Twenty-Eighth Meeting of the
IMF Committee on Balance of Payments Statistics

Rio de Janeiro, Brazil
October 27–29, 2015

BOPCOM—15/04

China's Implementation of *BPM6*

Prepared by the State Administration of Foreign Exchange (SAFE), China

China's Implementation of BPM6

1 The Preparations for the Implementation of BPM6 in China

1.1 The Legal Framework

Since the BPM6 was published in 2009, SAFE has started to study on it. In 2009 and 2010, SAFE identified China's data gap with the new manual, and made its implementation plans. In 2013, the basic law ***Measures for Statistics and Declaration of the Balance of Payments*** was revised. The following are the major adjustments.

First, the importance of international investment position data is emphasized. The coverage of BOP statistics explicitly includes the external financial assets and liabilities of residents, while the old ***Measures*** focused more on BOP transactions and only required institutions to report positions.

Second, the reporters are extended to both Chinese residents and non-residents who have transactions in China, while the old ***Measures*** only regulated the reporting obligations of the domestic institutions and individuals.

Third, the new ***Measures*** put more reporting obligations on the custodians, registry and settlement intermediaries in order to facilitate data collection and reduce social costs.

Fourth, the individual residents are obligated to report their external assets and liabilities, while the old ***Measures*** only required institutions to report data. The revised ***Measures*** are the basis for setting up new reporting requirements and extending the coverage of reporters.

1.2 Corresponding Requirements and Systems with the *Measures*

Since 1996, the framework of balance of payments statistics has developed gradually, including international transactions reporting system (ITRS), enterprise surveys, official records, estimates and data of international organizations.

1.2.1 ITRS

The classifications and codes of BOP transactions were revised in 2014. *Codes* are applied in ITRS and used by reporters who make receipts and payments through banks. The main changes of the *Codes* are: First, items are reclassified and renamed in line with BPM6. For instance, merchanting is adjusted to general merchandise from service, while processing with no change

of ownership of input goods are changed from general merchandise to service. Second, items are designed to meet the requirements of foreign exchange administration. For example, goods transactions are classified according to whether they are subject to Customs reporting.

In 2015, *the ITRS reporting requirements* were revised too, which raised the threshold of reporting obligations and encouraged to report via electronic channels.

1.2.2 External Financial Assets, Liabilities and Transactions Statistics (survey of financial institutions)

Report on External Financial Assets, Liabilities and Transactions (FAL Report) were set up in 2013, and enforced in September 2014. *The Report* made great improvements in coverage, granularity and frequency. First, reporters cover all kinds of financial institutions including banks, insurance companies, security companies and other financial intermediaries. Second, *the Report* cover external financial transactions as well as positions, while previously, only positions were collected. Third, the data are collected monthly, while in the past, only quarterly data were collected. *The Report* is helpful not only to BOP statistics, but also to close data gaps of LBS and CPIS.

1.2.3 The ITRS computer system has been upgraded and a new system to collect external financial assets, liabilities and transactions data has been set up.

1.3 Data preparation

From 2009, SAFE began a series of data preparation work, that is, to enhance the data validation, to negotiate on coverage of official records and data exchange arrangements with relevant government agencies, to update the template for BOP and IIP compilation, to design the presentation table of BOP and IIP and to revise historic data of items such as goods for processing and merchanting, etc..

1.4 Communication Strategy

In September 2014, SAFE posted China's implementation of BPM6 on the official website, including papers on *Introduction of BPM6*, *New Presentation Tables of BOP and IIP*, and *China's Plans and Arrangements in Implementation of BPM6.* SAFE also hosted seminars to introduce BPM6, and helped the public to understand and use the data in BPM6 presentation.

1.5 Dissemination of Data in line with BPM6

On June 30, 2015, SAFE disseminated BOP and IIP of the first quarter of 2015 in line with BPM6, and revised historic data of BOP and IIP.

2. Improvements in BOP Compilation in Implementation of BPM6

2.1 Current Account: Processing and Merchanting

2.1.1 Methods and Data Sources

Processing with no change of ownership of input goods is adjusted to manufacturing service from general merchandise, and only the processing fees are recorded. Previously, when the goods were supplied from the owner and returned to the owner, the value of the service was included in the value of goods. In China, the data source of processing with no change of ownership of input goods is ITRS payments and receipts of manufacturing service, and previously the data source was the Customs data. Processing with change of ownership of imported goods is still recorded in general merchandise.

Merchanting of goods is reclassified as goods, while in BPM5 it was included under other services. In China, the data source is still ITRS which collects both merchanting receipts and payments. In line with BPM6, only net values will be included under goods.

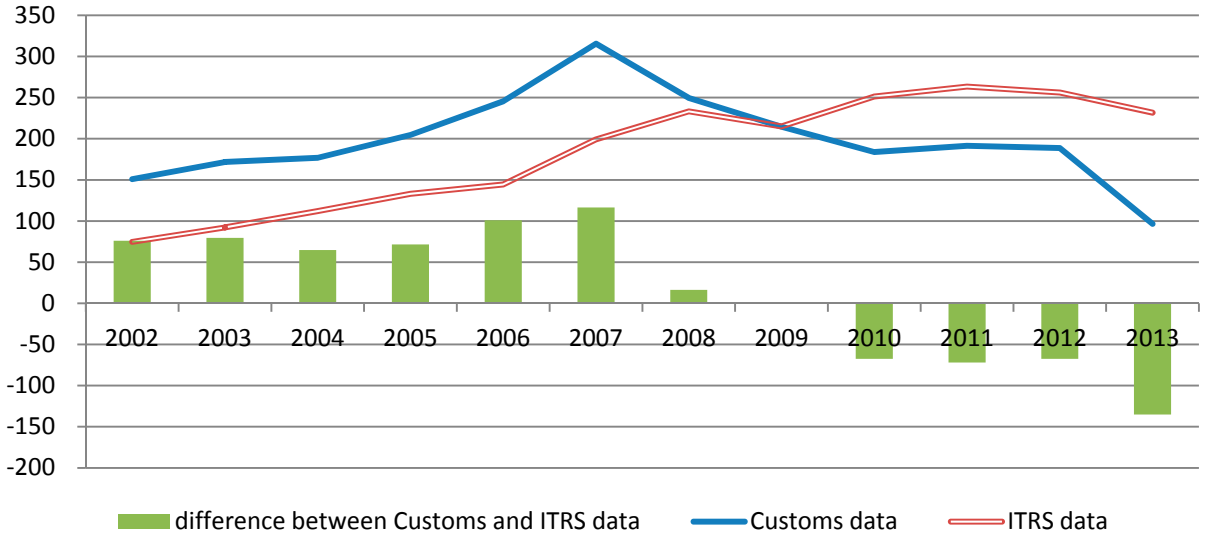
2.1.2 Analysis and Comparison

In China, the data sources to compile manufacturing service include: the net value derived from the input goods and processed goods of Customs data, and the manufacturing services fees of ITRS.

SAFE conducted a survey on some manufacturing enterprises to figure out their manufacturing services fees. The survey demonstrated that ITRS data were much closer to the actual manufacturing services fees. The reason why ITRS data are more accurate than the Customs data is that part of the processed goods are sold in China rather than being returned to the owner abroad. The situation is not covered by the Customs statistics, which may overvalue goods for processing. Also, because the Customs do not require processors to revise the original reports according to the actual transactions, the goods value may be understated.

ITRS data are more coordinated with the economic reality. Because the processing abroad is small, here we only take the processing in China as an example. From 2001 to 2008, the net value of processing with no change of ownership of input goods derived from Customs data is higher than ITRS

processing fees, and since 2009, the situation changed and the net value of processing derived from the Customs data shrunk quickly (see Graph A). Although both data sources have disadvantages, it is difficult to judge which one is better. But the net value of processing derived from the Customs data is declining from US$ 31.5 billion in 2007 to US$ 9.7 billion in 2013, and the sharp decline could not be fully contributed to the transform and upgrade of processing trade. Since April 2014, processing with no change of ownership from the Customs has recorded a deficit for continuous six months, which means the actual data may be twisted by the non-market or statistical factors. Different from the Customs data, the ITRS processing fee receipts were declining gradually after 2011, which seems to be more consistent with the foreign trade development.



Graph A. Comparison of the Customs data and ITRS data in processing with no change of ownership of input goods (Unit: US$ 100 million)

Based on the above comparison, ITRS processing fees are to be used to compile BOP. Although the ITRS on processing fees has its own drawbacks, e.g., the processing fees directly paid for machines provided by the owners are not captured; the processing fees does not exclude the Customs clearance fees and transport service fees. However, since SAFE has no additional data to modify the ITRS data, we may validate and improve ITRS data with the support of enterprise survey in the near future.

2.2 Current Account: Adjustment the Estimation of Transport on Goods and Goods Related Insurance Service

Before 2015, SAFE applied 4% of the total value of goods imported to transportation service and 1% to insurance service to convert imports from CIF to FOB valuation, and reconcile between the Customs merchandise source data and total goods on a balance of payments basis. Before implementing BPM6 in China, SAFE managed to verify the above ratio by using the Customs reports on the freight and insurance payments. SAFE is planning to update the ratio every year.

2.2.1 Methods and Data Sources

Based on the key items in the Customs reports such as the gross value of goods imported, freight, insurance premium, and departure countries/regions, SAFE used the weighted averages to calculate transport by sea and by air, because transport by these two means account for 95.86% of the total transport. The result indicates that the average freight is about 4.32% in the gross value of the imported goods, and the average insurance ratio is 0.27%. The average freight ratio and the average insurance ratio from about 160 countries/regions are also calculated.

The Customs reports of imports form the basis for estimation. Useful information include means of transportation, type of trade, departure/arriving countries/regions, freight, insurance premium, categories of goods, unit price, gross value, etc.

Law of large numbers is the underlying theory of the estimate. Sea transport and air transport are major means of transportation for imports. Freight by these two means accounts for more than 90% in total freight of imports. The average ratio of the freight by the two means of transports is therefore used to calculate freight by all means of transportation for imports.

2.2.2 Steps of Estimates (Taking Freight as an Example)

The freight ratio has close relationship with items such as departure countries/regions, categories of goods, weight of goods, and gross value of goods, and thus can be estimated by matrix of the key items. However, because the key items are so complex that it is a challenge to construct them in a matrix, we simplify the estimate and use only information on departure countries/regions. As a result, the freight ratio is to divide freight by gross value of goods from each departure countries/region.

Step1, get departure countries, freight, and value of goods from every Customs reports, and divide freight by value of goods to get freight ratio. The abnormal samples are excluded to get reliable results.

Step 2, calculate the freight ratio of different countries. The freight ratios of each reports are grouped by country codes.

Step 3, calculate the general freight ratio with the freight ratio of individual country, weighted by the ratio of value of goods of the country in the total value of goods.

As a result, the general freight ratio and the freight ratio of main counterparties are demonstrated in the table below:

Table A. The Freight Ratio in General and of Main Counterparties

Countries /Regions	Samples excluded with their freight ratio							
	>10%	>15%	>20%	>25%	>30%	>40%	>50%	No excluding
In General	**2.36 %**	**2.99 %**	**3.52 %**	**3.96%**	**4.32%**	**4.95%**	**5.42%**	**31.00%**
Korea	1.67%	1.98	2.23%	2.44%	2.63%	2.92%	3.17%	14.04%
Japan	1.64%	2.06	2.38%	2.65%	2.88%	3.27%	3.57%	30.74%
Taiwan, China	1.63%	2.06	2.39%	2.66%	2.89%	3.25%	3.53%	22.01%
U. S. A	3.53%	4.53	5.36%	6.04%	6.60%	7.56%	8.31%	71.59%
Australia	3.09%	4.16	4.91%	5.49%	5.93%	6.41%	6.85%	12.28%
Germany	2.38%	2.91	3.29%	3.59%	3.84%	4.25%	4.58%	19.64%
Malaysia	1.95%	2.42	2.80%	3.13%	3.42%	3.87%	4.23%	18.38%
Swiss	3.27%	4.23	4.97%	5.61%	6.17%	7.04%	7.74%	144.43%
Russia	4.98%	7.03	8.83%	14.65%	17.11 %	19.54%	20.65%	26.10%
Singapore	2.03%	2.54	2.96%	3.31%	3.61%	4.08%	4.45%	37.53%
Canada	3.74%	4.87	5.65%	6.26%	6.86%	7.67%	8.54%	48.22%
France	3.44%	4.41	5.09%	5.63%	6.07%	6.76%	7.36%	30.52%
U. K.	3.28%	4.18	4.92%	5.56%	6.09%	6.96%	7.67%	75.09%
Italy	3.37%	4.26	4.94%	5.48%	5.95%	6.73%	7.33%	17.54%
H.K., China	2.02%	2.46	2.79%	3.06%	3.26%	3.61%	3.87%	8.45%
Holland	3.23%	4.08	4.70%	5.24%	5.68%	6.36%	6.97%	392.56%

The above results are logical in several points: First, the freight ratios with long distance counterparties (e.g. USA, Australia) are higher than those with

short distance counterparties (e.g. Korea, Japan). Second, the freight ratios with Malaysia and Singapore are higher than that with Japan and Korea, which is consistent with the fact that commodities imported from Malaysia and Singapore are most low value-added and their freight ratio in the total value are comparatively high. Third, in most countries sea freight ratios are lower than air freight ratios, which is rational in transportation industry. As an exemption, sea freight ratio from Russia is higher than air freight ratio because air samples from Russia are relatively small (there are only 188 samples left if samples with freight ratio over 10% are excluded).

After analysis and comparison, it is decided to apply the results excluding the samples with the freight ratio over 30%, that is, the general average freight ratio is 4.32%. the main reasons are: first, even the commodities with high freight ratio such as iron ore, its average freight ratio is around 10%, and at most 25%, which is less than 30%; second, after excluding the samples with the freight ratio over 30%, the remaining samples account for 88.5% of the total samples, and could act as a representative of the whole picture. Therefore, it is rational to estimate excluding the samples with the freight ratio over 30%.

The method of calculating insurance service ratio is same as the freight and the results are as follows:

Table B. The Insurance Service Ratio in General and of Main Counterparties

Countries /Regions	Samples excluded with their insurance ratio					
	>5%	>10%	>15%	>20%	>30%	No excluding
In general	0.23%	0.26%	0.26%	0.27%	0.28%	0.57%
Korea	0.113%	0.145%	0.155%	0.159%	0.163%	2.471%
Japan	0.280%	0.420%	0.451%	0.460%	0.488%	0.663%
Taiwan, China	0.153%	0.193%	0.200%	0.201%	0.213%	0.355%
U. S. A	0.240%	0.271%	0.276	0.280%	0.301	0.428%

			%		%	
Australia	0.184%	0.202%	0.202%	0.217%	0.217%	0.217%
Germany	0.196%	0.214%	0.221%	0.228%	0.238%	0.289%
Malaysia	0.266%	0.273%	0.287%	0.291%	0.303%	0.312%
Swiss	0.434%	0.504%	0.536%	0.599%	0.631%	0.759%
Russia	0.403%	0.490%	0.490%	0.550%	0.550%	0.550%
Singapore	0.226%	0.267%	0.268%	0.275%	0.279%	0.333%
Canada	0.250%	0.262%	0.283%	0.283%	0.321%	0.361%
France	0.305%	0.325%	0.328%	0.328%	0.330%	0.369%
U. K.	0.251%	0.264%	0.264%	0.269%	0.275%	0.292%
Italy	0.367%	0.408%	0.432%	0.451%	0.495%	0.635%
H.K., China	0.185%	0.202%	0.210%	0.219%	0.228%	0.358%
Holland	0.244%	0.267%	0.287%	0.287%	0.287%	0.287%

From the above table, it is logical that the overall insurance ratio increases as the excluded examples decrease. To identify the right criteria to exclude the

abnormal examples, SAFE surveyed some big property insurance corporations and the survey showed that in average, insurance ratio (insurance premium in insured value) accounts for a few of a thousand, which validates our estimates. The overall insurance ratio would be around 0.27% and the samples coverage arrives at more than 99%, no matter excluding samples with the insurance ratio over 0.1%, 0.15%, 0.2%, or 0.3%. Therefore, it is decided to apply the 0.27% to compile the BOP. Compared with the present 1%, the adjusted ratio would reduce the insurance service payment.

2.2.3 Impact on BOP

The new estimated average freight ratio (4.32%) is slightly higher than the previously adopted one (4%). The new insurance premium ratio (0.27%) is much lower than the previous one (1%). However, because the total percentage of insurance in service trade is relative lower (around 5%), the volume of service trade estimated with the new method will not change greatly.

2.3. Current Account: Travel Expenditure

2.3.1 Method and Data Sources

The statistical method of travel expenditure is changed from using mainly bilateral data to a combination of ITRS, banking card data, and estimate on cash expenditure. Previously, SAFE obtained per capita expenditure of Chinese travelers from the main counterparty countries/regions' website, and multiplied with the number of Chinese travelers to get the total travel expenditure. Per capita expenditures of the unavailable partner countries are estimated according to that of the available neighbor countries. The drawbacks of the previous method are: first, SAFE only has the number of Chinese travelers to the first destination country, and has no information on those who visit several destinations during one trip. Accordingly, the number of Chinese travelers and the total travel expenditures might be underestimated. Second, per capita expenditures of the Chinese are unavailable for most partner countries.

In 2015, SAFE started to use payment data to compile travel expenditures. There are three types of payments: by remittance, by swiping bank cards, and by cash. Specifically, remittance is widely used by Chinese students aboard for tuition, and the data are obtained from ITRS. Swiping card data can be obtained from the *Report on External Financial Assets, Liabilities and Transactions Statistics*. Under the *Report*, China Union Pay and domestic card issuers are required to report Chinese residents' overseas bank card expenditures with

country breakdown. The cash expenditure is estimated according to its proportion to total travel expenditures (10% in HK, and 30% in other countries and regions). The proportion was derived from a survey by China National Travel Administration in 2010.

2.3.2 Related Issues of the New Method

The payment data could reflect the actual travel expenditures more completely. The bank card data and remittance data are more frequent and reliable data sources, which can be used to compile travel expenditures with country breakdown.

However, there are also some disadvantages. For example, some remittance reported as travel in ITRS and some overseas purchases via bank card are actually goods transactions, because the money is used for valuables and durable goods, Sometimes, the money is used for investment abroad, which should be included in financial account. However, without further information, it is hard to identify how much should be allocated to goods item or financial account.

2.4 Financial Account: new instruments of financial derivatives and insurance, pension, standardized guarantee schemes are added; financial transactions data are directly collected in place of deriving flows data from positions data.

Financial derivatives and insurance, pension, standardized guarantee schemes are added to both the BOP and IIP in 2015. Thank to the enforcement of the *Report on External Financial Assets, Liabilities and Transactions Statistics*, financial stock, transaction flows and other flows are collected separately. As a contrast, the previous practice was to include financial derivatives in debt instruments, and to use stock changes to derive financial derivatives flows. Moreover, insurance, pension, standardized guarantee schemes were not collected.

Currently, the new *Report* only requires financial institutions to report the data, non-financial institutions are not covered, yet. However, because most cross-border financial transactions (except direct investment) can only be conducted by financial institutions or via financial institutions at present, the *Report* has high data coverage and can assure the data integrity.

3. Improvements in IIP

3.1 Improvement in Round-Tripping investments

3.1.1 The Previous Method and Related Issues

Before 2015, SAFE used the position data of MOFCOM to compile outward FDI. In 2014, after discussing with the MOFCOM, SAFE decided to supplement the MOFCOM data with the outward FDI whose actual or ultimate host economy was China. Although this part was missing in the MOFCOM's statistics, the inward FDI data captured it already. That is, the inward FDI covers all direct investments directly invested by non-residents no matter where the ultimate investing country is. So, round-tripping is also included in inward FDI. Because the outward FDI and inward FDI apply different principles, the outward FDI might have been understated.

3.1.2 Improvement Methods and Data Sources

In line with BPM6, both outward FDI and inward FDI should be compiled based on the direct direct investors or direct direct investment enterprises principles. To close the gap on outward FDI and inward FDI, MOFCOM and SAFE have jointly revised the *reporting requirements on outward FDI* and disseminated it in the end of 2014. By the end of June, 2015, the corresponding data of 2014 have been collected.

Meanwhile, a temporary measure was taken by SAFE. When compiling IIP of first quarter of 2015, SAFE supplements the outward FDI with FDI data of big companies who ultimately invest back to China mainland. Taking China Mobile as an example, it made round tripping investment via its subsidiary company China Mobile (HK), which set up China Mobile Co. Ltd. in China mainland. The investment in HK is not covered by outward FDI, while the investment back in China mainland by HK subsidiary is covered by inward FDI.

3.2 Statistics of Equity Securities Investment at Market Value

3.2.1 The previous Method and related issues

According to BPM5 and BPM6, the transactions and positions of equity securities should be recorded at market value. Before 2015, QDII (Qualified Domestic Institutional Investors) and QFII/RQFII (Qualified Foreign Institutional Investors) are valued at market value, while equity securities of domestic corporations listed abroad are valued at historic cost. As a result, the equity securities liabilities are undervalued.

3.2.2 The Adjustment of Statistical Method: to use the information available on the Internet

3.2.2.1 Calculation of market-value positions of equity securities listed abroad

Based on the list of domestic corporations listed abroad by CSRC, SAFE could search those companies' quarterly, semi-annual, and annual reports, and figure out the quantities of outstanding equities held by foreign investors. In terms of the market value per stock abroad, the total market value held by foreign investors can be calculated.

3.2.2.2 Newly calculated data of equity securities and their validation

The results show that at the end of 2013, the total market value of equity securities listed abroad is approximately US$ 520 billion, of which US$ 15.6 billion is held by domestic investors, US$ 344 billion by foreign investors, US$ 160 billion by unknown investors. Because the equity securities listed abroad are mainly for non-Chinese investors, SAFE assumed that the unknown investors are foreign investors, so the total value held by both foreign and unknown investors is US$ 504 billion. The above assumption may overestimate China's equity securities liabilities.

To ensure the accuracy of the above estimate, SAFE compared the data with IMF's CPIS counterparties' data. According to 2013 CPIS, China's equity securities liabilities is US$ 512.5 billion, which in theory cover all equity securities issued by domestic enterprises and held by foreign investors, no matter where they were issued and whether they were listed or not. If exclude the equity securities issued in China and unlisted securities held by foreign investors from the CPIS, the CPIS derived data would be less than SAFE's calculation. However, the two data sets are becoming more comparable than they used to be.

3.2.2.3 Limitations of the method and alternative treatment

Using internet information to calculate market value of equity securities listed abroad has its own limitations: first, the information is published far behind the compiling period. For instance, the quarterly and annual reports of most listed corporations are published at least one quarter after the reference period. If allowing for data processing period, the BOP compilers may get the final data in 4 months, which cannot meet the IIP compilation schedules. Second, not all companies disclose detail information on their investors. For

example, some companies only disclose several big investors, without indicating whether they are domestic or foreign investors. In view of the limitations, SAFE has to assume the unknown investors as foreigners, and to use the latest available information. In 2015, SAFE has adopted the internet information to compile the IIP, without revising the historic IIP. SAFE also made notes to explain the break in time series.

4. Medium and Long-term Improvement Plans

4.1 To further improve the data collection and estimates of travel expenditures, especially to survey the cash ratio in total travel expenditures, on-line purchase of goods abroad with bank cards, and estimates of student's expenditure abroad.

4.2 To make a survey on the international transport receipts for goods and passengers to large-scale transportation enterprises, in order to substitute the ITRS data and rough estimates.

4.3 To make a research on recording insurance related items, such as service, secondary income and financial account. The external assets/liability and transactions forms cover part of insurance business (direct insurance provided by domestic insurance corporations, and reinsurance accepted and provided by them), and SAFE need to do more work to check the data quality, explain to and discuss with the reporters, and improve the estimates.

4.4 To make a research on how to estimate FISIM.

4.5 To research on compiling bilateral current account of BOP and IIP. In view of the importance of bilateral data consistency and analysis needs on positions, SAFE will begin to research on data collection, estimates and compilation of the current account of BOP with country breakdown item by item, and IIP with country breakdown and currency breakdown by items and sectors, to meet the requirements of compiling the CPIS, LBS, and additional analytical positions data.