep insight into these factors) we have, for a major part, focused on the statistics pertaining to the period from 2001 to 2012. The major prompter to choose the period from 2001 to 2012 was the fact that India made its presence felt in the international trade scene during this period. This paper also studies the trend of current and capital account inflows and outflows from the year 2001-2002 to 2010 -2012 and finally also examines the overall balance of payments.

Review of Literature

EPW Research Foundation (2005) in an article titled, "India's Balance of Payments : Concepts, Compilation and Recent Scenario. 1950-51 to 2003-04" dwelt on India's balance of payments and related concepts, including the scenario from 1950-51 to 2003-04, where the individual components of balance of payments were analyzed. The present article follows the same style, but the data from 2001-02 till 2011-12 has been taken for analysis. Lokesha and Leelavathi (2012) provided an extensive explanation for determinants of FDI inflows into as well as outflows from India. The article analyzed the dynamics of several FDI determinants in relation to the inflows and outflows. They concluded that FDI inflows into India are simultaneously determined by policy framework, market size, economic factors, as well as economic stability and political factors.

Srikanth and Kishore (2012) made an interesting observation comparing global FDI inflows and FDI inflows into India. The article stated that the global FDI inflows stood at USD 1393 bn in 2000 and peaked at USD 1971 bn in 2007 before reducing USD 1244 bn in 2010. Further, they stated that FDI equity inflow into India was USD 167 mn in 91-92, which increased to USD 5.5 bn in 2005-06, and reached a peak of USD 27.3 bn in 2008-09 before declining to USD 19.4 bn in 2010-11 (Ministry of Commerce, 2012). The trend of FDI inflow in India followed the global pattern. Ramakrishna (2011) discussed the features of the trade policy of India in general along with the recent trade policy of 2004-2009. The study assessed the impact of the trade policy on India's economic growth, balance of payment, and current account deficit.

Gulzar and Shafi (2011) in an article titled "Balance of Payment, Exchange Rate Regime and Monetary Policy" showed how a deficit in the balance of payments agitates the exchange rate and the monetary policy. Elitok (2008) in her research dissertation on the topic "The Relationship between Trade Growth and Balance of Payments-Application of Balance of Payments Constrained Growth Model to the Turkish Economy" addressed the question of how trade liberalization affected the BoP and growth in Turkey between the period from 1960 to 2004. Sarode (2012) attempted to find a link between FDI and its impact on the Indian economy. Their findings indicate that FDI has a negative effect on current account and a positive effect on capital account. Virmani (2001) in his working paper for the Planning Commission, "India's 1990-91 Crisis: Reforms, Myths and Paradoxes" observed that the strengthening

of the balance of payments as a result of the external sector reforms was reflected in the overall balance and the real exchange rate. There was an annual average reserve accumulation of 1.1% of GDP in the post-crisis period compared to the annual draw down of 0.2% of GDP during the pre-crisis decade. The real effective exchange rate showed no depreciation on average during the post-crisis period after depreciating by an average of 2% per annum during the eighties.

↳ **International Trade Theories and Indian BoP :** Amongst the various trade theories, the new trade theory and Porter's diamond-national competitive advantage can be applied to the Indian scenario. The new trade theory which was propounded in the early 1970s :

> argued that in industries where there are economies of scale, both the varieties of goods that a country can produce and the scale of production are limited by the size of the market. The domestic market may not be big enough to allow producers to realize economies of scale. (Hill & Jain, 2006)

Hill and Jain (2006) further argued that international trade makes the world one big market and producers of goods are thus able to realize the economies of scale. With the opening up of the Indian markets since 1991, many international companies have increased their trade volumes with India to achieve this goal. This is evident in the automobile, mobile telephony, and consumer goods industry to name a few. Michael Porter in his theory of national competitive advantage lists "factor endowments" as one of the attributes that help in achieving national competitive advantage. He further stated that the factors that a country is endowed with could be basic or advanced. The advanced factors are shaped by the Government's policies, which could be done by stimulating advanced research at higher education institutions (Hill & Jain, 2006). The Indian Government's fillip to the software industry can be categorized as an advanced factor in the case of India, and this has resulted in software being the largest export for India.

↳ **Different BoP Scenarios :** The balance of payments position is a function of the current, capital, and the official reserves account of the country. The exports and imports of commodities, export and import of software and services, private and official transfers are classified under current account. Major components of the capital account are FDI, FII, loans, and so forth. BoP accounting follows a double entry system. All inflows are treated as credit and have a credit balance, whereas all outflows are treated as debit and have a debit balance. Some heads like FDI may have both debit and credit balances because any investment into the country is an inflow and credited under FDI and any disinvestment and repatriation of funds by a foreign entity will be treated as an outflow and ,therefore, as a debit. The balance of payments position varies from time to time and from country to country. For the year 2011-12, India is facing a deficit in current account, but a surplus in the capital account with a net deficit balance. This means that the inflows under capital account are not sufficient to cover the current account deficit (The figures as in December 2012 show that capital inflows have regained momentum and are enough to cover CAD). The Table 3 shows the different scenarios possible on account of capital and current account deficit.

Table 3: Possible Scenarios on Account of Capital and Current Account Deficit

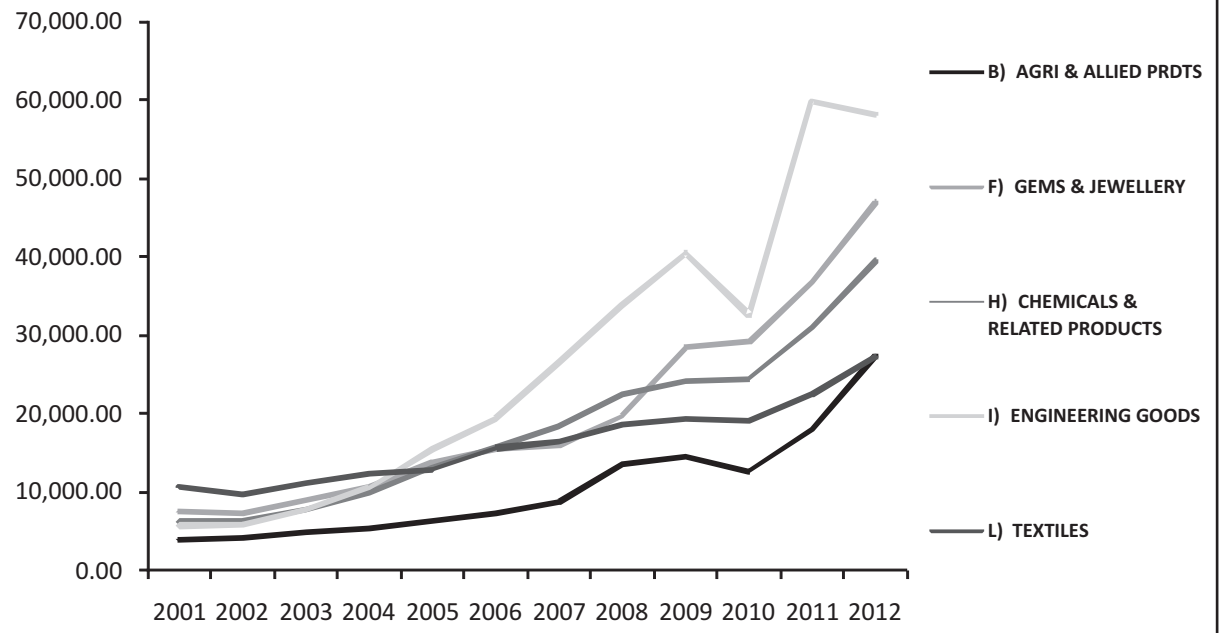
Sl. No.	Current Account	Capital Account	Net Balance	Remarks
1.	Deficit	Deficit	Deficit	Leads to reduction of reserves and BoP Crisis
2.	Deficit	Surplus	Surplus	Acceptable BoP Position
3.	Deficit	Surplus	Deficit	Tells severely on the consumption pattern of the country.
4.	Surplus	Deficit	Surplus	Excessive investment abroad, repayment of loans, royalties etc. Favourable Balance of Trade and services.
5.	Surplus	Deficit	Deficit	Could be short term excesses or excessive investment abroad, repayment of loans taken in the past.
6.	Surplus	Surplus	Surplus	A favourable position but an excessive surplus could be detrimental as it would result in sterilization costs.

Source : Authors' Research

Results and Discussion

Balance of Trade – Inflows : The inflow under the balance of trade head arises from the merchandise exports the country makes. The top five exports made from our country in 2000- 2001 were textiles (23.52%), gems and jewellery (16.24%), chemical and related products (13.59%), engineering goods (12.48%), and agriculture and allied products (8.53%). There has been a change in the top five exports by 2011-2012. In 2011 -12, the top five exports were engineering goods (18.80%), petroleum products (18.25%), gems and jewellery (15.16%), chemical and related products (12.75%), and agri and allied products (8.83%). The Figures in brackets show the percentage share of that particular commodity in the total exports of the country. The Figure 1 shows the growth trajectories of the growth of the top five exports. One redeeming feature depicted by the Figure 1 is that the export of engineering goods has overtaken textiles, whose share in the total exports has fallen from 24% in 2001-02 to 8.93% in 2011-12. This stands testimony to the fact that India now truly belongs to the committee of the top industrialized nations.

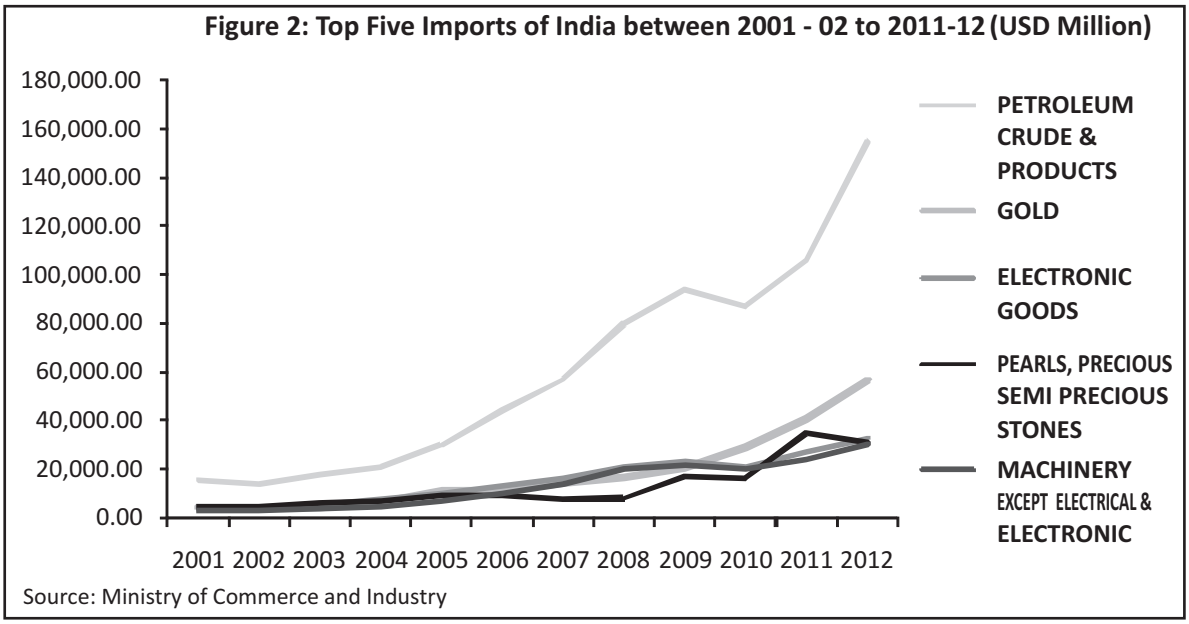
Figure 1: Top Five Exports of India between 2001 -02 to 2011-12 (In USD Million)



Source: Ministry of Commerce and Industry

Balance of Trade - Outflows : The outflows under balance of trade arises due to import of merchandise. The top five imports made by India in 2000-2001 were petroleum crude (27.02%), pearls and precious stones (8.30%), gold (7.12%), electronic goods (6.06%), and machinery excluding electronic and electrical goods (4.68%). In 2011-12, the mix of the top imports of the country changed as follows: petroleum crude continued to be the top import of the country at 31.01% of the total imports followed by gold (11.30%), pearls and precious stones (6.14%), electronic goods (6.54%), machinery excluding electronic and electrical goods (6.04%). The figures in brackets show the percentage share of that particular commodity in the total imports of the country. The import of petroleum crude continues to plague the nation with no significant oil finds in the country. The quantum of petroleum crude imported is by far the largest import into the country, which is almost three times more than the next largest import, namely gold. The import of gold has risen to the second position despite the rise in international gold prices. The demand for gold within the country arises mainly from the insatiable thirst of Indians for gold jewellery. The Figure 2 shows the top five imports of the country between 2001 -02 to 2011-12 in US Dollar terms.

Balance of Trade : The balance of trade is a dependent function of the countries' merchandize imports and exports. As already referred, India has never had a balance of trade surplus. However, the Figure 3 along with the Table 4 shows the alarming rate at which the deficit has grown between the years 2001-2002 and 2011– 2012. The deficit of



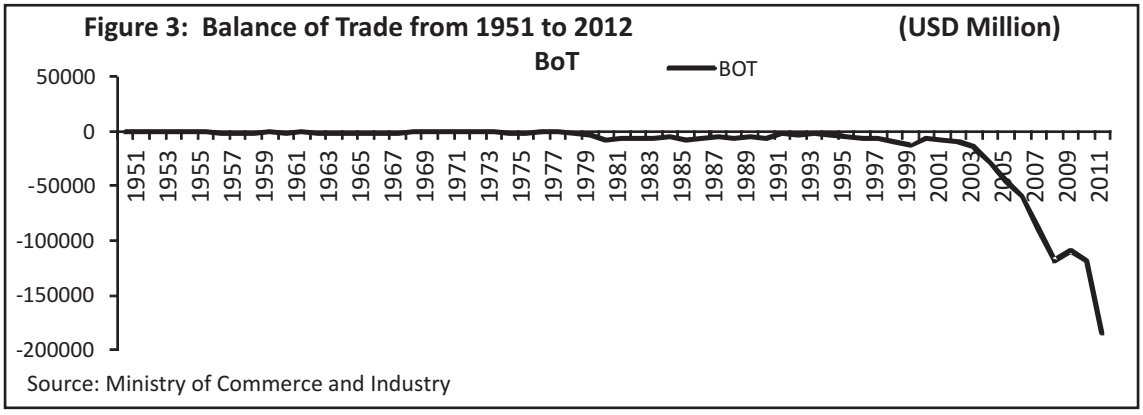


Table 4: Balance of Trade from 2000-01 to 2011-12

2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
-12460	-11574	-10690	-13718	-33702	-51904	-61782	-91467	-119519	-118202	-130593	-189759

Source:- RBI Bulletin - Reserve Bank of India (USD Million on Constant prices)

Table 5: Components of Invisibles

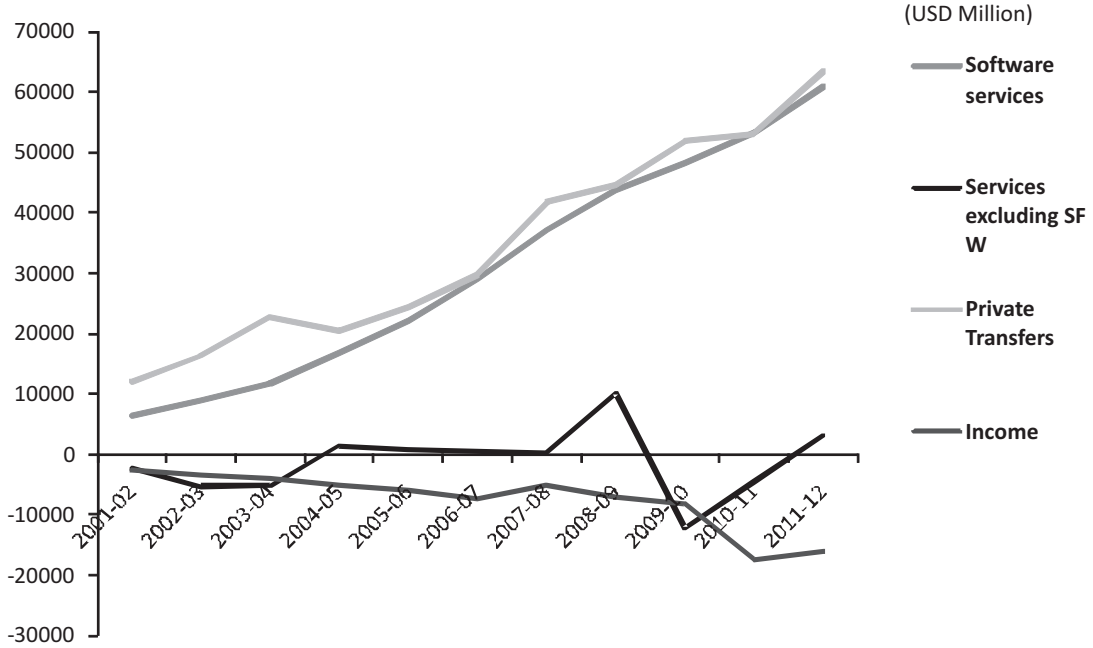
Services	Transfers	Income
Travel	Official	Investment income
Transportation	Private	Compensation of employees
Insurance		
Government not included elsewhere		
Miscellaneous which includes software services		

Source : Authors' Research

balance of trade from 1951 can be divided into three distinct phases, **a)** the first phase from 1951 to 1980 during which the deficit never rose to more than USD 5000 mn, **b)** the second phase between the years 1981 to 2004 during which the balance of trade deficit hovered under USD 20000 mn, and **c)** from 2005 onwards, when our balance of trade exceeded USD 50000 mn by a large margin.

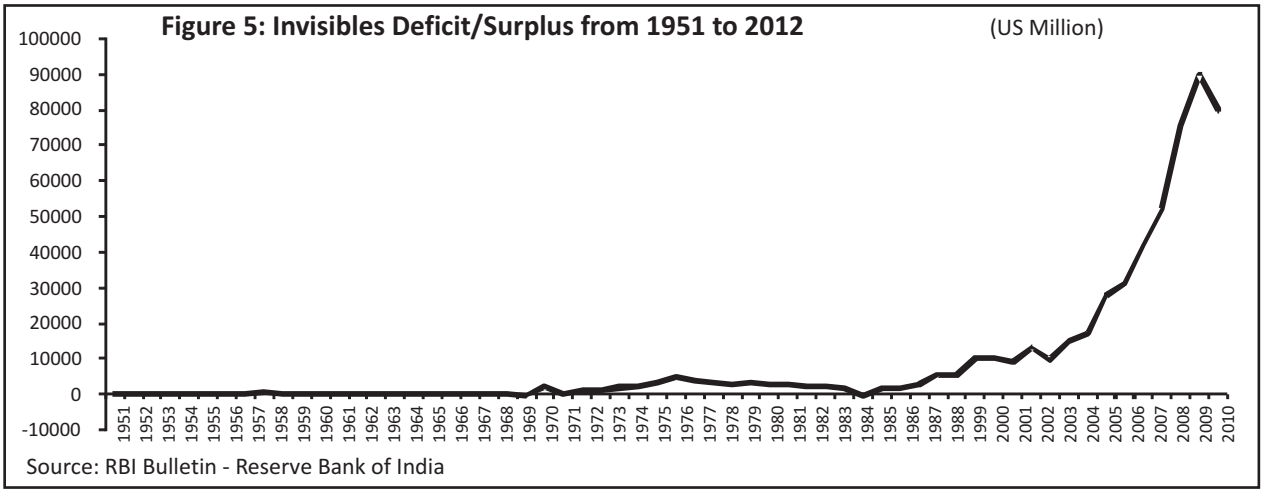
↳ **Invisibles :** The invisibles head of the balance of payment account is divided into three major subheads namely **a)** Services, **b)** Transfers, and **c)** Income. These subheads are further subdivided as per the Table 5. In 2000-01, Services recorded 22% of the net invisibles, whereas Transfers recorded 106 % of the net invisibles, and Income recorded (-) 28% of the net invisibles. The major contributor under the Services head was Software, which contributed a stunning 46% of the net invisibles. Private transfers accounted for a staggering 103% of the net invisibles. Investment income and compensation to employees drained the invisibles balance with a negative

Figure 4: Growth of the Important Components of Invisibles from 2001-02-2011-12



Source: RBI Bulletin - Reserve Bank of India

Figure 5: Invisibles Deficit/Surplus from 1951 to 2012



Source: RBI Bulletin - Reserve Bank of India

Table 6: Invisibles Deficit/surplus from 2000-01 to 2011-12											
2000-01	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**
9794	14974	17035	27801	31232	42002	52217	75731	91605	80022	84648	111604
Source: RBI Bulletin - Reserve Bank of India (USD Million on Constant prices)											

contribution of 26% and 2% respectively. The figures depict the extent to which our country was dependent upon Software services, which earned a sum USD 6884 mn and private transfers earned a sum of USD 15856 mn.

In 2011-12, Services accounted for 57%, Transfers accounted for 57%, and Income accounted for -14% of the net invisibles. The contribution of Software to invisibles at USD 60957 mn (55%) almost reached private transfers at USD 63469 mn (57%). There has been exponential growth under both software exports and private transfers, and income continues to drain the invisibles account. The Figure 4 shows the growth of the various components of the invisibles account from 2001 to 2012.

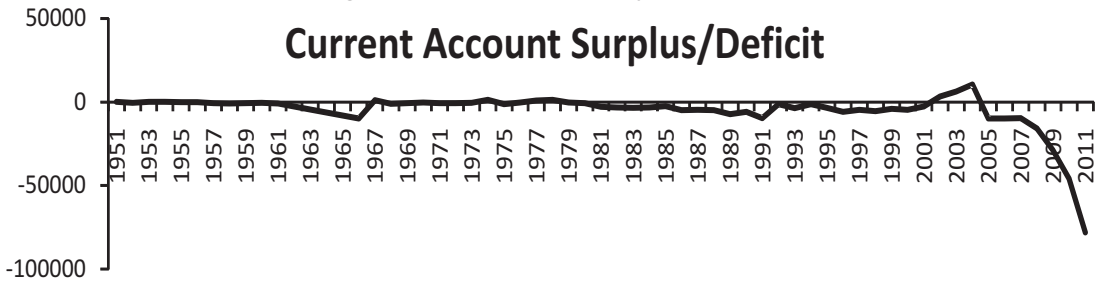
Net Invisibles : The growth of net invisibles is shown in the Figure 5. Till 1993-94, the net invisible was flat and had never exceeded USD 2150 mn. However, in the year 1995-96, the net invisible almost doubled to USD 5680 mn and has never looked back since then. The figure has multiplied exponentially and by the end of 2011-12, it stood at USD 111604 mn. The growth in the net invisibles especially during the years 2000-01 to 2011-12 as shown in Table 6 can be attributed to the phenomenal growth under software exports and inward remittances from abroad.

Current Account Balance : Whether a current account has a positive or negative balance depends upon the balance under its subheads namely 'visible' and 'invisible'. In India, the 'visible' always carried a negative balance and the 'invisible' carried a positive balance for a major period from 1951. The contribution to the 'invisible' came from private remittances from abroad (classified under private transfers) and from software exports (classified under the

Table 7: Current Account Surplus/Deficit 2000-01 to 2011-12 (USD Million)											
2000-01	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**
-2666	3400	6345	14083	-2470	-9902	-9565	-15737	-27915	-38180	-45945	-78155
Source: RBI Bulletin - Reserve Bank of India (USD Million on Constant prices)											

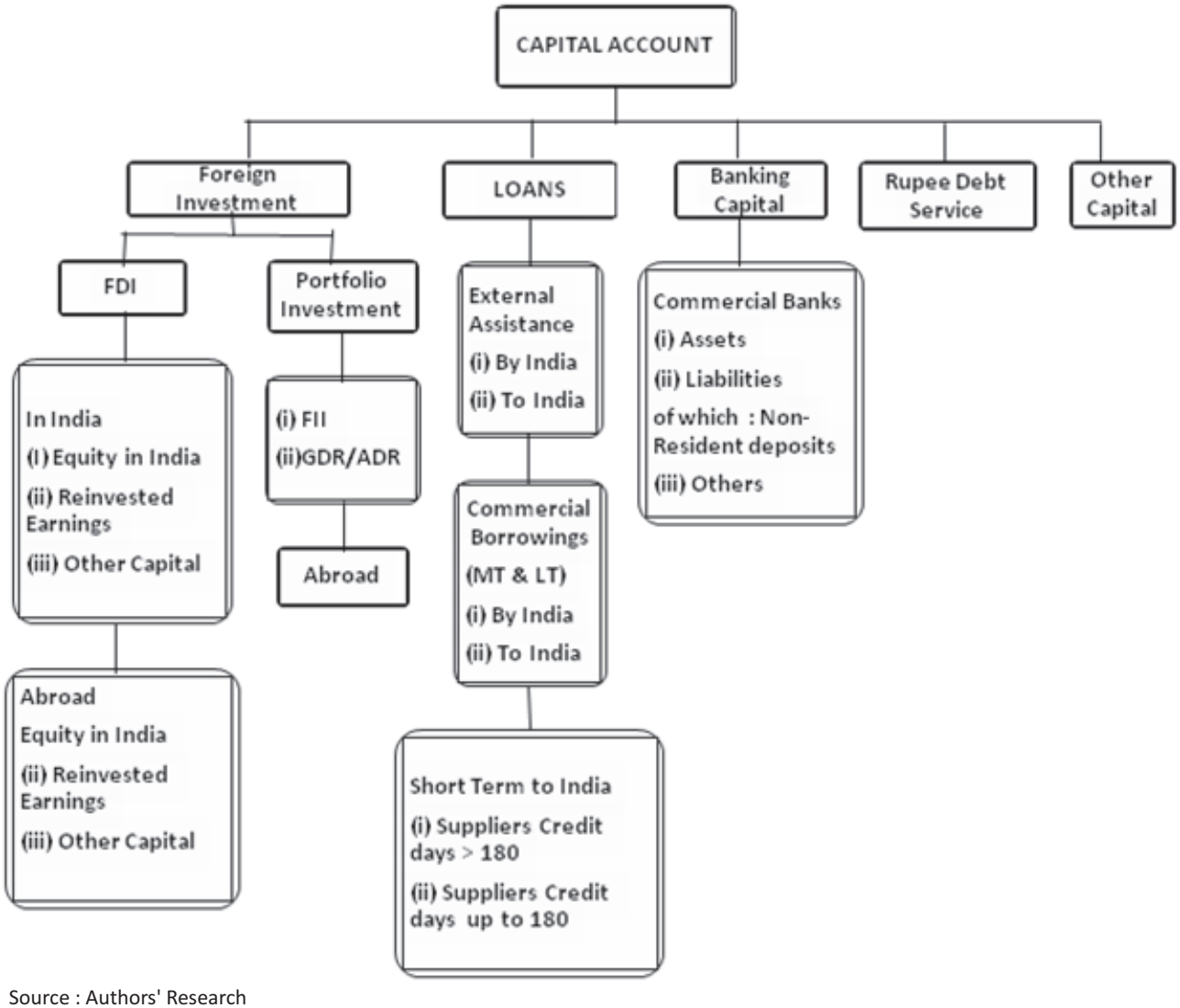
Table 8: Top Five Inflows and Outflows in BoP and its Effect on Current Account Balance											
Commodity/year	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**
Software	6502	8863	11750	16900	22262	29033	37242	43,736	48,237	53,265	60,957
Private transfers	12125	16387	22833	20525	24493	29825	41705	44,567	51,791	53,125	63,469
Gems and Jewellery	7,306	9,030	10,573	13,762	15,529	15,984	19,692	28,411	29,081	36,877	46,957
Chemical and related products	6,371	7,858	9,960	13,164	15,619	18,434	22,377	24,066	24,410	30,997	39,494
Engineering goods	5,747	7,689	10,516	15,383	19,303	26,506	33,737	40,487	32,554	59,930	58,226
Total (A)	**38,051**	**49,827**	**65,632**	**79,734**	**97,206**	**119,782**	**154,753**	**181,267**	**186,073**	**234,194**	**269,103**
Petroleum Crude	14,000	17,640	20,569	29,844	43,963	57,059	79,780	93,667	87,136	105,964	154,906
Gold	4,170	3,845	6,517	10,538	10,831	14,474	16,601	20,436	28,816	40,657	56,434
Electronic goods	3,782	5,599	7,506	9,993	13,242	15,971	20,662	23,468	20,952	26,574	32,676
B) Pearls, precious & semi-precious stones	4,623	6,063	7,129	9,423	9,134	7,492	7,954	16,804	16,299	34,620	30,667
C) MACHINERY **	2,971	3,566	4,744	6,818	10,010	13,866	19,902	21,747	19,711	23,854	30,196
Total(B)	**29,546**	**36,713**	**46,465**	**66,616**	**87,180**	**108,862**	**144,899**	**176,122**	**172,914**	**231,669**	**304,879**
Net Effect on Current account (A-B)	**8,505**	**13,114**	**19,167**	**13,118**	**10,026**	**10,920**	**9,854**	**5,145**	**13,159**	**2,525**	**-35,776**
Source: RBI Bulletin - Reserve Bank of India (USD Million on Constant prices)											

Figure 6: Current Account Surplus/Deficit 1951-2012



Source: RBI Bulletin - Reserve Bank of India (USD Million on Constant prices)

Figure 7(a) : Components of Capital Account



Source : Authors' Research

miscellaneous head.) The Table 7 gives the current account surplus/deficit from 2000-01 till 2011-12. The Figure 6 shows that from 1951-52 till 2003-04, the current account balance had never crossed the USD 10000 mn mark - whether it was positive or negative current account balance. In 2003-04, the current account balance was recorded as

USD 6345 mn and rose to a peak of USD 10561 mn in 2003-04, which is the highest positive current account balance recorded so far. However, from this peak, the current account balance dropped dramatically to a negative balance of USD 9902 mn in the following year (2005-06), and has been falling continuously at an alarming rate since then. As in March 2012, the current account deficit stood at USD 78155 mn. In 2004, the current surplus was achieved mainly because the software exports and inward remittances exceeded the petroleum imports which were at a moderate level. In subsequent years, the import of petroleum crude, gold, and machinery rose to such an extent that they exceeded by a large extent our major homebound receivables namely exports like software, machinery, and so forth as well as private transfers. To give a snapshot of the current account, we studied the five major inflows into and outflows from the current account. The Table 8 shows the net balances of five major imports and exports and its resultant effect on the current account balance.

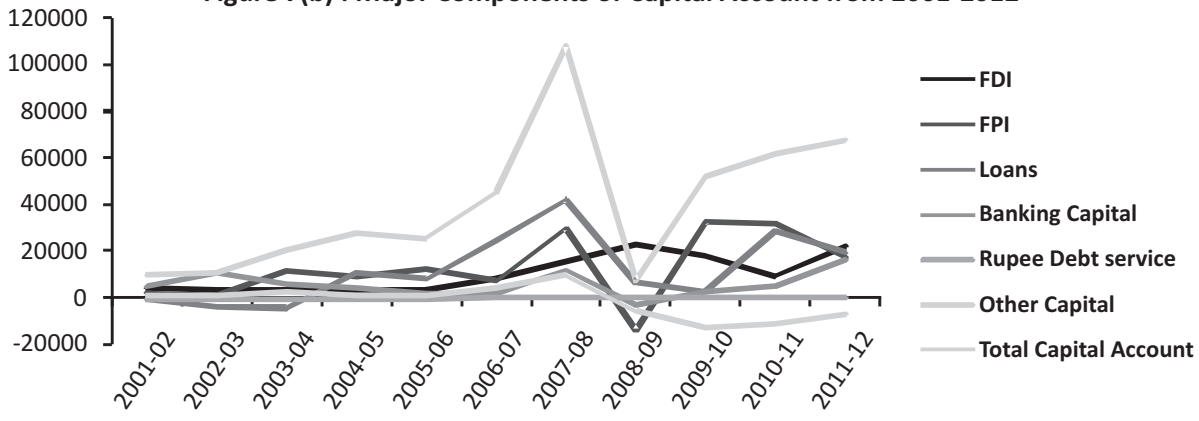
↳ **Major Components of Capital Account :** The various components of capital account are depicted in the Figure 7(a).The Table 9 and Figure 7(b) gives the movement in the various constituents of the capital account. The major inflows under current come from FDI, FPI, loans and banking capital. The net flows under FDI are more stable than that of FPI as is evident from the figures given in the Table 9. This is due to the fact that investment and withdrawal under FPI are simpler than that under FDI. It is not only the volatility of FPI but also the source of such funds which is a cause for concern for the Government. FDIs grew consistently from USD 4734 mn in 2001-02 to USD 22061 mn in

Table 9: Major Components of Capital Account from 2000 -01 to 2011-2012

Year	FDI	FPI	Loans	Banking Capital	Rupee Debt service	Other Capital	Total Capital Account
2000-01	3272	2590	5264	-1961	-617	292	8840
2001-02	4734	1952	-1261	2864	-519	781	8551
2002-03	3217	944	-3850	10425	-474	578	10840
2003-04	2388	11356	-4364	6033	-376	1699	16736
2004-05	3713	9287	10909	3874	-417	656	28022
2005-06	3034	12494	7909	1373	-572	1232	25470
2006-07	7693	7060	24490	1913	-162	4209	45203
2007-08	15893	27433	40653	11759	-122	10969	106585
2008-09	22,372	-14031	8315	-3,246	-100	-5,917	7,395
2009-10	17,966	32,396	12447	2,083	-97	-13,162	51,634
2010-11	9,360	30292	28,437	4,962	-68	-10,995	61,989
2011-12	22,060	17,170	19,307	16,226	-79	-6,928	67,756

Source: RBI Bulletin - Reserve Bank of India (USD Million on Constant prices)

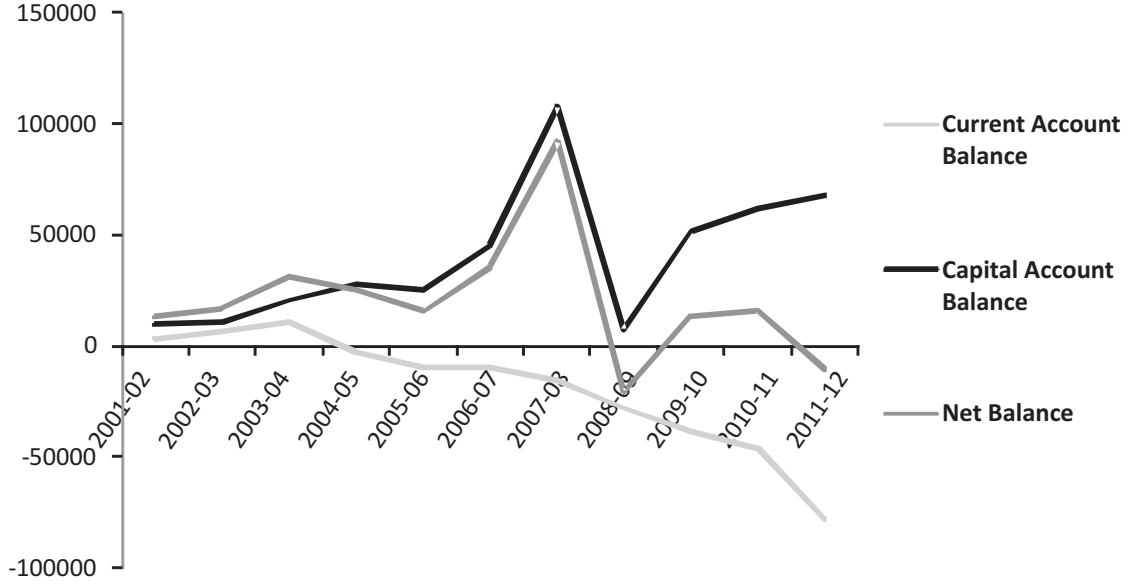
Figure 7(b) : Major Components of Capital Account from 2001-2012



Source: *RBI Bulletin - Reserve Bank of India*

Table 10: Current and Capital Account Balance from 2000 to 2012				
Year	Current Account Balance	Capital Account Balance	Errors	Net Balance
2000-01	-2666	8840	-305	5869
2001-02	3400	8551	-194	11757
2002-03	6345	10840	-200	16985
2003-04	14083	16736	602	31421
2004-05	-2470	28022	607	26159
2005-06	-9902	25470	-516	15052
2006-07	-9565	45203	968	36606
2007-08	-15737	106585	1316	92164
2008-09	-27915	7,395	440	-20080
2009-10	-38180	51,634	-12	13442
2010-11	-45945	61,989	-2993	13051
2011-12	-78155	67,756	-2432	-12831
Source: RBI Bulletin - Reserve Bank of India		(USD Million on Constant prices)		

Figure 8 : Current and Capital Account Balance from 2001 to 2012



Source: RBI Bulletin - Reserve Bank of India

2011-12. A significant leap was observed in the year 2007-08 when the net FDI more than doubled from USD 7693 mn to USD 15893 mn. FDI constituted around 55% of the total capital account in 2001-02, which reduced to 33% of the total FDI in 2011-12. The inflows under FPI have been more volatile. In the ten years from 2001-02 to 2011-12, the FPI ranged between a negative net balance of USD 14031 mn in 2008-09 to USD 32396 mn in 2010- 11. FPI which was around 23% of the total capital account in 2001-02 rose to 60% in 2010-11. As far as loans are concerned, from 2001-02 to 2003-04, there was a negative balance showing an outflow of funds on account of repayment of loans. However, since then, the loans have shown a positive balance indicating that Indian corporates' commercial borrowings have increased considerably, perhaps due to the falling interest rates abroad. It must be mentioned here that the commercial loans are significantly higher than external assistance to/from the Government. The external assistance figures are also falling as India becomes less dependent on external loans, thanks to significant inflows under other heads. Banking capital has always contributed positively to the current account, except in 2008 - 09, when there was a negative balance of USD 3246 mn. The negative balance was mainly on account of outflow of net bank assets in comparison to the inflows under net liabilities. The Table 10 and Figure 8 gives the balances in the current

account and capital account from 2001-02 to 2011-12, and its effect on the country's reserves. It can be seen that in the last 10 years (except during 2008-09 and 2011-12), the country had a favourable balance of payments. In 2007-08, the balance of payments position reached a peak of USD 90164 mn.

Analysis and Interpretation

We have endeavoured to study whether any relationship exists between the following pairs of variables :

- Current Account and Capital Account,
- Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI),
- Private Transfers and Bank liability.

For the purpose of testing the relationship, we used the two tailed Pearson's coefficient of correlation at a significance level of 0.01%. Further, instead of the yearly data, we used quarterly data (from 2001 to 2012) culled out from RBI's quarterly bulletin. The results of the statistical tests conducted by us are tabulated below:

Correlations	Current A/c & Capital A/c	FDI and FPI	PT and BL
Pearson Correlation	-0.458**	0.666**	0.705**
Sig. (2-tailed)	0.003	0.000	0.000
N	44	44	44
**. Correlation is significant at the 0.01 level (2-tailed).			

The results show a significant correlation between variables. Current Account and Capital Account show a significant negative correlation over the period of time. It shows the trend of these variables; the increase in the Capital Account impacts a decrease in the Current Account and vice versa. It is evident from the data that since the year 2000, only three times - 2001, 2002, and 2003- we have had a positive balance in Current Account, and from 2004 onwards, it has showed a negative balance and has been decreasing year after year (till date). The Capital Account showed a positive balance and has been increasing year by year, with the exception of the year 2008. Intuitively, one assumes that FDI and FPI have a positive correlation as both these variables depend upon the same macro economic factors. However, it is well know that FPI inflows are more volatile than the FDI inflows. In order to see whether the volatility of the FPI inflows has any impact on the FDI inflows, we tested the relationship between the FDI and FPI inflows using once again the two tailed Pearson's correlation test at 1% significance level. Our tests show that a significant positive relationship exists between FDI and FPI for the considered time period. Similarly, Private Transfers and Bank Liability (only non-resident deposits) have a significant positive correlation. It shows that whenever the flow of Private Transfer increases, the Bank Liability also increases. It says that non-residents route their remittances through proper banking channels resulting in an increase in Bank Liabilities.

Conclusion

While the BoP data contains the overall figures under various heads, we have tried to unravel the figures and see what they represent. For example, if the exports under BoP shows a consolidated figure, we have tried to break up this consolidated figure into its constituents like software, engineering goods, textiles, and so forth, and then study the trends of these constituents. Our study shows that the major reason for the BoP crises are the oil import bills, which have increased by a staggering USD 48942 mn in absolute terms (46%) from USD 105964 in 2010-11 to USD 154906 in 2011 - 12. Increase in gold imports at USD 15777 during the year 2011-12, which has been identified by the Government as a reason for the crisis, comes at a distant second as far as imports are concerned (as we were writing this paper, the Govt of India increased the customs duty on gold imports from 4% to 6% to discourage gold imports) . Software exports and private remittances have increased substantially by USD 7692 and USD 10344 respectively, but this combined increase (USD 18036) could not bridge the gap caused by oil imports (USD 48942 mn). In the capital account, the three main contributors, that is, FDI, FPI, and loans instead of reducing the current account deficit added to the deficit by USD 9552 mn. The twin deficit in current account and capital account has, therefore, caused the crisis. We also found a negative correlation between Capital and Current Account, while a positive correlation was

established between FDI and FPI and Private Remittances and Bank Liabilities. Even though the import of gold has risen in the last one year the increase of oil imports has been far more significant. The Government of India ,therefore, has to focus on reducing the oil import bills.

Research Implications

This paper has analyzed the BoP scenario till the financial year ending 2012. Since the balance of payments is a dynamic macro economic indicator, further trends for the period (2012) can be analyzed. Furthermore, as a part of this study, we have analyzed the relationship between Capital- Current Account, FDI - FPI, and Private Transfers - Bank Liability. The balance of payments contains a number of other variables which are dependent on one another - the study of which can throw fresh light on the subject.

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