

Chapter 3 Prospect of Rate of Return Gap between USDIA and FDIUS

This chapter examines prospect of rate of return gap between USDIA and FDIUS. We will analyze the prospect rate of return of FDIUS and USDIA first. Then we will consider the outlook of the rate gap.

Table 3-1 Investment Return of USDIA and FDIUS on a Current Cost Basis (1983-2004)

	USDIA	FDIUS	Gap		USDIA	FDIUS	Gap
1983	8.7%	2.2%	6.5%	1994	10.2%	3.7%	6.6%
1984	10.0%	4.1%	6.0%	1995	11.4%	4.7%	6.7%
1985	9.8%	3.0%	6.9%	1996	10.9%	4.6%	6.3%
1986	9.5%	2.6%	6.9%	1997	11.2%	5.5%	5.7%
1987	10.5%	2.5%	8.0%	1998	9.2%	4.4%	4.8%
1988	11.8%	3.3%	8.5%	1999	10.1%	5.3%	4.8%
1989	11.6%	1.6%	10.0%	2000	10.3%	4.5%	5.8%
1990	11.3%	0.7%	10.6%	2001	8.0%	0.9%	7.1%
1991	9.3%	-0.4%	9.7%	2002	8.2%	3.0%	5.2%
1992	8.8%	0.4%	8.4%	2003	9.9%	4.6%	5.2%
1993	9.7%	1.4%	8.3%	2004	10.5%	6.4%	4.1%

(Compiled from the Department of Commerce data)

1. Prospect of Rate of Return of FDIUS

If we take an overview of the direction of basic trend of rate of return of FDIUS for the 22 years in Table 3-1, excepting two periods, namely (1) the years from 1989 to 1993 featuring torrent-like foreign investment to the U.S. and following U.S. economic recession and (2) the years from 2001 to 2002 featuring increased mega deals acquiring U.S. assets and following IT bubble burst, the data broadly indicate that rate of return of FDIUS moved in 2-3% range in 1980s, rose to 4-5% in the middle of 1990s, and was reaching 5-6% range in recent years. Rate of return that deteriorated from 1989 to 2003 was due to the surge of inward investment in the late 1980s by foreign companies particularly by Japanese investors targeting at U.S. corporations and real estates. A couple of analyses were already conducted in this regard. The following are pointed out as the background to the deteriorated rate of return of FDIUS¹³.

- High startup and restructuring costs related to acquisition.
- Acquired foreign-owned companies tended to be those that had low or negative rates of return.
- Foreign owners were willing to accept a below average rate of return by acquiring U.S. companies with home country funds at a time when the purchasing power of the U.S. dollar was weak.
- Aggressive investment in equipment and spending in advertisement after acquisition.
- U.S. economic recession in the wake of the surge in FDIUS.

The burden of high startup costs is likely to tail off over time. There are some cases in which foreign owner subsequently decided to withdraw from the market in host country after having performed poorly. There are other cases in which foreign affiliates have successfully penetrated the market over time. All combined, rate of return on foreign investment is expected to gradually improve as time goes by (“age effects”)¹⁴. Indeed, the rate of return of FDIUS started improving from the level of 0.4% in 1992 to 3.7% in 1994 and over 4% in and after 1995, up to 2000.

¹³ “An Examination of the Low Rates of Return of Foreign-Owned U.S. Companies”, Survey of Current Business (March 2000)

¹⁴ Although this is an USDIA case, the “age effects” are evidently confirmed with the following financial data of Wal-Mart Stores, Inc.’s operations. Earnings before interest and taxes (EBIT) to sales ratio of the stores in foreign countries for the period from 2001 to 2005 compares to that of stores in the U.S. as follows. Stores in foreign countries: 2001 (3.3%); 2002 (3.2%); 2003 (4.9%); 2004 (5.0%); and 2005 (5.3%). Stores in the U.S.: 2001 (6.6%); 2002 (6.8%); 2003 (6.8%); 2004 (6.7%); and 2005 (6.7%). While USDIA operations in full scale had already started for manufacturing sector as early as in the 1960s or 1970s, Wal-Mart, by far the largest retailer in the U.S. started FDIUS as late as in 1991 and its investment abroad in full scale was after the late 1990s. The company is still “in the process of moving up the leaning curve” (an U.S. investment banker’s analyst interviewed by IIMA), in that it has yet to establish sufficient level of store network in each market.

Notwithstanding the above, FDIUS flow started picking up again in about 1998 with a surge of mega M&A deals, and reached its record high at US\$321.3 billion in 2000. FDIUS's profitability worsened sharply with increasing startup costs and U.S. economy recession in the wake of IT bubble burst, thus FDIUS rate of return plunged as low as to 0.9% in 2001. The rate of return has been in a gradually recovering trend thereafter. Table 3-2 presents net profit and rate of return of FDIUS by industry since 2001 (on a historical cost basis).

Table 3-2 Investment Return Ratio of FDIUS by Industry (2001-2004)

(US\$ million)

	2001		2002		2003		2004	
All industries	3,919	0.3%	35,256	2.6%	59,130	4.3%	92,766	6.3%
Manufacturing	4,261	0.9%	22,928	4.0%	22,116	4.6%	36,640	7.3%
Food	597	3.3%	932	4.9%	-5	-0.0%	1,959	9.7%
Chemicals	2,005	1.6%	8,022	6.4%	8,595	6.6%	8,966	6.3%
Metals	-265	-1.2%	-8	-0.0%	518	2.9%	2,344	12.8%
Machinery	-982	-2.6%	545	1.2%	-563	-1.2%	1,390	2.9%
Computers etc.	-5,609	-7.6%	-2,603	-5.4%	-276	-0.6%	2,383	5.6%
Electric products	2,413	5.0%	4,790	9.6%	-70	-0.2%	766	5.9%
Transportation equipment	1,891	3.2%	4,066	6.6%	4,651	7.3%	5,422	8.0%
Wholesale trade	9,566	5.3%	12,048	6.3%	16,391	8.7%	21,616	11.3%
Retail trade	1,335	5.4%	1,486	6.8%	1,711	7.7%	2,201	8.8%
Information	-13,392	-9.1%	-3,577	-2.7%	2,575	2.1%	5,924	4.9%
Depository institutions	1,991	3.0%	1,096	2.8%	2,131	2.6%	4,619	4.4%
Finance (except depository institutions) and insurance	-1,443	-0.8%	-3,355	-2.0%	7,742	4.3%	8,753	4.4%
Real estate, rental and leasing	1,570	3.3%	1,839	4.0%	919	2.0%	2,175	4.7%
Professional, technical services	-239	-0.8%	-214	-0.7%	-23	-0.1%	2,611	7.1%
Other industries	270	0.2%	2,106	1.0%	5,568	2.5%	8,227	3.4%

(Compiled from the Department of Commerce data)

According to the data of the Department of Commerce, FDIUS inflow, after hitting its record high of US\$321.3 billion in 2000, plummeted to US\$167.0 billion in 2001, and further plunged to US\$80.8 billion in 2002 and US\$67.1 billion in 2003, before it recovered to US\$106.8 billion in 2004 which is almost the same level of the years before 1997. Looking ahead, rate of return of FDIUS is likely to maintain its improving trend as the "age effects" mentioned above will support the trend with reduced startup costs and improved market penetration coupled with reduced poor FDIUS performers after their withdrawal from the U.S. market. The rate of return of chemical industry, the single largest industry segment in terms of the size of the net profit in manufacturing sector, was 6.3% in 2004. Given that chemical segment's rate of returns averaged at 7.3% for the years from 1994 to 1998 that were in between the two periods of torrential investment boom in the late 1980s and late 1990s, it would not be unrealistic to expect a rate of return higher than the current level. The rate of return of information industry segment (data by industry for information segment are not available before 1999 as the segment was among other manufacturing sector) is likely to improve as its business environment should be more promising than in 2004 or before. All in all, the rate of return of FDIUS is unlikely to drop from the level of 2004, as there are no particular negative factors foreseen in the near future.

2. Prospect of Rate of Return of USDIA

In analyzing the prospect of the rate of return of USDIA in coming years, major determining factors should be the future direction of *i*, *ii*, *iii*, *iv* and *v* in the summery section of Chapter 2. Those are the elements that have been deemed as shoring up rate of return of USDIA. As for element *i* (country risk factor) and element *ii* (motivation of oversea investment), we do not foresee any changes of these fundamental frameworks. Prominent use of holding company structure in USDIA to minimize cash-out by corporate tax from foreign affiliates (element *iii*) is likely to continue. As for the high percentage of reinvested earnings of USDIA (element *iv*), it should be negatively impacted to some extent by the magnitude of the repatriation of retained earnings abroad under the American Job Creation Act 2004. The retained earnings (excluding the portion arising from revaluation) as of the

end of 2004 is estimated at US\$850.6 billion, i.e. total amount of US\$696.8 billion (retained earnings as of the end of 2003) and US\$153.8 billion (reinvested earning in 2004). If we assume the repatriated amount under the above-mentioned Act is somewhere around US\$200 billion, the remaining retained earning balance is estimated at approximately US\$650 billion. By applying interest rate of 5-6% p.a. as U.S. dollar marginal funding cost to US\$650 billion retained earnings, the opportunity gain for the foreign affiliates of USDIA should be calculated at US\$32.5-39.0 billion. This represents 1.4-1.7% on US\$2,300 billion (USDIA position as of the end of 2004). This is lower by 0.3% than the estimated 1.75-2.0% in accordance with Table 2-6, which indicate the negative impact would not be significant if the repatriation is within the magnitude above. As to element v (the difference between the effective corporate tax for USDIA and U.S. statutory corporate tax for FDIUS), the basic framework is unlikely to change. The above indicates there will be no macro elements that will negatively affect the rate of return of USDIA.

We examine below the investment return ratio by industry. Table 3-3 presents the trends of income and rate of return of USDIA (on a historical cost basis) by industry for the years 2001-2004.

Table 3-3 Income and Rate of Return of USDIA (2001-2004)

	(US\$ million)							
	2001		2002		2003		2004	
All industries	110,029	7.9%	124,940	8.1%	171,229	10.1%	209,339	10.9%
Mining	9,262	12.2%	8,915	11.1%	11,274	13.3%	16,905	17.9%
Utilities	2,068	8.7%	2,095	8.1%	2,054	8.5%	2,086	10.2%
Manufacturing	27,603	8.2%	26,411	7.9%	35,981	10.1%	48,328	12.0%
Food	2,597	11.6%	2,604	12.8%	3,137	14.6%	3,227	12.9%
Chemicals	7,161	9.2%	8,632	10.7%	10,857	12.1%	13,792	13.5%
Metals	1,422	6.5%	1,158	5.4%	1,718	8.0%	2,578	10.6%
Machinery	1,313	6.6%	1,926	10.7%	2,221	11.3%	2,873	12.6%
Computers, etc.	4,335	7.3%	1,519	2.8%	4,623	9.2%	5,985	10.9%
Electrical products	669	6.8%	509	5.3%	591	5.7%	1,348	11.5%
Transportation equipment	2,148	4.8%	1,190	2.3%	2,335	5.0%	4,523	9.4%
of which Mortar vehicle	531	2.3%	-588	-3.2%	-240	-1.2%	1,419	7.3%
Wholesale trade	13,706	13.3%	13,382	11.9%	18,759	16.1%	24,145	18.7%
Information	-3,084	-6.5%	1,320	3.1%	6,224	13.7%	9,078	17.2%
Depository institutions	2,335	4.9%	1,270	2.4%	2,403	4.3%	3,098	5.0%
Finance (excluding depository institutions) and insurance	9,224	4.0%	14,585	5.6%	21,356	7.0%	27,329	7.8%
Professional, technical services	1,741	5.2%	2,219	6.8%	3,730	11.3%	5,775	14.9%
Other industries	47,166	9.6%	54,666	9.2%	69,322	10.2%	72,447	9.4%
of which Holding companies	41,483	10.3%	48,277	9.8%	60,795	10.7%	61,473	9.4%

(Compiled from the Department Commerce data)

Combined income of two major sectors (manufacturing and “other industries”) accounts for 60% of total. According to the data for the period, the rate of return of all industries tends to turn out to be at the level of weighting the rate of return of manufacturing sector by 40% and that of “other industries” by 60%, except in 2001 when information sector (communication) suffered from exceptionally huge losses due to IT bubble burst and the rate of return turned out to be slightly lower than the trend. As indicated by the trend of rate of return of USDIA in Table 1-8, the medium-term trend of rate of return of USDIA has steadily exceeded 10% level except in 2001 and 2002 when the rate was deteriorated by IT bubble burst. The rate of return of “other industries” that include a wide variety of industry segments through holding company structure remains in a steady range of 9.5% while that of manufacturing sector has been hovering recently in a 10-12% range. As far as we see from the trends of the above-mentioned sectors, we detect no particular negative factors. As such, USDIA rate of return is basically likely to maintain its medium-term trend of 10% range.

3. Summary of Chapter 3 (Prospect of Rate of return Gap between USDIA and FDIUS)

The analysis indicates that USDIA return ratio is likely maintain the current level without any particular negative elements while rate of return of FDIUS is to continue its improving trend.

Accordingly, the gap between the two rates of return is likely to show a basic trend of gradual decline from the recent 4-5% range. If we use the data of income account up to September 2005 (provisional and seasonally adjusted) to estimate the rate of return of USDIA and that of FDIUS on a current-cost basis, they are calculated as 10.1% for USDIA (10.5% in 2004) and 6.9% for FDIUS (6.4% in 2004), thus the gap between the two at 3.2% (4.1% in 2004). It should be noted, however, that these data are provisional and the denominators used in calculation are USDIA and FDIUS positions as at 2004-end instead of the estimated nine months average, hence the above rates need to be treated as only estimates with such limitations. Nonetheless, these numbers are generally in line with the prospect discussed as above.

Table 3-4 Income Receipts and Payments of Direct Investment, January-September (2005)

(US\$ million)

	Jan.-Mar.	Apr.-Jun.	Jul.-Sept.	Jan.-Sept. (total)	Investment position	Rate of Return % p.a.
USDIA (receipts)	58,180	59,635	61,787	179,602	2,367,386	10.10%
FDIUS (payments)	29,803	31,145	27,078	88,026	1,708,877	6.90%

(Compiled from the Department of Commerce data)

As we have discussed above, the gap between the two is in a gradually narrowing trend. Then, the next question is how narrow can it be? We examined in Chapter 2 that there has been a significant difference between USDIA and FDIUS in their cumulative reinvested earnings, and that rates of return of the two reflect the difference of such financial position. We estimated that the rate difference attributable to such factor is around 1.4-1.7% p.a. even after the estimated amounts of dividends are repatriated under the American Job Creation Act 2004. Such rate difference will not easily disappear. Furthermore, the tax situation will not change: USDIA pays lower corporate tax thanks to active utilization of oversea holding company structure while FDIUS pays higher corporate tax at U.S. statutory tax rate. Accordingly, on the basis of net profit, rate of return of USDIA should tend to be calculated higher than FDIUS. This situation will not change in a foreseeable future. As for FDIUS, its rate of return should improve due to the “age effects” as years go by. Should it happen, however, there may a possibility of increasing incentive for income shifting as pointed out in section 6 of Chapter 2. All in all, it may be unlikely that things will evolve in such a way that the rate of return gap (USDIA rate minus FDIUS rate) will be narrowed less than 2-3% consistently.

Box 2: Operations of U.S. and Foreign Multinational Companies and the U.S. Current Account

Some argue: “U.S. companies tend to choose to have their foreign affiliates manufacture and/or sell their products, or have other foreign companies manufacture and/or sell their products through granting licenses to do so, rather than manufacture their products in the U.S. and export them from the U.S. to international markets.” Their argument goes on: “As a result, the U.S. companies tend to receive the proceeds of their products in the form of receipts of royalties or licensing fees (i.e., U.S. receipts in the U.S. services account), or in the form of net profits of their foreign affiliates (i.e., U.S. income receipts on foreign direct investment).” It further goes on: “This must be the background to the U.S. persistent huge trade account deficit as against the surpluses on its services account and income account. This could also be the background to high rate of return of USDIA.” We hereunder examine the validity of such argument using the relevant data of the Department of Commerce.

The balance of payments records transactions between residents and non-residents. Since multinational companies’ residency is determined in accordance with their location, the balance of payments does not explicitly specify their activities. In order re-capture international transactions from the point of activities by multinational companies, the Department of Commerce releases additional data titled “an ownership-based framework of the U.S. current account.” The data

reclassify the relevant international transactions in accordance with the ownership of the entities instead of physical location. The table below outlines the framework. The numbers in parentheses refer to the numbered items in the table below.

1. The U.S. current account and foreign affiliates of U.S. companies

Overseas sales of U.S. companies including their foreign affiliates are recorded in item 3 (exports of goods and services), or item 6 (sales by foreign affiliates).

If we examine from the viewpoint of U.S. receipts from non-residents, we have to subtract item 7 (foreign affiliates' purchases of goods and services directly from the United States), item 8 (costs and profits accruing to foreign persons), and item 9 (sales by foreign affiliates to other foreign affiliates of the same parent), from item 6, the result of which equals to income receipt on foreign direct investment. Accordingly, any receipt by U.S. resident from non-resident is necessarily recorded as item 3 (exports of goods and services), or item 4 (income receipts on foreign direct investment).

On the other hand, U.S. sales of foreign companies including their U.S. affiliates are recorded in item 14 (imports of goods and services), or item 17 (sales by U.S. affiliates).

If we examine from the viewpoint of U.S. payments to non-residents, we have to subtract item 18 (U.S. affiliates' purchases of goods and services), item 19 (costs and profits accruing to U.S. persons), and item 20 (sales by U.S. affiliates to other affiliates of the same parent), from item 17, the result of which equals to income payments on foreign direct investment. Accordingly, any payment by U.S. resident to non-resident is recorded necessarily as item 14 (imports of goods and services), or item 15 (income payments on foreign direct investment).

The above ownership-based framework reveals more clearly the relationship between the operations of multinational companies and the U.S. current account. It also confirms that operations of multinational companies do not affect the current account statistics in any way.

2. Total sales of foreign affiliates of U.S. companies exceed by 2.4 times the U.S. total exports

Total sales of foreign affiliates of U.S. companies reached US\$2,480.7 billion (on the basis of adjusting double counting by subtracting items 6 and 7 from item 6) in 2003 whereas U.S. total exports of goods and services reached US\$1,022.6 billion in the same year. The former exceeded 2.4 times the latter. The comparables figures for import side are US\$1,942.5 billion for total sales of U.S. affiliates of foreign companies, and US\$1,517.4 billion for U.S. total imports, being the comparable ratio at 1.3.

This indicates that U.S. companies tend to choose to deliver goods through foreign affiliates to international markets rather than to export them from the U.S. This appears to support the above-mentioned argument regarding the background to the U.S. persistent huge trade account deficit as against the surpluses on its services account and income account.

Looking at the trends of item 4 (U.S. income receipts on foreign direct investment) and item 6 (sales by foreign affiliates of U.S. companies) in 1993 and 2003, we see substantial increases in both items. If the sales by foreign affiliates had been boosted due to shift from U.S. exports, it would have caused U.S. current account deficit to increase. If the sales by foreign affiliates had been boosted independently without shift from U.S. exports, it would have caused U.S. current account deficit to decrease with increased income receipts on U.S. foreign direct investment.

As to the argument that "the tendency for U.S. companies to choose to grant licenses to foreign companies rather than to export goods from the U.S. to international markets has formed the

background to the deficits in current account (25a) and the surpluses in services account (25b)", it appears to hold good, as the receipts of royalties and licensing fees far exceed the payments thereof.

3. Increase in sales by foreign affiliates of U.S. companies and rate of return of USDIA

Looking at the trends of item 4 (U.S. income receipts on foreign direct investment) and item 6 (sales by foreign affiliates of U.S. companies) in 1993 and 2003, we see substantial increases in both items. However, given that USDIA investment position increased substantially at the same time, it is difficult to argue that the rate of return has been shored up with the increased sales by foreign affiliates of U.S. affiliates. In fact, the rate of return remained stable during the period (refer to Table 1-8).

Table Ownership-Based Framework of the U.S. Current Account

		(US\$ billion)			
		1993	1998	2003	2004
1	Exports of goods and services and income receipts	778.9	1,195.3	1,332.4	1,531.0
2	Receipts resulting from exports of goods and services or sales by foreign affiliates	710.1	1,037.5	1,215.9	1,384.5
3	Exports of goods and services, total	642.9	933.5	1,022.6	1,151.4
3a	Goods, balance-of-payments basis	456.9	670.4	713.4	807.5
3b	Services	185.9	263.1	309.1	343.9
4	Net receipts by U.S. parents of direct investment income resulting from sales by their foreign affiliates	67.2	104.0	193.3	233.1
5	Nonbank affiliates	63.5	103.2	190.8	229.8
6	Sales by foreign affiliates	1,570.6	2,370.0	3,383.0	n.a.
7	Less: Foreign affiliates' purchases of goods and services directly from the United States	157.6	248.9	245.6	n.a.
8	Less: Costs and profits accruing to foreign persons	1,089.1	1,601.2	2,289.9	n.a.
9	Less: Sales by foreign affiliates to other foreign affiliates of the same parent	260.4	416.6	656.7	n.a.
10	Bank affiliates	3.7	0.7	2.5	3.2
11	Other income receipts	68.8	157.9	116.5	146.5
12	Imports of goods and services and income payments	823.9	1,356.1	1,780.9	2,118.1
13	Payments resulting from imports of goods and services or sales by U.S. affiliates	721.1	1,136.9	1,588.8	1,874.2
14	Imports of goods and services, total	713.2	1,098.5	1,517.4	1,769.0
14a	Goods, balance-of-payments basis	589.4	917.1	1,260.7	1,472.9
14b	Services	123.8	181.4	256.7	296.1
15	Net payments to foreign parents of direct investment income resulting from sales by their U.S. affiliates	7.9	38.4	71.4	105.1
16	Nonbank affiliates	7.5	35.8	69.3	100.5
17	Sales by U.S. affiliates	1,329.4	1,875.5	2,340.2	n.a.
18	Less: U.S. affiliates' purchases of goods and services directly from abroad	208.7	307.8	397.7	n.a.
19	Less: Costs and profits accruing to U.S. persons	1,113.3	1,531.8	1,873.1	n.a.
20	Less: Sales by U.S. affiliates to other U.S. affiliates of the same parent	n.a.	n.a.	n.a.	n.a.
21	Bank affiliates	0.5	2.6	2.1	4.6
22	Other income payments	102.8	219.1	192.1	243.9
23	Unilateral current transfers, net	-39.8	-53.3	-71.2	-80.9
24=2-13	Balance on goods, services, and net receipts from sales by affiliates	-11.0	-99.5	-373.0	-489.7
25=3-14	Balance on goods and services	-70.3	-165.0	-494.8	-617.6
25a=3a-14a	Trade account	-132.5	-246.7	-547.3	-665.4
25b=3b-14b	Services account	62.1	81.7	52.5	47.8
26=4-15	Balance on income account of direct investment	59.3	65.6	121.9	128.0
27=11-22	Income account (excluding income resulting from direct investment)	-34.0	-61.2	-75.6	-97.4
28=1-12+23	Current account	-84.8	-214.1	-519.7	-668.1
	GDP	6,657.4	8,747.0	10,971.2	11,734.3

Note: Relationships among major items are as follows

1=2+11, 2=3+4, 2=13+22, 13=14+15, 5=6-7-8-9, 16=17-18-19-20

(Source: Survey of Current Business, January 2006) Current Business, January 2006)

Box 3: Internet Shopping and Balance of Payments

Against the backdrop of growing number of internet transactions in recent years, a question may arise as to how these deals are captured in the statistics of the balance of payments. This obviously has implications to the data including those on U.S. exports of goods and services, and sales by foreign affiliates of U.S. companies. Explained below are the relevant present statistical treatments in the U.S. and Japan.

In the U.S., all cross boarder transactions to be recorded in the balance of payments are required in principle to be reported directly by entities in question, irrespective of internet and traditional transactions.

Internet sales by U.S. book sellers to nonresidents are recorded as exports of U.S. goods. The transactions are captured at the time of customs clearance unless the amount involved is less than US\$2,500.

If a nonresident downloads certain software through internet and pays its price to an U.S. software sales company, the transaction shall be recorded as export of service. Exports of services are reported through such surveys as BE-20, B-22, etc., though the scope of the surveys is only for corporations.

If an U.S. individual downloads personally certain software from non-U.S. software company, the transaction is not recorded as import of service. It is true that, if the relevant payment is made with credit card, the transaction could be captured because subsequent cross-boarder funds settlement is made between banks. However, the U.S. authorities are not currently making any attempt to reflect the data on cross-boarder credit card settlement in data on exports /imports of goods and services.

Under the Japanese reporting system, meanwhile, cross-boarder payments by Japanese individuals (or non-Japanese individuals) with their credit cards are recorded as payments (or receipts) under "travel", a sub-item of service account. Accordingly, purchasing software with credit cards is recorded in travel balance even though the transaction has no relevance to travel.

This kind of electronic transactions that are not captured or that are recorded as different types of transactions appear to be relatively small at present. Given the possibility that further increase of internet transactions in particular those by individuals may cause distortion in the relevant statistics in the future, this issue needs further examination.