

**REPORT OF THE COMMITTEE
TO STUDY THE FEASIBILITY OF
IMPLEMENTATION OF
GIRO BASED PAYMENT SYSTEM
IN INDIA**



**RESERVE BANK OF INDIA
APRIL 2013**

Contents

Chapter No.	Particulars	Page Number
	Letter of Transmittal	
	Executive Summary	
I	Background	1
II	Overview of the existing Payment Systems in India	6
III	Some GIRO Payment Systems across the globe	12
IV	A GIRO Model for India	17
V	Recommendations	23
Annex1	List of Members of the Committee	30
Annex2	IBPS-Suggested Operating and Procedural Guidelines	32
	Abbreviations	43

LETTER OF TRANSMITTAL

April 29, 2013

Shri H. R. Khan,
Deputy Governor,
Reserve Bank of India,
Mumbai.

Dear

We have great pleasure in submitting the Report of the Committee to study the feasibility of implementation of GIRO based payment system in India.

The approach adopted by the Committee was to identify the gaps in the existing payment systems and explore the possibility of introducing a GIRO based payment system to supplement the existing ones. The Committee formed two sub-groups, one to study the designs and contours of the system, which would adequately address the identified gaps and another to look into the operational/procedural guidelines that may have to be adopted for effective implementation of the system. The subgroups interacted with select stakeholders.

The Committee itself met on four occasions between December, 2012 and March, 2013.

On behalf of the members of the Committee and on my own behalf, I sincerely thank you for entrusting this responsibility to us.

With warm regards

Yours sincerely

Sd/-
(G. Padmanabhan)

Executive Summary

Introduction

1. In the Second Quarter Review of Monetary Policy 2012-13, Governor, Reserve Bank of India announced the setting up of a Committee to finalise the modalities of implementing an electronic GIRO payment system-both electronic and cheque based in India. Earlier, the RBI, in its Payment Systems Vision in India 2012-15, had identified the need for developing an electronic bill payment system based on a GIRO model for payments towards insurance premia, utility payments, taxes, school fees, etc.
2. Accordingly, a Committee under the chairmanship of Shri G. Padmanabhan, Executive Director, RBI was set up to study the feasibility of implementation of an electronic GIRO payment system in the country.
3. The terms of reference of the Committee included finalizing the contours of the GIRO product (electronic and cheque) for the country, designing the procedural guidelines of the proposed system, drawing up a roadmap for its implementation and lay down the transitional path for switchover from cheque to electronic GIRO over a period of time.

Scope of GIRO

4. A GIRO is a payment instruction from one bank account to another bank account which is initiated by the payer. As the payment systems evolved, GIRO came to include acceptance of third party payments at Banks, debit authorisation of recurring payments and also clearing and settlement payment networks in different countries. The Committee observed that in the Indian context, where cash continues to be the predominant mode of payment, GIRO could include any third party payment made through any payment mode viz. cash, cheque, credit/debit cards, prepaid payment instruments, etc. resulting in the transfer of funds to the bank account of a beneficiary.

Approach of the Committee

5. The Committee had interactions with major participants in the bill payment market in the country to understand the extent of gaps and opportunities for a GIRO model. It also

studied the GIRO payment systems operating in the world to help in developing a GIRO model which would suit the needs of the country.

Observations of the Committee

6. A wide range of payment instruments viz. cheque, debit/credit cards, prepaid instruments etc. and retail payment channels viz. NEFT, NECS, ECS(Debit), IMPS etc. are available in the country. Even non-banks have been permitted to issue prepaid payment instruments and effect P2P domestic money transfers in a limited way.

7. While the existing systems are safe and robust, the existing systems did not fully address the needs of a consumer to pay the utility bills, school/university fee etc. for the following reasons -

- a. Lack of interoperability in the bill payment processes requiring the consumers to make payments at the respective Billers Own Collection Point or his agent.
- b. Consumer preference for payment at BOCPs, which provides him instant receipt confirming the payment of the bill and lack of trust in the agents.
- c. A vast majority of the consumers have no access to other modes of electronic payments or are wary of using them.

8. Bill payment is a major component of the retail payment transactions. It is estimated that over 30,800 million bills are generated each year in the top 20 cities in the country. The Cash and Cheque collections constitute over 90 percent and electronic payments through ECS etc. continue to be low.

9. Intermediaries/Aggregators play an important role in the bill payment system in India. They provide payment collection services to the billers through various agent outlets and also offer reconciliation services to the billers. However, the intermediaries/aggregators operate on the basis of bilateral agreements with the billers. There is a lack of coordinated industry initiative to develop a common interoperable bill payment system. There is, therefore, a need for a GIRO payment model for India which will be inter-

operable, enable third party payments and also provide for acceptance of payment in cash and cheque as well.

10. Among the Giro models operated globally, the Boletto Bancario System in Brazil and the SADAD system in Saudi Arabia provide for acceptance of bill payments at various bank branches, agent outlets etc. The Boletto Model is mainly a paper-based model, involving generation of a bar-coded Boletto slip by a biller/merchant which is presented at the agent outlet by a consumer at the time of making payment. The SADAD model is electronic.

Major Recommendations

11. A GIRO based payment system christened “India Bill Payment System” (IBPS) may be designed and implemented in the country.

12. The participants in the IBPS would include Billers, Intermediaries/Aggregators, Banks, Collection Agencies operating the IBPS points and the IBPS Points.

13. Initially, the Intermediaries/Aggregators may be permitted direct connectivity to the IBPS system. In due course, the managers of IBPS may consider extending direct connectivity to the billers, based on appropriate access criteria.

14. To enhance consumer confidence and acceptance of the IBPS, a service mark/logo should be designed and displayed on the bills as well as the IBPS points, where payments are accepted.

15. The consumer should be provided with an instant receipt by the IBPS acknowledging the receipt of the payment. The receipt should have the unique reference number generated by the IBPS and also carry the IBPS service mark/logo. The payment made by a consumer would be irrefutable.

16. **Bill Presentment:** Presently, there is no standardized system of bill data codification across billers. IDRBT could develop an appropriate algorithm for the purpose of capture of bill data for adoption by the billers. However, the IBPS should support the prevalent mode of bill presentment which is largely paper based. The IBPS should also encourage

electronic presentment. Mobile number/ Aadhaar based mapping for payers and Billers could also be undertaken while safeguarding the consumers' privacy at the same time.

17. **Bill Information flow:** Payment information from the IBPS point should flow online to help minimise reconciliation issues and customer grievances. The Billers/businesses which may not be able to provide/support online flow of payment information may leverage the aggregators' capability in this regard.

18. **Payment instruments/channels:** The IBPS should enable acceptance of all payment instruments including cash at the IBPS points. The system should provide for acceptance of payments at any IBPS outlet, including bank branches, ATMs etc. It should also facilitate acceptance of payments through IVRS, net banking and mobile banking.

19. **Fund Settlement:** Fund settlement for the transactions through the IBPS will be undertaken by IBPS at periodical intervals. Non-bank entities will identify a sponsor bank and notify the same to IBPS for the purpose of fund settlement.

20. **Customer Support:** IBPS will provide for online registration of complaints from customers and the first point of contact (Bank Branches/Customer Service Point receiving the payment) would provide customer support. But the customer grievances related to bill payment will have to be attended to by the Biller and IBPS/Aggregator would provide the necessary support to the Billers in this regard.

21. **Engagement of Stakeholders:** The proposed IBPS would require discussions with a large group of billers, aggregators before implementation to ensure their acceptance and they should be associated with the implementation and management of the system.

22. **Management of the IBPS:** Ideally, a separate organization needs to be set up to operate and manage the IBPS in a professional manner and the operations of the organization should be run on commercial lines. The organization should have an advisory body/ steering committee with representations from billers, aggregators, banks, payment networks, customers and others. The new organization could be authorized by the RBI under the Payment and Settlement Systems Act, 2007, to operate the IBPS.

Chapter I

Background

*Reserve Bank of India:
Vision Statement for Payment Systems in India - 2012-15*

“To proactively encourage electronic payment systems for ushering in a less-cash society in India and to ensure payment and settlement systems in the country are safe, efficient, interoperable, authorised, accessible, inclusive and compliant with international standards”

1.1 Reserve Bank of India (RBI) has been constantly endeavoring to ensure that the payment and settlement systems in the country are safe, secure, efficient and well regulated. It has also taken measures to widen the reach of payment services in the country through both banking and non-banking channels.

1.2 In its Payment Systems Vision in India 2012-15, the RBI has, *inter alia*, observed that “India has a diverse and a complex Biller market structure which varies with national /regional players and private / state owned entities with a huge bill payments market. Among the electronic payments infrastructure, ECS occupies a major share followed by cards and bank account funding in payment of bills. It is estimated that a large portion of the bill payments is done at Biller’s location (generally walk-in customers). Thus there is a huge opportunity for developing a bill payment system for payments towards insurance premia, utility payments, taxes, school fees, etc. Towards this end, there is a need for developing an electronic GIRO system. One of the prerequisites for developing an electronic GIRO system is the standardisation of Biller information”

1.3 Keeping in view the above vision of the RBI, the Governor had announced, in the Second Quarter Review of Monetary Policy 2012-13, *“implementation of an electronic GIRO payment system in India, viz. a payment instruction from one bank to another bank account which is initiated by the payer and not the payee, has been identified as one of the key tasks in Payment Systems in India: Vision 2012-15. Accordingly, it is proposed to set up a Committee (Chairman: Shri G. Padmanabhan) to finalise the modalities of GIRO payment – both electronic and cheque based”* (Para 121)

1.4 Accordingly, a Committee, christened as “Committee to study the feasibility of implementation of GIRO based payment systems” was constituted with Shri G. Padmanabhan as Chairman. The composition of the Committee is placed in Annex I. The terms of reference of the Committee are as follows:

- a) Finalise the contours of the GIRO product (electronic and cheque) for the country
- b) Design the procedural and operational guidelines for the GIRO payment system
- c) Draw up a roadmap for implementation of GIRO in India
- d) Lay down the transitional path for switchover from cheque to electronic GIRO over a period of time

1.5 Understanding GIRO

In earlier days, a payment was made by sending a cheque to the payee and payee deposited the cheque in his/her Bank for credit to his/her account. Later on, there came a facility by which the payer himself could deposit the cheque in his/her bank for credit to payee’s account. These were termed as “payer” initiated payment and were known as GIRO. Hence, a GIRO transfer in its original form was a payment instruction from one bank account to another bank account which was initiated by the payer, not the payee. In subsequent evolution, GIRO came to include acceptance of third party payments at banks, debit authorisation of recurring payments and also clearing and settlement payment networks in different countries.

1.5.1 Traditional Payment:

In any cheque payment transaction between the payer and the payee the latter receives the cheque from the payer and at its convenience deposits it in the bank where he/she maintains an account.

Traditional payments have the following characteristics:

- The payment transaction is initiated by the payee
- The transaction involves only two banks viz. the payer bank and the payee bank.
- It is a debit pull transaction

1.5.2 GIRO Payment:

GIRO payments have the following characteristics:

- The payment transaction is initiated by the payer
- The transaction may involve the presence of three banks (collecting bank, payer bank and the payee bank)
- It is a credit push transaction

1.5.3 A GIRO system could be either paper-based or electronic. Examples of an electronic GIRO are the National Electronic Funds Transfer (NEFT) system operated by the RBI and the Automatic Clearing House (ACH) in the USA. However, these systems do not directly facilitate third party fund transfers. The Electronic Clearing Service (ECS-debit) operated by the RBI does provide for payments initiated by a third party based on an authorization/mandate given by the payer. Examples of Paper-based GIRO systems are the Boleto Bancario in Brazil and the Bank GIRO Credits in the United Kingdom. These systems permit third party payments and settlement at banks.

1.6 Given that in India a wide variety of payment instruments and channels are already available, which would form an integral part of any GIRO model , it is necessary to broaden the scope of GIRO for India. Accordingly, for the purpose of this report, a GIRO system would include any payment transaction initiated by a payer with debit card, credit card, pre-paid payment instrument, cheque or even cash resulting in funds being transferred to a bank account of the beneficiary.

Approach of the Committee

1.7 While the terms of reference of the Committee referred to the implementation of an electronic and cheque based GIRO payment system in India, the Committee was of the considered view that before exploring the need and feasibility of introducing a new GIRO payment system in India, it was desirable to assess the systems presently in place in the

country and identify the gaps in the system taking into account all payment channels and all varieties of payment instruments, including cash. It was also important that any new system does not attempt at duplicating or supplanting ones already existing in the country; rather it should leverage to the extent possible, the existing and in-the-pipeline payment infrastructure.

1.8 The Committee was conscious of RBI's vision to move towards a less cash society. However, given the fact that over seventy percent of payment transactions in the country were conducted in cash and the existence of a large non-banked populace, which relies on cash for their payment transactions, including bill payment transactions, it is considered necessary to provide cash as payment option for any pan-India payer initiated payment system. At the same time, any new payment system introduced in the country, should further aid and support in financial inclusion.

1.9 The Committee noted that GIRO payment systems have been functioning in different parts of the globe and decided to study the models in a few countries, understand their experiences to help in facilitating the development of a GIRO model appropriate to our needs.

1.10 Given the fact that any GIRO payment system has necessarily to include bill payments, the Committee decided to invite a few major aggregators, national level BCs, who are a vital part of the bill payment market infrastructure in the country today, to make presentations on the existing bill payment mechanisms and offer their views and suggestions.

1.11 The Committee also decided to meet a few large Billers to understand the payment behavior of their subscribers/clients, the likely benefits from any proposed national bill payment system as envisaged in RBI's Payment System Vision 2012-15 and the issues and challenges associated with the design and implementation of a standardized billing system.

1.12 In order to accelerate the work of the Committee, two sub-groups were formed to address specific tasks. Sub-Group I interacted with various stake holders, studied the GIRO systems prevalent in a few countries and finalized the contours of the GIRO product, for electronic, cheque and cash. Sub-Group II prepared the operational and procedural guidelines. Both the Sub groups met on 5 occasions.

1.13 The Committee also held four meetings in Mumbai between December 2012, and March, 2013.

Design of the Report

1.14 This Report is divided in 5 chapters including this introductory chapter. Chapter II briefly reviews the existing payment infrastructure in the country, the efficacy of the existing systems to meet the demands both in terms of reach and availability of adequate variety of payment instruments and channels. It specially focuses on the existing bill payment systems and explores the challenges in moving towards a common national bill payment system which would provide a cost-effective option of bill collection to Billers, a single window to subscribers for payment of bills for utility services, payments for school/university fees etc., credit card payments and even for fund transfers. Chapter III examines the GIRO systems prevalent in a few countries and their relevance in the Indian context. Chapter IV deals with the GIRO models which may be considered suitable for India. Chapter V sets out the recommendations of the Committee. Suggested and operational procedural guidelines are given in Annex-II

Acknowledgements

1.15 The committee is grateful to the aggregators, billers, service providers for their valuable inputs and constructive suggestions. The committee had co-opted Mr K Sivaraman, General Manager (Retd.), Reserve Bank of India into the committee. The committee wishes to place on record its appreciation of his valuable contributions. The committee also received unstinted support from Ms Radha Somakumar, Reserve Bank of India, Mr Praveen Singh, State Bank of India and Mr Dilip Asbe, NPCI in coordinating the discussions of the subgroup and in drafting of this report. Their support is deeply appreciated. The committee also thanks officials of the Department of Payment and Settlement Systems, Reserve Bank of India who participated in the discussions of the committee.

Chapter II

Overview of the Payment Systems in India

2.1 The RBI is mandated under the Payment and Settlement Systems Act, 2007, to regulate and supervise the payment and settlement systems in the country. The Act also provides that no person other than the RBI can commence or operate a payment system in India unless authorized by RBI. As the country's central bank, RBI has also a developmental role in the area of payment systems. Towards this end, the RBI has been taking appropriate initiatives and its short and medium term objectives are clearly reflected in its Vision Statement for payment systems (2012-2015)

2.2 In the recent past, the RBI, the Government of India, banks and Payment Networks have initiated significant measures aimed at encouraging electronic payments by securing the payment systems across channels, and importantly, to widen the geographical reach and accessibility of the payment systems. These have enabled easier and greater access to payment systems beyond the normal banking channels' reach. The Business Correspondent model for banks, thrust by banks on the expansion of their ATM network and promotion of alternate channels permitting non-banks to set up and operate white label ATMs, permitting non-banks to undertake domestic money transfer activity, implementation of the Immediate Payment Service (IMPS) are some of the initiatives in this direction.

2.3 Today, the payment system in the country offers a variety of payment instruments to the public viz. cheques, credit cards, debit cards, pre-paid payment instruments, including mobile wallets, issued both by banks and authorized non-bank entities etc. The payment delivery channels available to customers/consumers include the traditional brick and mortar bank branches, business correspondents of banks, ATMs, mobile banking, internet banking and agents of various Billers/aggregators, who facilitate P2B payments. While the aggregators play an important role in the collection of payments and reconciliation on behalf of large Billers, inter-bank settlement of payment transactions are enabled by various authorized entities. The RBI which operates the RTGS, the large value electronic payment platform, NEFT, the retail electronic payment system, the NECS(Credit) which provides corporates the facility to initiate bulk and repetitive payments like salaries, interest warrants, etc. and the ECS(Debit), a mandate-based facility enabling utility bill companies to collect payments of periodic and repetitive nature from their consumers in an efficient manner. The position of entities

authorized by the RBI to operate payment systems in the country as at March 2013 is set out in Table 1.

Table 1

Position of Entities Authorised to Operate Various Payment Systems		
Sl. No.	Broad Nature of Payment System	No. of Authorised Entities
1.	Central Counter Party	1 CCIL (Securities, Rupee Derivatives & Forex Settlements)
2.	Card Payment Networks	4
3.	Cross Border Money Transfer (In bound)	9
4.	Retail Payment Systems – ATM Networks	7 includes NPCI which is also authorized to operate the Immediate Payment Service (IMPS)
5.	Prepaid Payment Instruments	22

2.4 Cash and cheque continue to be the preferred mode of payment for a vast majority of the populace, despite the measures of the RBI to introduce alternate payment methods/instruments. The initiatives taken by the RBI have resulted in the share of cheques in all payments (retail and large value) has declined from 65 percent to 52 percent in volume and from 12 percent to 9 percent in value terms in the last three years.

2.5 As regards the use of cash for payment transactions, RBI's Vision Document for Payment Systems 2012-15 notes that *"..... cash remains the predominant payment mode in the country. Reflecting this tendency, the value of banknotes and coins in circulation as a percentage of GDP (12.04%) is very high in the country when compared to other emerging markets, like Brazil, Mexico and Russia. The cash to GDP ratio in India has remained range-bound over the last three years. Similarly, the number of non-cash transactions per citizen is very low in India (6 transactions per inhabitant) when compared to other emerging markets...."*

¹. While there is no conclusive data on the extent of use of cash for payment transactions vis-à-vis cheques and electronic, data shared by a few aggregators on collections made on behalf a few large Billers, cash receipts account for more than 70% of the total retail collections at the Billers' Own Collection Point (BOCP).

¹ Payment Systems in India – Vision 2012-15 (Para 1.3)

Gaps and Opportunities in the Present Payment System

2.6 Admittedly, a wide range of payment instruments and payment channels are currently available in the country. These systems are secure and robust and would seem to be adequate to meet the present needs. However, a close examination of the systems and practices reveal gaps in the area of P2P money transfers and operational and cost inefficiencies in the bill payment/collection processes across the country. Banks and Business Correspondents are enabled to handle P2P remittances both for customers and non-customers. Non-banking entities have also been permitted to undertake domestic money transfer by enabling fund transfer from one prepaid card to another prepaid card issued by the same entity since October, 2011. All fund transfers in India are carried out traditionally between two bank accounts. RBI in an attempt to give impetus to remittance facility for migrant labourers who do not have bank accounts has enabled Cash Pay-in facility (walk in customer transferring funds to the bank accounts of his family) up to Rs 5000/- per transaction and a monthly ceiling of Rs 25,000/-. Likewise the facility to transfer funds from a bank account to a beneficiary who does not have a bank account (Cash Pay-out) is enabled up to Rs 10,000 per transaction and a monthly ceiling of Rs. 25,000.

However, collection of third party cheques is not facilitated by banks and the payee of a cheque can deposit it only in the bank where he/she maintains account.

2.7 **Absence of Interoperability:** Bill collection/payment process in the country provides abundant scope for improvement. Billers generally have bilateral tie-ups with banks or aggregators for collection of payment of bills from their consumers. The agent outlets usually serve one or more Billers directly or through an aggregator. A consumer can only pay the bills, which are accepted by the agent. Even among the aggregators there is no or limited interoperability.

2.8 **High Cash Collection:** The Billers also have the BOCPs for collecting payments by cash/cheque. The Committee's interaction with a few aggregators and major Billers revealed that the cost of collection at the BOCPs is significantly higher than the cost of collection through an agency arrangement. As a high percentage of the bills are actually paid by consumers at the BOCPs, the total cost of collection for the billers is very high. The extrapolated data related to bill payments in the top 20 cities in the country and the pattern of bill collection related to power industry are set out in Table 2 and Table 3 respectively.

Table 2

Bill Payments Estimates				
Bill Pay Segment	Estimated No. of Subscribers (Million)	No. of payments / bills p.a. (Million)	Avg. Bill/ payment Size (Rs.)	Total Market Size (Rs Million)
Electricity	35	420	1500	630,000
Telephone (Landline)	20	240	1200	288,000
Mobile (Postpaid)	60	720	750	540,000
Insurance	250	500	3500	1,750,000
Others (e.g. piped gas, cable etc.)	15	180	750	135,000
Total	1180 *	30,860*		6,223,000**

* There are no formal studies/reports that are publicly available on the overall size of the Bill Payments market in India. We have, therefore, used certain parameters and extrapolations to arrive at an estimate of the number of bills paid in the top 20 cities. Include the figures pertaining to Mobile (prepaid) bills.

** This totals to about 30 billion payments/bills per annum with a total payments value of about Rs. 6,223 billion (or about USD 115-120 Billion)

Table 3

Bill Payment Estimates (Power Industry)						
Biller	Total Collections (Rs. Mn)		eCollections & Cheque (Rs. Mn)	Cash Collection (Rs. Mn)	% of Retail Collection in Cash	Cash Collection Centers (In Nos)
	Retail	Industrial				
Biller 1	25800	27000	37200	15600	60.47	55
Biller 2	25000	47000	56880	15120	60.48	24
Biller 3	23000	49000	54000	18000	78.26	60
Biller 4	39500	10500	18000	32000	81.01	42
Biller 5	35520	14400	32760	17160	48.31	39
Biller 6	4200	10800	11400	3600	85.71	250
Biller 7	4800	12000	14400	2400	50	250
Biller 8	3500	3100	3240	3360	96	248
Biller 9	16000	14000	18000	12000	75	500
Biller 10	14600	9400	9600	14400	98.63	250

The above data though only a rough estimate reveals the huge size of the bill payments market in the country. Further, the cash and cheques constitute a very sizeable portion of the retail collections.

2.9 Consumer preference for BOCP: The consumer's preference for the BOCP is apparently driven by the sense of comfort he or she derives from direct payment at the Biller's collection centre and consummation of the transaction evidenced by the instant printed receipt he or she receives for the payment. The lack of visibility and low levels of trust in the agents' networks also contributes to this behaviour.

2.10 Poor Accessibility: BOCPs are generally concentrated in urban centers. While a few Billers in the public sector have arrangements with the post offices for payment of bills by their consumers, bill payment outlets are not easily accessible to people in rural/remote areas.

2.11 Lack of coordinated initiative: The Billers are aware of the high cost of collection at the BOCPs. Some Billers offer cash incentives to consumers who pay their bills electronically. Though the Billers perceive the advantages of a single, interoperable, standardized country-wide billing system and some of them are aware of similar systems in operation in some countries, there has apparently not been any industry-driven initiative to evolve a common interoperable system, which would bring about convenience of payment to consumers and cost and operational efficiency to the Billers.

Opportunity for a Giro system in India for bill payments

2.12 Bill payments form a major component of all retail payment transactions. For the purpose of bill payments, bills could include not only the bills generated by the utility services providers but any payment on demand service like school/university fees, examination fees, Govt. payments, pre-paid payment instruments top-up, mobile phones recharge/top-up etc. Customer can make bill payments at BOCP, cheque drop boxes, few bank branches and agent outlets or electronic modes.

Persons with access to internet banking have the option to pay their bills electronically without a visit to the physical outlets of the Billers although they may have to make payment at different sites. However, a majority of the consumers either have no access to the internet or are still wary of using this option to pay their bills. The transaction volume in ECS (Debit) has been

growing at about 5 percent per year in the last couple of years and was 165 million in 2011-12². These volumes are still insignificant in comparison to the total billing volumes of the country. Hence the vast majority continues to depend on visits to different customer service outlets for payment of each bill which is neither efficient nor providing convenience to the customer.

2.13 There is, therefore, a need for an interoperable, integrated bill payment system in the country which will -

- a) offer consumers a single bill payment point, not far from their place of work or residence, which will enable payment of any bill at any place;
- b) allow consumers to make payment by cash, cheque, credit/debit cards, prepaid payment instruments at the bill payment points;
- c) include any bank branch, post offices, business correspondents, retail agents of aggregators, ATMs, etc.
- d) provide instant confirmation of payment made through SMS or otherwise
- e) facilitate payment of bills through internet banking, mobile banking and IVRS
- f) serve as an efficient, cost effective alternative to the existing systems and provide reconciliation services to incentivise Billers and aggregators to switch over to the new system, which will eventually set the billing standards in the country
- g) enhance consumer confidence and experience.
- h) reduce the expenditure incurred by billers on collection of bills at their own collection centres.

² Report on Trend and Progress of Banking in India 2011-12

Chapter III

Some GIRO Payment Systems across the globe

United Kingdom

3.1 Like the rest of the world, electronic funds transfers are increasingly used in the United Kingdom for initiating payment transactions. While CHAPS provides the platform for transferring large value automated electronic credits on real time basis, other systems like the FPS and BAC cater to credit transactions which are of small values.

3.2 Paper based GIRO payments, which have been in force for a few decades, continue to be facilitated by banks in the United Kingdom. In this arrangement, customers use a Bank GIRO Credit (BGC), a paper slip addressed to a specific bank branch instructing it to credit a specified sum to a named account at that branch, to make payments by cash or cheque into the account of the beneficiary. The BGC by itself is not a payment instrument and needs to be accompanied by cash or cheque. The payment process can be initiated by the payer at any bank branch and it is not necessary that either the customer or the beneficiary should have an account in the bank branch where the transaction is originated. BGCs are commonly found in the form of tear-off slips at the bottom of utility, telephone and other regular bills.

3.3 For quite sometime, BGCs were not standardized and banks accepted hand written BGCs, which had inherent deficiencies and were prone to errors. To address this problem, a standardized form of BGC was developed by the Cheque & Credit Clearing Company Ltd. (C&CCC). In the payment process associated with the BGCs, the BGCs pass in clearing through the C&CCC and it was mandated that these should comply with the design, layout and printing requirements as laid down in C&CCC Standard 3.2.

3.4 BGCs are also included as part of the cheque books issued to customers. Such BGCs contain account details of the customer and help in initiating P2P payment transactions by a payer for credit to the customer's account.

3.5 Though the paper-based GIRO system provides for acceptance of third party payment instructions by banks, it is a voluntary arrangement and it is not mandatory for a bank to accept BGCs (accompanied by cash/cheque) from customer of other banks.

3.6 Settlement of transactions in the GIRO System: A BGC is cleared and settled the same way as cheques over a three day period and they pass through the same processing equipment and the same exchange centers.

3.7 Trends in paper GIRO: Paper based credit transfers continue to show a decline. The total volume of interbank paper credits cleared in the United Kingdom declined from 108 million in 2006 to 61.7 million in 2010. Similarly, the total value of these transactions fell from GBP 60 billion in 2006 to GBP 32.3 billion in 2010. Paper-based credits are accompanied by cheques and/or cash and are often used for making payments to large organisations such as utility or mail order companies. Payments to individuals rarely pass through the clearings as they are usually paid into the beneficiary's own bank.³

Germany

3.8 In Germany, GIRO refers to the provision of cashless payment and clearing operations.⁴ It is considered as a banking activity requiring a licence from the German Federal Financial Supervisory Authority except in the case of payment transactions conducted under special laws as is the case of the Deutsche Bundesbank.

3.9 The GIRO Networks in Germany for retail payments (cheques, credit transfers and direct debits) include Central Cooperative Banks whose members are cooperative banks, Central Savings Bank whose members are Savings Banks, commercial Banks whose members are their own branches and other partner banks and GIRO Network of the Bundesbank with banks as participants.

3.10 Bilateral interbank clearing arrangements exist between the commercial banks, central cooperative banks and Central Savings Bank in the retail payments.

3.11 Inter-bank settlements are effected in the RPS of the Bundesbank (there are 251 active participants in the RPS) or through bilateral clearing. The system is highly heterogeneous with over two-thirds of the banks reportedly having bilateral arrangements.

³ CPSS Red Book – 2012 Payment, clearing and settlement systems in the United Kingdom

⁴ German Banking Act (KWG) of 1961

3.12 With about 0.4% in terms of volume and 0.6% in terms of value, cheque constitutes a negligible portion of the use of retail payment instruments. Electronic credit transfers represent over 83% of the value of retail payment instruments.

3.13 There is no nationwide ACH that covers the entire payments market in Germany. However, the Central Bank reportedly offers its own ACH services to banks. It also provides paperless processing of credit transfers, direct debits and cheque collection items through batch-oriented clearing

Singapore

3.14 Interbank GIRO System (IBG) in Singapore is an offline interbank payment system which caters mainly to low-value bulk payments. It is a paperless system which permits customers of participating banks to transfer funds to/from the accounts of customers of any other participating bank. Singapore Automated Clearing House (SACH) operates the IBG. Net settlement amounts are sent by the SACH to MEPS (MAS Electronic Payment System) for settlement at the end of the day. MEPS is operated by the Monetary Authority of Singapore.

3.15 The majority of non-cash retail payments utilises IBG debit and credit transfers as well as payment cards (stored value, debit and credit cards) and cheques. Bank customers can also use their debit cards to make third-party account funds transfers and to pay bills via automated teller machines (ATMs) and self-service kiosks.⁵

3.16 IBG is akin to the Electronic Clearing Service, both NECS and RECS, operated in India by the RBI.

Brazil

3.17 One of the most innovative and popular payment method introduced in Brazil over two decades back is the Boleto Bancario, also referred to simply as Boleto.⁶ The Boleto is developed by the banks in Brazil in order to establish a universal exchange system which allows customers to pay bills at any Brazilian bank. Boleto is regulated by the Brazilian Federation of Banks (FEBRABAN).

⁵ CPSS - Red Book - 2011

⁶ Boleto in Portuguese translates to Bank Payment Slip

3.18 Boleto is essentially a Bar Coded Paper Voucher that providers of goods and services (Billers) deliver to consumers to facilitate the payment of bills. Prior to issue of Boleto, the Billers have to enter into a contract with their bank to obtain a Merchant ID and get authorization to issue the Boleto. Consumers can also generate a boleto online. The format of the Boleto was standardized more than two decades ago and contains all necessary information to process the credit transaction.

3.19 The main participants in the Boleto payment method are:

- i. **Issuer Bank:** The financial institution responsible for contracting with the Biller and the issue of Boletos
- ii. **Biller:** The Merchant who generates and delivers the Boletos to the customer to facilitate payment and receives the amount collected (e.g. insurance, Essential bills, Utility bills, etc.)
- iii. **Customer:** Person who pays the Boleto
- iv. **Collectors:** Bank branches, ATMs, Post Offices, Retail Agents etc. where the Boleto is paid
- v. **Clearing House:** Two interbank clearing houses, the *Sistema de Transferência de Reservas (STR)* for transfers greater than R\$5,000 or *Câmara Interbancária de Pagamentos (CIP)* for transfers less than R\$5,000.

3.20 In the Boleto Payment method, a customer orders goods or services from a Biller, who sends online or through post, a prefilled Boleto which contains the payment details in a standardized bar code. The customer presents a physical copy of the Boleto at a collecting agent and makes payment in cash or by card. The details on the Boleto are captured by the collecting agent with the aid of a bar code reader. Clearing House completes the clearing and settlement of the payment and the Issuing Bank credits the Biller's account and the Biller fulfills the order.

Over time, the banks signed up other retail channels allowing for payments to be made at any authorized location including bank branches, post-offices, ATMS, lottery stores, etc. Forms of payment include: cash, cards and cheques. Today, the Boleto system processes 40% of the Brazilian bill payment market.

Saudi Arabia

3.21 Till the early 1990s, over 60 % of bills were being settled in cash, mainly at banks. This arrangement suffered from operational inefficiencies affecting all stake holders viz. the banks, the Billers and the consumers. To address the problems, large Billers made arrangements to improve the bill collection system. However, these were bilateral agreements between the Billers and the banks, and each bank had to set up separate links with each Biller. The arrangement was complex and had significant drawbacks. In the year 2004, the Saudi Arabian Monetary Authority (SAMA) sought to integrate these networks by setting up a centralized bill payment system SADAD, which provided a single platform linking different Billers and banks.⁷

3.22 SADAD has significantly reduced the time spent by customers for paying bills. It has reduced dependence on physical channels by facilitating online payments. At the same time, it allows customers to use certain channels like ATMs, Phone banking and Point of Sale Outlets (of any bank).

3.23 SADAD has been widely embraced by banks and Billers and as of 2010, it had a market share of over 91% of all the invoices generated in the kingdom. During the period 2003 – 2010, the use of bank branches for bill payments declined significantly from 73% to 6%.

3.24 In the SADAD system, the Billers send summary of bill information to SADAD at pre-determined schedules and SADAD uploads the same into its database after due validation and notifies Billers of any discrepancies. A customer requests bill information through Bank channel and SADAD retrieves the requested information and forwards the same to the customer. The Customer selects the bill(s) to be paid, the payment instruction is carried out by the bank by debiting the customer's account under confirmation to the customer. SADAD updates its database based on the bank's confirmation and notifies the relevant Biller accordingly.⁸

3.25 At the end of the day, SADAD initiates the settlement instructions through the Saudi Arabian Interbank Express (SARIE) Billers reconciliation reports from SADAD on a daily basis showing details of all transactions processed by SADAD.

⁷ CPSS – Innovations in retail payments – May 2012

⁸ www.sadad.com

Chapter IV

A GIRO Model for India

4.1 The Committee discussed at length different GIRO payment models prevalent in the world and their relevance and adaptability in the Indian context. The Committee acknowledged the suitability of these models in the respective jurisdictions. However, it was felt that keeping in view the need for a single, interoperable bill payment system as mentioned in para 2.13, the “Boleto Bancario” model in Brazil and the SADAD model in Saudi Arabia have features that are relevant to India, as they both enable acceptance of bill payments at multiple service points viz. bank branches, ATMs, retail outlets etc.

4.2 While the “Boleto Bancario” model is primarily a paper-based model involving printing of the billing information in a standardized bar code form which needs to be presented at the time of payment, the SADAD is mainly electronic and where the information on the bill is pulled from the database of SADAD. Both the models provided an interoperable platform facilitating payment of bills of all the Billers who subscribe to the systems. Both have succeeded in streamlining the bill payment processes in their respective countries.

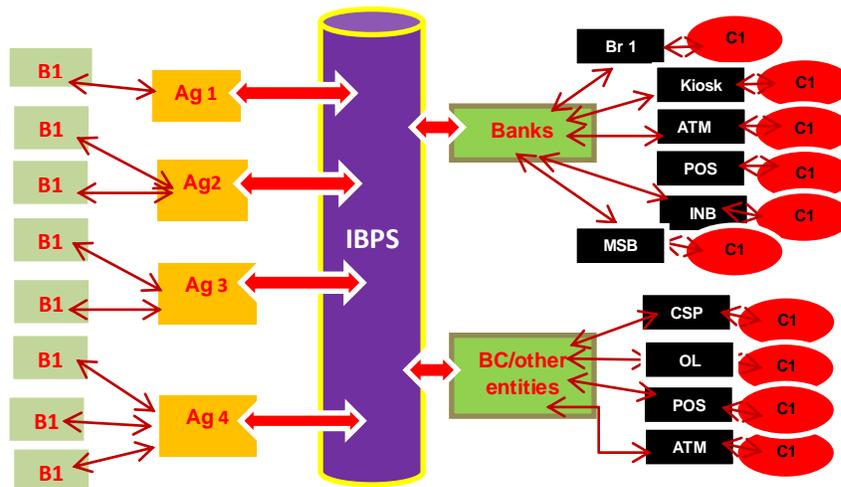
4.3 **Broad Guiding Principles underlying the proposed GIRO model:** The Committee was guided by the following principles in designing the bill payment model for the country:

- 4.3.1 The system shall be aimed at larger public good.
- 4.3.2 It shall align with the objectives of the Reserve Bank of India and the Government of India to facilitate progress towards a less cash society
- 4.3.3 A major objective would be to migrate payments to electronic channels
- 4.3.4 It shall leverage on the existing payment infrastructure to the extent possible.
- 4.3.5 It shall take into account the ground realities obtaining in the country and have a clear migration path to the final desirable state.
- 4.3.6 It shall retain and encourage competition among the participants providing services.
- 4.3.7 It shall generate efficiency and ensure against monopolistic situations among the participants.
- 4.3.8 It shall provide commercial value to all the stakeholders.

4.4 After due deliberations, the Committee concluded that the GIRO model schematically represented hereunder (Chart I) would adequately meet the gaps and inefficiencies observed in the existing payment systems in India. The proposed system is expected to effectively meet not only usual bill payment needs but also have the flexibility to enable one-off payments and person-to-person fund transfers in the future. The Committee further felt that the new system,

which is largely aimed at bill payments in the country, needs to be appropriately branded to enable identification and acceptance by the users and could be christened as the “Indian Bill Payments System (IBPS)”.

The IBPS bill payment network (Chart 1)



B- Billers/ Businesses; Ag- Aggregator/ Intermediary; IBPS- Indian Bill Payment System; CSP- Customer Service Point, Br- Bank Branch, Kiosk- Self Serving Kiosk, ATM- Automated Teller Machine, etc., OL- Outlet; PoS- Point of Sales Machine, C- Customer, INB – Internet Banking, MBS – Mobile Banking Service

4.5 Participants in the IBPS

4.5.1 Customers/consumers: A person who is required to make payment to a corporate/service provider for the services availed. He carries the bill/details of the bill to the IBPS Bill Payment Collection Point (IBPS Point) for payment.

4.5.2 Billers: The Billers are the corporate/service providers who have provided service to a customer and have generated a bill demanding payment therefor. The bill will have relevant information viz. name of the billing entity, customer/consumer identifier, bill number, amount and due date, The Billers participate in the IBPS bill payment network.

4.5.3 Aggregators/Intermediaries: Aggregators/Intermediaries provide, inter-alia, transaction processing services to the Billers. Billers connect to the IBPS through the Billing aggregators, who may become service providers to the Billers to facilitate their participation in the IBPS network, help

in reconciliation process and receive the funds collected through the IBPS and transmit the same to the Billers' accounts in accordance with the extant directives of RBI.

4.5.4 IBPS Points: These are the points of presence where a customer / consumer makes payment of a bill. The IBPS points could be Customer Service Point outlets (BC Agent/sub Agent or a Card Accepting Merchant Establishment/other entities) which have tied up for IBPS Bill collection, ATMs and bank branches that are enabled for IBPS Bill collection. The IBPS points may also be operated by a non-banking entity. These entities are required to identify a Sponsor Bank for the purpose of fund settlement and notify the IBPS accordingly. The IBPS points will be appropriately equipped to accept the IBPS based payment and carry the service mark of IBPS.

4.5.5 IBPS: The IBPS is the central payment system for management of the Bill payments. The IBPS receives inputs on the bill and payment details at the IBPS point. After payment is made, it provides payment confirmation to the customer/consumer. In course of time IBPS may retrieve from billers the bill details and route these to the customers/consumers at the IBPS point. The IBPS connects to the billers through the aggregators and update the information so that the aggregator/Biller is fully updated about the transaction. It connects to the IBPS points through a bank/other entities. It provides payment and settlement services to the participants.

4.6 Objectives: The Objectives of IBPS shall be as under:

- a. It shall create, maintain and operate the IBPS infrastructure and shall ensure robust integration, resilience and operation.
- b. It shall effectively handle the bill/business payments with high level of efficiency, traceability and professionalism and deliver high quality services in a cost effective manner.
- c. It shall continuously improve, innovate and expand IBPS by providing new value added payment services.
- d. It shall facilitate provision of value added and innovated services by intermediaries to the customer/consumer.
- e. It shall leverage the best possible use of the technological developments to bring value to the eco-system.
- f. It shall develop a road map for IBPS that lowers entry barriers and promotes optimal use by the individual, business and governmental sectors.

- g. It shall provide pro-active, careful and attentive risk management to ensure that all risks are clearly identified and mitigations are put in place with the purpose of ensuring appropriate control of all risks.

4.7 Scope of the services at IBPS points:

It is envisaged that the proposed system would enable IBPS points to accept payments from public on demand raised by various entities which are linked to IBPS system. It is expected that the IBPS Points would provide payment related service to the wide range of industries engaged in providing services viz. Educational, Financial and Insurance, Government, Telecommunications and Utilities, Transportation , etc. The services of IBPS points could be used for payment/ collection of fees, insurance premiums, EMLs, municipal taxes, Govt. Challans, business invoices deposits, bill, mobile top-ups, Bus/ Train ticketing, etc.

4.8 Benefits:

The benefits of the proposed model include:

4.8.1 Convenience:

- a) The IBPS shall provide convenience to customers, Billers, other entities, Banks, etc.
- b) It shall provide a customer/consumer the facility to initiate any payment transaction (payments for bills, school/college fee, insurance payment, government payments etc.) from any outlet participating in the IBPS.
- c) It shall bring multiple Points of Presence (IBPS points) which would accept the bill payments from consumers.

4.8.2 Operational Efficiency:

- a) The proposed system shall bring in interoperability among the various players which are right now providing the services on stand-alone basis.
- b) The Billers/businesses need not link separately with multiple aggregators/banks and may have a single interface.

- c) It would enable each bank to offer payment services for every Biller/businesses without directly integrating with it.
- d) It would move the billing industry and other businesses towards standardization of billing/payment demand systems.
- e) The proposed system would ride on existing infrastructure (cheque clearing, card payment networks, etc.) to the extent possible so as to bring efficiency and quick implementation.
- f) The system will enable broad-basing of aggregating business which may contribute to cost and operational efficiency of the bill payment system.

4.8.3 Electronification:

- a) It would give boost to electronification of payments and card acceptance for such payment is likely to grow up.
- b) It would prompt the billers/ businesses to electronify their billing systems.
- c) It would act as a catalyst for e-commerce/ businesses in India and also support e-governance initiatives of Governments.

4.8.4 Cost and Revenue benefits :

- a) The proposed system would help the billers in reducing the cost of collection as fewer resources would be required to build, operate and support the collection process.
- b) It would lower capital expenditure for the Billers/businesses due to reduced investments in infrastructure and software development.
- c) It shall provide revenue stream for multiple stake holders which are engaged in providing these services.

4.8.5 Authenticity:

- a) Being a system authorised by the Reserve Bank of India under the Payment and Settlement Systems Act, and with the help of a unique brand, logo and generation of verifiable unique reference number the proposed system would generate trust among the consumers for payments at the IBPS points.

- b) The IBPS will have a guaranteed settlement arrangement which would enhance the confidence of the billers and aggregators to enrol into the system.

Chapter V

Recommendations

5.1 The Committee recognises the need for a GIRO model in India to start with mainly to streamline the bill payment process in the country. Accordingly, the Committee proposes the IBPS Model depicted in Chapter IV for adoption. In the context of implementation of the suggested IBPS model, the Committee makes further recommendations as under:

5.1.1 The IBPS Chain:

- a) After careful deliberations, the Committee proposed that the IBPS model need not serve as an aggregator for billers, at least in the initial stages due to the following reasons:
 - i) It would be desirable that the IBPS has and retains a lean structure for the sake of efficiency.
 - ii) Billers across the country are at different levels in terms of technology and it would be difficult for the IBPS to bring them directly on board, particularly as it would involve considerable on-ground initiatives across the country. On the other hand, the aggregators with their expertise, experience and reach would be better positioned to provide the appropriate support and guidance to the billers and value added services including customised MIS.
 - iii) It would be easier for the IBPS to deal with a few aggregators rather than directly handle a very large number of billers spread across the country.
 - iv) The IBPS is envisaged as a system which will facilitate bill and other payments at any IBPS point in the country. It is apprehended that permitting billers to directly join the IBPS may lead to a monopolistic situation with the IBPS playing the role of a super aggregator.
 - v) Presently, aggregators add a lot of value to bill payment chain, offering collection and reconciliation services and customised MIS to billers and providing convenience to customers. The proposed IBPS, which enables interoperability, may witness emergence of more aggregators in the ecosystem as the entry barriers will be lowered.

However, the need for billers to directly join the IBPS may be considered by the organization managing the IBPS after framing necessary access criteria.

- b) It is recommended that Banks/ BCs/ Other entities that are willing to provide collection services for bill payments would connect to IBPS. The criteria for admitting BCs and other entities to participate in the IBPS may be decided by the IBPS.
- c) CSPs/ Branches/ Outlets would provide the standard customer interfaces as designed by IBPS which could be hosted through a computing device. Customers approaching these outlets for payments would provide the required details for facilitating payment and in due course of time for retrieval of bill details.
- d) Service of IBPS would also be leveraged by other payment channels like, Mobile Banking/Internet Banking/IVRS, ATM, etc.

5.1.2 Bill Data Codification:

From the experiences of other countries, it is observed that Bar Coding of bills/invoices etc. leads to standardisation and automated processing. However, at present, in India the Billers are at different stages of adoption of Bar/other codes in their billing system and also the code acceptance infrastructure is not widely present. Some of the Billers may also adopt different Codes (QR etc.). Many Billers require only limited details for effecting the transactions and may not feel the need for initiating bar coded bills. It is also felt that Bar Coding will push paper billing in India and attempts being made in the direction of electronic presentment of bills may get impeded. As an additional option, proposed system shall have the features to handle non Bar Coded Payments also. The committee felt that ultimately bill data would be standardized across all billers in the medium to long term and a unique reference number for every bill could be assigned by the billers/ businesses by using the algorithm published by IBPS. The work related to devising the algorithm could be done by an expert agency like IDBRT.

5.1.3 Bill Presentation:

- a) The Committee observed that in the “Boleto Bancario” system, the bill details are captured from the barcode printed on the Boleto slips and transmitted to the Biller’s database. This arrangement did not have any possibility for data errors and could be operated even in an off-line mode. However, the arrangement pre-supposes a standardized billing arrangement across Billers and achieving such a standardization would be a humongous task and may deter Billers if the cost of switchover to a new system is going to be high. Besides, it would be a challenge to equip all the CSPs, bank branches and the ATMs with barcode readers.

- b) It is, therefore, recommended that the IBPS system would support the prevalent mode of bill presentment which is largely paper based. However, the IBPS shall also encourage electronic presentment. The Billers would be encouraged to push the bills/notifications on mobiles/emails of the consumers. Mobile/e-mails will carry the uniform code generated by Billers as per IBPS approved algorithm. Consumer may also SMS this code to fetch bill details or the technology could be leveraged to read this code at the IBPS points. The Bill may either be identified for payment through Codes or some selected data inputs provided by the consumer. Mobile number/ Aadhaar based mapping for payers and Billers could also be undertaken while safeguarding the consumers’ privacy at the same time.

5.1.4 Payment Information flow:

- a) The Committee observed that in the SADAD model, the bill details are downloaded from the Billers periodically and stored in the SADAD database. A consumer could pull the bill details from the SADAD database at the time of paying a bill. The Committee deliberated whether a similar arrangement could be considered for India by facilitating a consumer to pull information of all his outstanding bills based on a single identifier like the mobile phone number or Aadhaar number.

- b) The committee felt that the challenges in this arrangement would include the need and capability of the IBPS to store huge amount of data and diversity in the nature of unique consumer ids assigned by the Billers. Further, IBPS may offer more real time solution and service delivery to the consumers and billers/business when it remain connected live to the aggregator systems/biller systems rather than attempt to host the entire data. Also, linking all the payment information to a single publicly known identifier viz. mobile number may lead to compromise of privacy.
- c) Further, in this approach, the complete bill payment transaction will get split into two transactions – first will be a pull transaction to fetch the bill payment records and the second will be a push transaction to complete the bill payment. This could lead to longer transaction time as well as higher drop/failure rate in the transactions.
- d) It is, recommended that the bill data may not be required to be downloaded in the IBPS data base and real time connectivity with the aggregators/billers (where the bill data is stored) will be provided by IBPS in course of time. The payment information related to bills, etc. shall flow online. It would help in minimising issues related to reconciliation and customer grievances. From day one however suitable validations would also be built in the system to meet specific requirement of Billers such as part payment, advance payment, payment after due date, etc. The Billers/businesses which may not be able to provide/support online flow of payment information may leverage the aggregators' capability in this regard.

5.1.5 Payment Instruments:

It is recommended that IBPS shall support all means of electronic payments, viz. Credit/Debit Card, Bank Account, Pre-paid instrument, etc. Cash and cheque would also be supported. However, keeping the view the RBI objective to move towards a less cash society and the high cost of cheque handling, the Committee recommends that the IBPS may use pricing as a tool to encourage or discourage various modes of payment.

5.1.6 Bill Payment:

- a) The Consumer visits the IBPS points and provides the bill information for making payments. He may also present the Bar Coded bills at the IBPS points for the payment which would be scanned for the Bar/ Smart Codes. The codes sent on mobile phones by the Billers/businesses requesting for payments may also be scanned and the relevant data captured.
- b) The Bar coded bills may not require any additional manual inputs at the IBPS points. However, for others, the respective Billers may require different set of data for validation/payment and IBPS would provide the appropriate front end applications for all the payment channels as well as for all modes of payments. The specific data as required by the Billers/ businesses and provided by the consumers would be keyed in at the acceptance points.
- c) The accepted mode of payment at the IBPS points would be Cash, Cheque, Credit/Debit Cards, mobile payments and other PPIs. Upon the payment, a receipt is generated by IBPS and handed over to the consumers. The payment receipt is stamped with IBPS logo and a unique reference number generated by the IBPS system. The payment confirmation may also to be sent through SMS/e-mail, if desired by the consumers. The receipt issued by IBPS would be an irrefutable proof of payment by the customer to the concerned biller. The payment made by cheques would be subject to realisation.

5.1.7 Settlement of fund:

- a) The committee was of the view that IBPS would handle fund settlement for the transactions passing through IBPS. The non bank entities operating IBPS points would identify a Sponsor Bank for the purpose of fund settlement and notify the IBPS about it. IBPS shall at pre-defined intervals would settle the funds among the Sponsor Banks and Billers'/aggregators' Banks.

- b) The clearing and settlement of payment instruments e.g. Cards, Cheques, etc. would ride on the existing payment systems/ networks up to the point of receipt of funds by the Sponsor Banks.

- c) Separate business rules for different payment instruments and channels would be devised.

5.1.8 Roles and Responsibilities:

It is recommended that IBPS shall act as a standard setting body that would set the standards for the participants. It may also adopt International Standards that may exist. It is also recommended that the standards created by IBPS shall be open and non-proprietary. It shall work as a Clearing and Settlement agency which would carry out the fund settlement work among the connected entities. It shall define the operational processes of the central infrastructure. It shall determine the rules, standards and procedures required to maintain the integrity of the clearings. It shall also determine the membership criteria and ensure that members comply with these rules, standards and procedures. It shall develop standardised Front End applications for initiating payments and shall manage the code assignment process for Billers/banks and also lay down guidelines and best practices.

5.1.9 Customer Support:

It is recommended that as a first point of contact, customer support would continue to be provided by the Bank Branches/CSPs/Entities receiving payments from consumers. The IBPS may enable online registration of complaints. But the customer grievances related to bill payment will have to be attended to by the Biller and IBPS/Aggregator would provide the necessary support to the Billers in this regard.

5.1.10 Engaging the stake holders:

It is recommended that the proposition of enabling bill payments at various locations through different payment instruments would require discussions with a larger set of Billers and aggregators before undertaking the journey of implementation. The proposed arrangement shall have their acceptance and support and to ensure this, they should be on-boarded during the implementation and further management of the proposed system.

5.1.11 Management of IBPS:

As evident from the data on bill payments, IBPS is expected to handle and process large volumes of transactions each day. Hence, it is important that the system maintains high standards in terms of processing efficiency, adopting risk mitigation measures etc. to enhance user experience and encourage billers to enroll to the system. Besides, the IBPS would involve high level of investment in technology and continued expenses towards maintenance and upgradation. For this purpose, it is necessary that the IBPS is managed and operated in a professional manner on commercial model. The Committee was, therefore, of the view that ideally a separate organization needs to be set up to operate and manage the IBPS and the operations of the organization should be run on commercial lines. The Committee also felt that the management of the organization should be in the capable hands of professionals with an advisory body/ steering committee with representations from billers, aggregators, banks, payment networks, customers and others. The new organization could be authorized by the RBI under the Payment and Settlement Systems Act, 2007, to operate the IBPS.

5.1.12 Operating Guidelines:

The indicative operating and procedural guidelines related to IBPS is placed in Annex-II. The IBPS may be guided by the same for framing its detailed business rules.

Annex 1

Names of the members of the Committee to study the feasibility of implementation of GIRO based payment system in India

S.No.	Name	
1	G. Padmanabhan , Executive Director, Reserve Bank of India	Chairman
2	R.K. Saraf, Deputy Managing Director, State Bank of India	Member (Chairman – Sub Group 1)
3.	A.P. Hota Chief Executive Officer, National Payments Corporation of India	Member (Chairman – Sub Group 2)
4	A.P. Singh Deputy Director General, Unique Identification Authority of India	Member
5	Bhavesh Jhaveri Country Head, HDFC Bank Ltd.	Member
6	Loknath Mishra Head of Commercial Banking, ICICI Bank Ltd.	Member
7	Lalit Sinha, General Manager, Union Bank of India	Member
8	Subhkanta Satpathy Chief Information Officer and Head I.T., Axis Bank Ltd.	Member
9	Sangram Singh Senior Vice President, Citi Bank N.A	Member
10	Ms Nirupama Soundararajan Additional Director, Federation of Indian Chambers for Commerce and Industry	Member
11	Dr. A.M. Pedgaonkar Chief Advisor, Banking Technology, Indian Banks Association	Member
12	T.V. Seshadri Country Head, MasterCard	Member
13	Uttam Nayak Country Head, VISA Worldwide Pvt Ltd.	Member
14	Naveen Surya Chairman, Digital Payments Committee Internet and Mobile Association of India	Member

15	G. Raghuraj Deputy General Manager, Institute for Research and Development in Banking Technology	Member
16	Vijay Chugh Chief General Manager, Department of Payment and Settlement Systems, Reserve Bank of India	Member Secretary

**INDIAN BILL PAY SYSTEM
(IBPS)**

**SUGGESTED
OPERATING AND PROCEDURAL
GUIDELINES**

1 Transaction Flows

1.1 Mandatory requirements of the Assisted Model

- a) The assisted model should have an attendant to initiate the transaction
- b) The attendant should be adequately trained.

Following are the indicative high level transaction flows

1.2 Assisted Model (Immediate Payment Options – Cash, Card, Electronic)

- a) Consumer visits the IBPS point with the details of the bill to be paid. The information needed may either be bar code printed on the bill or static information about the bill or consumer's credentials with the biller such as consumer ID/other details needed to pay the bill.
- b) Validation transaction (wherever required) is created and sent to Biller online, so that consumers details/other bill pay conditions are verified before initiating the payment transaction. Upon successful validation request payment transaction is initiated from IBPS point using cash/ card/electronic credentials. Wherever, the validation is not required by the biller, the payment transaction may be initiated on the basis of details provided by the consumer.
- c) Upon the successful payment authorization (only required for the card transaction/electronic credentials), the Bill Payment transaction is initiated and sent to the IBPS system and then to aggregator/biller. Biller takes the appropriate action on the Bill payment.
- d) The IBPS delivers the bill payment confirmation to the IBPS point. A receipt will be generated for the consumer by IBPS confirming the fulfilment of the transaction.
- e) Exception transaction flow is created if a negative response is generated from the biller or IBPS system for generating the reversal transaction.
- f) The Biller may send the confirmation SMS/e-mail in near real time basis to the consumer for confirmation of the Bill Payment.

1.3 Assisted Model (Delayed Payment Options – Cheque)

- a) Consumer visits the IBPS point with the details of the bill to be paid. The information needed may either be bar code printed on the bill or static information about the bill or consumer's credentials with the biller such as consumer ID/other details needed to pay the bill.
- b) Validation transaction (wherever required) is created and sent to Biller online, so that consumers details/other bill pay conditions are verified before initiating the payment transaction. Upon successful validation request payment transaction is initiated from IBPS point using cheque. Wherever, the validation is not required by the biller, the payment transaction may be initiated on the basis of details provided by the consumer.
- c) The consumer presents the cheque dawn on his bank in favour of the biller towards the payment of the bill. The IBPS point send the cheque to the sponsor bank which acts as the collecting bank. (The rights and title related issues regarding a sponsor bank collecting a third party cheque may require resolution)
- d) The Bill Payment transaction is initiated from the IBPS point and sent to the aggregator/biller and the response from the biller is delivered to the IBPS point and then to the consumer. In this case, Biller marks the payment mode as Cheque payment subject to realization.
- e) A receipt is generated for the consumer by the IBPS for the fulfilment of the transaction subject to cheque realisation
- f) The Sponsor Bank presents the cheque in clearing and collects the proceeds from the payer Bank.
- g) The settlement between the Sponsor Bank C and the Aggregator's/Biller's Bank B takes place through IBPS in usual course.(The possibility of credit being passed on to the Biller Bank by the payer Bank may also be explored)
- h) The Biller also may send the confirmation SMS/e-mail in near real time basis to the consumer for confirmation of the Bill Payment after money is received .
- i) Exception transaction flow is created if the cheque returns to collecting bank/sponsor bank.
- j) IBPs shall lay down the rules governing the acceptance of cheques at the IBPS points particularly in respect of delayed presentation of cheques, return of unpaid cheques, etc. and procedure for notification/return of cheques to the customers.

1.4 Bill Payment at Self Service Terminals

The proposed model involves the consumer making the payment by him / her.

- a) Consumer initiates the transaction for the bill pay either by means of bar code printed on the bill or static information about the bill or his credentials with the biller such as consumer ID/other details.
- b) Upon presenting the data by the consumer, a transaction is created to query the biller data for the business rule validation for a particular bill (optional and Bill presentment can be part of the system at a later point).
- c) Consumer decides appropriate payment mode i.e. card/electronic payment credentials for allowing them to debit his account real time basis.
- d) The Bill Payment transaction is created and sent to the aggregator/biller and the response from the biller is delivered to the acceptance point and then to the consumer.
- e) Upon the successful payment authorization, the Bill Payment transaction is initiated and sent to the IBPS system and then to aggregator/biller.
- f) The IBPS delivers the bill payment confirmation to the consumer. A receipt will be generated for the consumer by IBPS confirming the fulfilment of the transaction.
- g) Exception transaction flow is created if the negative response is generated from the biller or IBPS system for generating the reversal.
- h) The Biller also may send the confirmation SMS/e-mail in near real time basis to the consumer for confirmation of the Bill Payment.

2 Service Mark/Logo for IBPS Service

A common service mark/logo will be created for usage and identification of the Bill Pay transaction processing services. The service mark/logo can be utilized by the following ways:

Few Examples:



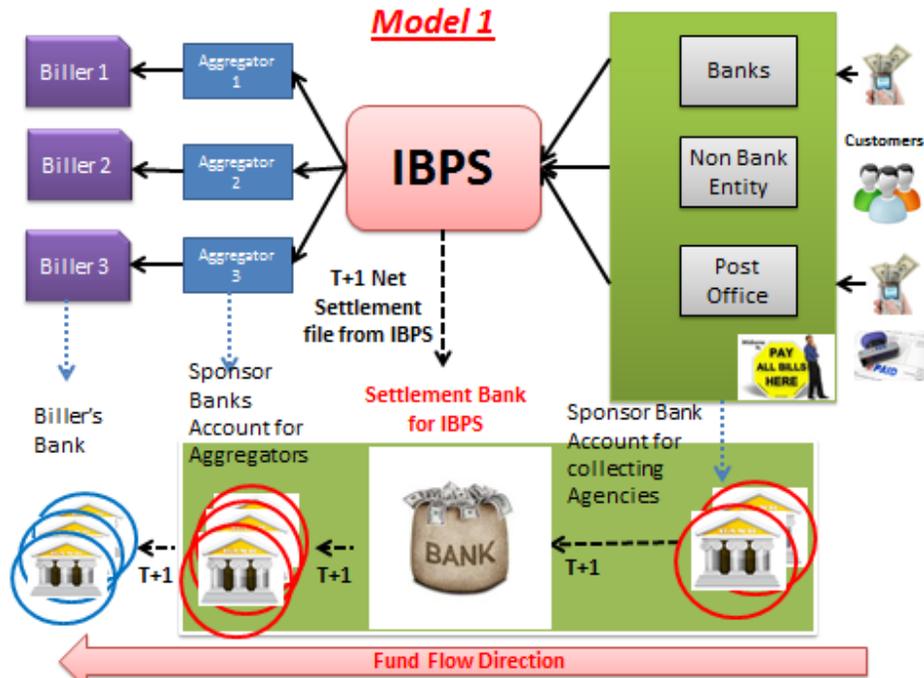
- a. All the IBPS points will display this service mark/logo prominently so that consumer can recognise this as a service point for the bill pay facility.
- b. All the billers joining the IBPS will also use this service mark/logo to be printed on the bills for awareness of the consumers.
- c. It will be responsibility of all the stake holders (Billers, Banks, IBPS, Entities offering these services, etc.) to advertise/market this service mark/logo and create the visibility for the purpose of consumer awareness.
- d. Rules would be framed by the governing body of the IBPS for the usage of this common service mark/logo by all ecosystem players.
- e. Upon termination from services the entity shall abstain from further using the service mark/logo with immediate effect and failure to comply with the same shall invite legal proceedings.

3 Clearing and Settlement

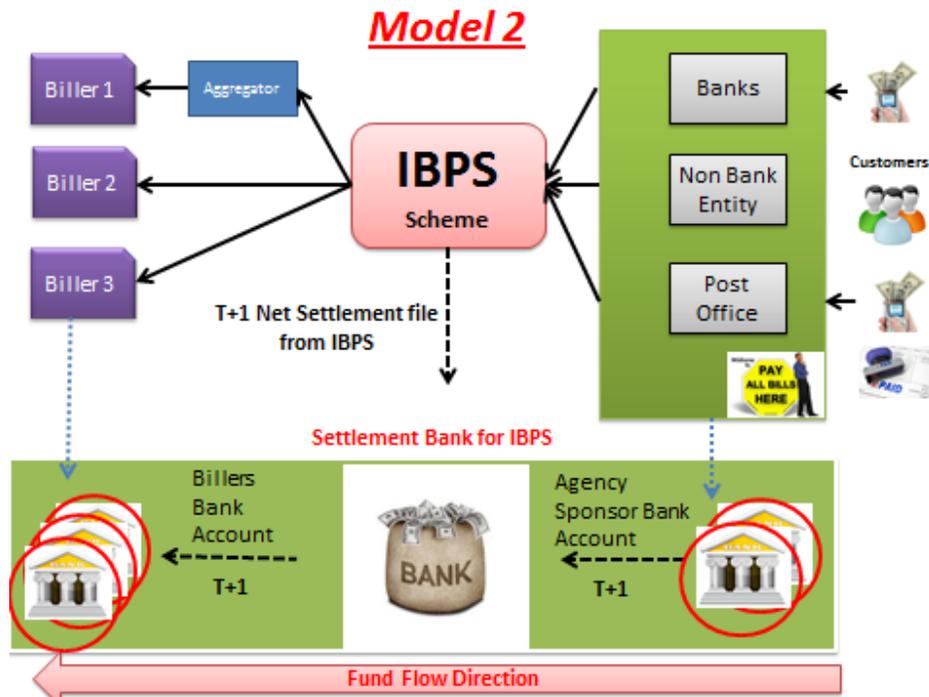
- 3.1 IBPS would handle fund settlement for the transactions passing through IBPS and among the entities connected to it.
- 3.2 IBPS will provide guaranteed settlement and towards this it may ask the settlement guarantee from the Sponsor Banks/ entities operating IBPS points.
- 3.3 The settlement period and frequency will be on T+1 (T = transaction date) basis on all the business days or as may be decided by the IBPS.
- 3.4 At the end of the business day or within timelines as stipulated by IBPS, the net receivable or payable in respect of each member entity will be generated and a Daily Settlement Report prepared and sent to all the member entities (banks and billers).
- 3.5 Settlement Finality - The settlement shall be final and irrevocable as defined in Section 23 of the Payment and Settlement Systems Act 2007 .

Indicative fund settlement flow

Option 1 (Existing Industry Practice)



Option 2 (In case funds are settled directly with the Biller's Bank)



4 Membership

4.1 Members of the IBPS shall be in any of these categories

- a) Banks
- b) Billers
- c) Intermediaries/ aggregators
- d) Collecting Agencies/ Entities operating IBPS points.

4.2 Each category of members need to be registered with the IBPS.

4.3 Each Non-Bank entity would have a Sponsor bank for the purpose of IBPS settlement.

4.4 IBPS will develop a standard Application Form for a bank/ non-Bank participants to join the IBPS as a Member

4.5 Eligibility criteria shall be developed for each category of members by organization managing IBPS.

4.6 For all the non-bank entities appropriate risk mitigation methods should be developed by IBPS.

4.7 Notifications

IBPS shall notify all the member entities regarding:

- a. Inclusion of a new member to the IBPS Network.
- b. Cessation of any member.
- c. Suspension/termination of any member.
- d. Amendments in the Common Operating Procedures.
- e. Any new enhancement in the software and hardware are informed to the IBPS Network.
- f. Changes in the periodic maintenance hours.
- g. Any other issues deemed important.

4.8 Termination/ Suspension

- a) A member may discontinue its membership from the IBPS by giving due notice as per the process decided by IBPS.
- b) The IBPS under certain circumstances (to be defined) may terminate/ suspend the IBPS membership

5 Roles and responsibilities

5.1 Consumer

- Consumer initiates the transaction at IBPS point for Bill Payment.
- Consumer should provide the correct bill details at the IBPS points.
- Consumer should ensure that there are sufficient funds in his account to be debited.
- Consumer shall be responsible for the actions arising out of dishonour of cheque.

5.2 Bank

Banks have different roles to play within the IBPS. An indicative list of rights and responsibilities is illustrated below:

Consumer's Bank:

- Bank will operate on transactions initiated by the consumer (other than by cheque) to debit their accounts on real time basis.

Sponsor Bank:

- The entities operating IBPS points would identify a Sponsor Bank for the purpose of fund settlement and notify the IBPS about it. IBPS shall at pre-defined intervals would settle the funds among the Sponsor Banks and Billers'/aggregators' Banks.
- The Sponsor Bank shall collect cheques received at IBPS points without delay.
- The Bank directly operating IBPS points may perform the function of Sponsor Bank of a Collection Agency for the purpose of fund settlement.
- The Sponsor Bank may be required to have an account with the settlement Bank of IBPS which shall be adequately funded.

Settlement Bank:

- The Settlement Bank of IBPS will maintain accounts of the bank of the participants and facilitate settlement as per the instruction from IBPS.

Biller/Aggregator Bank

- This Bank shall receive fund from the Settlement Bank towards the payments due to the billers.

5.3 Billers

- Billers will implement practical and reasonable service standards so as to encourage use of IBPS
- Billers will have a systematic procedure for dispute resolutions to ensure conflicts are resolved efficiently and amicably.
- Billers will connect to the aggregators and will change/upgrade their systems for supporting the standard interfaces for robust integration.
- Billers will put up the IBPS service mark on the bills during the course of the operationalization.
- Biller will endeavour to achieve bill data standardisation as prescribed by IBPS.
- Biller will endeavour to support and encourage electronic presentment of bills as well as acceptance of payments through electronic mode.
- Billers will abide to the common operating guidelines laid down by IBPS.
- Biller may communicate by means of instant SMS/e-mail confirmation of the bill payment to the consumer.
- Biller will provide to the consumer all the relevant information required for bill payment.

5.4 Intermediary/Aggregator

- Intermediary/aggregator would be connected to the billers.
- Intermediary/aggregator will ensure adherence to the uptime requirements of their systems as subscribed by the IBPS in their Procedural Guidelines.
- Intermediary/aggregator will change/upgrade their systems for supporting the standard interfaces for robust integration with IBPS.
- Intermediary/aggregator will abide to the common operating guidelines laid down by IBPS.
- Intermediary/aggregator shall facilitate the audit by IBPS at any given point of time.

5.5 Collection Agency

The agencies such as BC organizations and other entities which are operating IBPS points may assume the role in this category.

- The Collection Agency will create and operate the IBPS points.

- The Collection Agency would identify a Sponsor Bank for the purpose of fund settlement and notify the IBPS about it.
- The Collection Agency shall adhere to the operating guidelines of IBPS.

6 Agreements

The IBPs would involve agreement among various parties as under:

- a. IBPS and Collection Agency
- b. Collection agency, IBPS and Sponsor Banks
- c. IBPS and Intermediaries/aggregators

In the agreement IBPS shall also include service related parameters such as system availability uptime, need of back up/ DR systems, BCP other process certifications required.

7 Charges

IBPS may levy charges as decided by the management of IBPS

8 IBPSNet

There is a need of creating a secure network by the IBPS for connecting all the institutional participants (banks, billers and aggregators) in a secured manner. Existing physical networks created by various payment system operators may also be leveraged for the purpose.

9 Message Formats and Standard Creations

Bill Pay transactions routed through IBPS should comply with the message formats decided by the IBPS

The standard setting body must be led by IBPS and will have industry wide participation to create open standards. Adherence to the emerging international standards may be necessary.

10 Audit and Oversight

- 1 IBPS will have the powers to audit the IBPS system participants.

- 2 It is obligatory for all members to follow the IBPS Procedural Guidelines and any circulars, instructions, notifications etc. communicated in writing from time to time.

11 Dispute Resolution Mechanism

IBPS systems shall carry the unique reference numbers as required for the full lifecycle management of the transactions. This number should be printed in receipts and also should be verifiable on website or any other sources provided by IBPS.

IBPS will design and create an appropriate dispute management system as per the extant instructions for all the participants. Following facilities will be made available through dispute management systems implemented by IBPS:

- Debit or Credit Adjustment
- Chargeback
- Re-presentment
- Pre-arbitration
- Pre-arbitration accept / decline
- Arbitration
- Good-faith

Abbreviations

ACH	Automated Clearing House
ATM	Automated Teller Machine
BACS	Bankers Automated Clearing Services
BC	Business Correspondent of a bank
BGC	Bank Giro Credit
BOCP	Billers' Own Collection Point
C&CCC	Cheque & Credit Clearing Company Ltd., UK
CBLO	Collateralised Borrowing and Lending Obligation
CCIL	Clearing Corporation of India Limited
CHAPS	Clearing House Automated Payment System
CSP	Customer Service Point
ECS	Electronic Clearing Service
FEBRABAN	Brazilian Federation of Banks
FPS	Faster Payment System
IBG	Interbank Giro System , Singapore
IBPS	India Bill Payment System
IMPS	Immediate Payment Service (NPCI)
MAS	Monetary Authority of Singapore
MEPS	MAS Electronic Payment System
NECS	National Electronic Clearing Service
NEFT	National Electronic Fund Transfer System
NFS	National Financial Switch
NPCI	National Payments Corporation of India

P2B	Person-to-Business Payments
P2P	Person-to-Person Payments
QR Code	Quick Response Code
RBI	Reserve Bank of India
RECS	Regional Electronic Clearing Service
RPS	Retail Payment System
RTGS	Real Time Gross Settlement
SACH	Singapore Automated Clearing House
SAMA	Saudi Arabian Monetary Agency
SSK	Self Service Kiosks