Measurement problems in household international remittances

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Introduction

Although remittances have been a standard component of the balance of payments for many years, it has not been until very recently that attention has come to focus on the need for greater accuracy in their statistical measurement. For the most part this is simply a reflection of the practical fact that in an environment of limited compilation budgets, priority in the assignment of resources is determined by the relative importance of BOP flows.

In most industrialized economies, for example, the net flow of remittances is outward, but does not represent a significant fraction of total BOP flows nor of GDP. Obviously it does not make sense to allocate scarce resources for the measurement of a phenomenon which is of limited macroeconomic effect in the host country, and where improved accuracy would have only a marginal impact on the overall BOP accounts. In these countries the traditional approach to the measurement of remittances has been that of estimation on the basis of certain demographic and behavioral parameters pertaining to the immigrant population, although lately there has been increasing resort to ITRS data and direct reporting.

In many emerging economies, on the other hand, the net flow of remittances is inward and their macroeconomic impact is of substantial and growing importance (see Tables 1 & 2). Their effect must be considered by macroeconomic and monetary policy-makers, thereby giving rise to the need for more accurate measurement. This poses a methodological challenge to central bank compilers, given the absence of established “best practices” in remittances measurement.

This paper discusses some of the issues involved in improving the accuracy of the remittances statistics, in the face of a daunting array of obstacles comprising conceptual aspects, the complex structure of the remittances market and their channels of delivery, the nature of the different sources of data and, of course, the limited budget availability for the task.

It begins by describing the growing importance of remittance flows to emerging economies in the Latin American and Caribbean (LAC) region, and their macroeconomic implications. It proceeds to discuss conceptual ambiguities and ongoing efforts to clarify them with a new set of definitions of remittances in a BOP context. The structure of remittances markets in the region is analyzed in an effort to provide some indication of the appropriate compilation methodology to be employed, while a survey of different data sources and their availability is presented as another determining factor in the choice of measurement techniques.

The tentative conclusions of this work recommend that, in our region, compilation efforts should focus on direct reporting systems by the main intermediaries in the remittances market, to be complemented by additional information stemming from the use of household surveys. Discrepancies arising from data confrontation with estimates from other sources, where possible, should be regularly employed as a means for re-evaluating the methodology.

These issues have arisen in the context of ongoing work by CEMLA and others to develop a compilation guide on remittances for Latin American and Caribbean central banks, to be applied in a regional effort to improve information and measurement of remittance flows. The project is partially financed by the Multilateral Investment Fund (MIF) of the Inter-American Development Bank. A Working Group on Remittances (WGR) comprising 24 central banks from the LAC region is the implementing body, while technical guidance is provided by a Remittances International Steering Committee (RISC) composed of international stakeholder institutions and collaborating central banks. CEMLA provides the project Secretariat.

The growing importance of remittances

There appears to be a new element in modern migration that refers to the structure of the household. In traditional migratory patterns the family was eventually reunited in the host country, once the pioneer migrants had established certain stability of prospects. Remittances were a temporary flow of sustenance until the family regrouped geographically, at which point "remittance decay" set in.

Today, along with everything else, the household and the job market have gone global. Cross-border households are increasingly common, generating income where there is work to be found and spending it closer to home where the elderly and more dependent members remain. Many migrant workers do not intend to remain their entire lives in the host country, just their productive years. Remittances are merely a way of getting the money from where it is earned to where it is most needed. Contributing to this phenomenon are the vast improvements and declining costs in modern international travel, communications and financial transactions.

As a result, remittances tend to be more stable flows nowadays that do not drop off after a certain number of years. While there is a consensus that remittances are growing fast, with total international remittance flows estimated to surpass USD 200 billion for 2006, there is at the same time an underlying feeling that the statistical evidence is sketchy and that we are dealing more in the realm of orders of magnitude than accurate statistical measurement. There is also a presumption that the high growth rates we are witnessing in recent years may be overestimating the actual situation, since they are probably also reflecting improved measurement procedures. The following table provides estimates of remittances to the LAC region, showing an average annual cumulative growth rate of 19% over the period 2003-05:

Table 1

Remittance inflows to Latin America and the Caribbean

USD billions

Area	2005	2004	2003	a.a.c.r[1]
Mexico	20.0	16.6	13.3	23%
Central America, Dominican Rep. & Panama	11.7	10.2	8.8	15%
Andean Block (including Venezuela)	9.8	7.6	6.6	22%
Caribbean and English-speaking	3.2	2.9	2.7	9%
Mercosur	7.9	6.5	5.5	20%
Total for region	**52.6**	**43.8**	**36.9**	**19%**

[1] Average annual cumulative rate (of growth, i.e. the annual rate that applied during the period would produce the witnessed growth).

Source: MIF-IADB.

Regardless of the exactness of these figures, the fact remains that remittance flows now exceed the sum of Foreign Direct Investment (FDI) and Overseas Development Assistance (ODA) to the LAC region. In many countries they have displaced tourism and the main commodity exports as the largest credit item on the BOP current account, and in several of the smaller economies their equivalence in terms of GDP is in the double digits (see Table 2)[1] with the consequent impact on GNDI.

The economic importance of these flows, both at the micro and macro levels, must be taken into account by policy-makers in view of their positive development impact in various ways:

1) First and foremost, by permitting remittance recipients to accede to higher levels of consumption and improved living standards, including better health and education, these flows are contributing to the long-term development potential of the economy.

2) Secondly, and given the role played by the banking sector as either a direct or indirect intermediary in the remittance process, these flows represent an opportunity for broadening the financial inclusion of beneficiaries, providing access to bank credit for housing and microfinance to the lower-income population segments.

3) Last but not least, by strengthening the balance of payments and relaxing the traditional foreign exchange constraint faced by these economies, the a-cyclical nature of remittance flows improves creditworthiness and access to international capital markets, while reducing the cost of new debt.

Table 2

Current BOP transfers to LAC countries

1995 and 2004

BOP current transfer receipts			
USD millions	**1995**	**2004**	
			As % of GDP
Argentina	823	1,091	1%
Aruba	71	40	
Bahamas, The	25	265	5%
Barbados	57	127	5%
Belize	38	54	5%
Bolivia	248	488	6%
Brazil	3,861	3,582	1%
Chile	482	1,395	1%
Colombia	1,033	3,917	4%
Costa Rica	165	371	2%
Dominican Republic	1,008	2,672	14%
Ecuador	506	1,913	6%
El Salvador	1,393	2,634	17%
Guatemala	508	3,049	12%

[1] While the flows in Table 2 refer to total current transfer receipts, the "workers remittances" component accounts for, on average, 80% of the total.

Table 2 (cont)

Current BOP transfers to LAC countries

1995 and 2004

BOP current transfer receipts			
USD Millions	**1995**	**2004**	
			As % of GDP
Guyana	67	140	18%
Haiti	553	907	26%
Honduras	244	1,359	18%
Jamaica	670	1,892	22%
Mexico	3,995	17,124	3%
Netherlands Antilles	366	320	11%
Nicaragua	138	619	14%
Panama	184	323	2%
Paraguay	200	196	3%
Peru	837	1,467	2%
Suriname	13	76	7%
Trinidad and Tobago	34	101	1%
Uruguay	84	98	1%
Venezuela	413	180	0%
Anguilla	22	9	
Antigua and Barbuda	78	23	3%
Dominica	16	21	8%
Grenada	22	32	7%
Montserrat	14	28	
St. Kitts and Nevis	23	28	7%
St. Lucia	28	29	4%
St. Vincent & Grenadines	17	24	6%
Regional total	**18,236**	**46,594**	**3%**

Source: IMF BOP Statistical Yearbooks, as presented in Wilson, John "Manual on Best Practices for the Compilation of International Remittances" (draft), CEMLA, July 2006.

Central banks and the need for more accurate measurement of remittance flows

There are several good reasons why central banks should be directly concerned with the improved statistical measurement of remittances, but above all there is a practical aspect relating to a specific responsibility: central banks in our region are the primary compilers and main purveyors of economic and financial statistics to the government and the market. While the scope of this responsibility may vary from country to country, it encompasses at the very least, monetary, financial and balance of payments statistics, and in many cases extends to national accounts and price indices. From the operational viewpoint, however, there are primary central bank mandates that justify close involvement in the monitoring and measurement of remittances:

1) In the narrow terminology of payments systems analysis, what we commonly call remittances are in fact "small-value, cross-border, household-to-household transfers". As such they are of limited interest from a systemic viewpoint, in that their clearance and settlement should not normally pose a threat to the integrity of domestic payments systems, which is in many instances throughout the region a direct central bank responsibility under its mandate for financial stability.

2) It is their cross-border nature which makes them interesting to central banks, since that makes them fall squarely in the province of the international balance of payments. Remittances also occur within borders (for example, from the North to the South of Italy), but do not provoke very much interest in that context. In addition, the fact that as unilateral and unrequited transfers they are non-debt-creating flows adds to their fascination.

3) The balance of payments is very much central bank territory since it has impact on the exchange rate and the level of reserves, which are both primary preoccupations of the monetary authority. This in itself is a strong justification for greater central bank scrutiny of remittances as flows that are increasingly influential in the determination of both, as well as on the fiscal implications of monetary sterilization. As a growing component of the balance of payments, therefore, remittances warrant more focused attention and greater precision in their measurement.

4) As implied above, their impact goes beyond the narrow confines of the exchange market, and ventures into the mainstream of monetary and interest rate policy. For the many central banks in the region who have adopted inflation targeting as a monetary policy regime, inflation forecasting must take into account the pass-through to prices from movements in the exchange rate.

5) From a national accounts viewpoint, remittances increase the national disposable income of the receiving country over and above its gross domestic product. If remittance flows are underestimated, the estimation of such key variables as the national savings rate may be prone to systematic error. And since monetary policy must also take into account the deviation of actual from potential GDP, this is also an important consideration for inflation targeting regimes.

6) For central banks who still act as financial agent for the Treasury, the availability of foreign exchange for debt service should be of major interest (despite that today the dollar is at an anomalous discount rather than the traditional premium).

The case, then, for a better understanding and improved measurement of remittances is strong, although there are several important obstacles to be overcome in order for progress to be made. These can be of a conceptual, operational or co-operational nature, as illustrated in the following list:

- Lack of agreement on a precise definition of remittances
- Discrepancy of information from different sources
- Lack of knowledge of market structures and channels
- Lack of registration for market operators (informality)
- Lack of precision in measurement techniques

- Little use of household surveys
- Insufficient resources at central banks and other agencies
- Insufficient coordination at the national and international levels

The need for improved measurement of remittances was emphasized at the 2004 G-8 Summit at Sea Island, and with this objective in mind the G-7 Ministers of Finance called for the establishment of an international working group on improving data on remittances. This group met for the first time in January 2005 at the World Bank in Washington.[2]

It was agreed there that the conceptual aspects of the challenge, focusing on the need for new BOP definitions of remittances, should be coordinated by the Technical Sub-Group on the Movement of Natural Persons (TSG), as part of the UN Interagency Task Force of Statistics in International Trade in Services. The TSG has prepared new definitions and submitted them to the IMF BOPCOM, the Advisory Expert group on National Accounts and the Interagency Task Force for approval.[3]

It was also agreed that the operational issues relating to the compilation of remittance data would be referred to a "city group" of BOP compilers. Thus the Luxembourg Group met for the first time at Eurostat headquarters in June 2006, and is now in the process of preparing an annotated outline for a manual on compilation guidance.[4]

Conceptual and definitional aspects

Part of the problem of measurement lies in the contemporarily employed definitions contained in BPM5,[5] which tend to reflect the static post-war world of limited capital and labour mobility where cross-border financial transactions were subject to control and immigrant status was clear-cut. The situation today is very different, and from the recipient countries' perspective the need is to quantify these flows with greater precision and determine their macroeconomic impact on the home economy, rather than to inquire as to the specific source of the funds or the duration of residence in the host country of the remitter.

The current "narrow" BOP definition of remittances presents three major shortcomings: i) from a formal viewpoint, the accounting for different components has different implications for 1993 SNA in terms of GDI and GDNI; ii) from the perspective of coverage, the definition excludes certain transactions whose nature and economic impact would suggest, in a contemporary context, that they should be included as "bona fide" remittances; and iii) from the measurement angle, certain conceptual ambiguities regarding the term "migrant" provide compilers with little practical guidance on the classification of transactions into the different categories.

[2] See "International Working Group on Improving Data on Remittances: Interim Report", World Bank Development Data Group, IMF Statistics Department and UN Statistics Division, November 2005.

[3] See "Outcome Paper: Definition of Remittances" (draft), TSG June 2006.

[4] See "Main Conclusions of First Meeting", Luxembourg Group on Remittances, July 2006.

[5] "Balance of Payments Manual", 5th Edition, IMF.

The current account items[6] associated with remittances in BPM5 are the following,[7] although only the first two are traditionally included in working definitions of the term:

a) **Compensation of employees.** This item refers to the earnings of short-term (less than one year) and cross-border workers, ie non-migrants. Their gross earnings are booked as a credit to the home country (country of origin), while their personal expenses abroad are debited under "travel", and taxes and social security contributions paid in the host country under "current transfers". Thus there is an imputed "net remittance" on current account, although this does not reflect actual financial transaction flows.

b) **Workers' remittances.** This is the lion's share of remittances, and is defined as *"current transfers by migrants who are employed in new economies and are considered residents there"* (ie have stayed or intend to stay for more than one year). In contrast to the previous item, workers' remittances refer to the actual cross-border transfers of funds to households in the country of origin. The empirical difficulties of identifying and measuring these flows are compounded by the following issues: a) The transfers refer only to income from employment, excluding other possible sources of funds; b) The definition refers to transfers from "migrants", which is a descriptive term rather than a clearly defined category such as legal resident or non-resident; c) there is a presumption of family relationship between the parties, which is difficult to establish in practice; and d) the remitter universe is confined to employed migrants, excluding all others from this category.

c) **Other current transfers.** This is a "catch-all" category aimed at including all current transfers that do not originate from the employment income of migrant workers. As such it has not normally been added to the working definition of remittances, although as pointed out in the previous section, there are many transactions excluded by the definition of workers' remittances that both common parlance and economic analysis would tend to treat as remittances. These include other household-to-household transfers (gifts, dowries, inheritance, alimony), but also comprise transfers involving other institutional sectors such as the government (social security contributions and payments, taxes), NPISH or Non-profit Institutions Serving Households (charitable donations) and corporations (lotteries, private pensions, etc).

The TSG has recommended several modifications to the BOP presentation of remittances, aimed at eliminating some of these problems. The main thrust of these modifications, in consonance with the analytical need to concentrate on the economic impact of remittances, is to increase the focus on the beneficiary household and de-emphasize the "migrant" status of the remitter. The new definitions build up step-by-step (see Figure 1) according to the source of funds received by the beneficiary household, as follows:

a) **Personal transfers**. This item would replace "workers' remittances" as a standard BOP item. Personal transfers are defined as *"all current transfers in cash or in kind made, or received, by resident households to or from other non-resident households."* They would therefore include all household-to-household current

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6 BPM5 also includes "Migrants' Transfers" as a capital account component, reflecting an imputed transfer of net assets and liabilities of a household that changes residence status, although the link to remittances is tenuous.

7 For an in-depth discussion of BOP remittance definitions and their relation to SNA 1993, see "Issue Paper #1: Definition of Remittances and Relevant BPM5 Flows", Alfieri, Havinga & Hvidsten, United Nations Statistics Division, February 2005.

transfers, regardless of the remitter's source of funds, relationship to beneficiary or motivation.

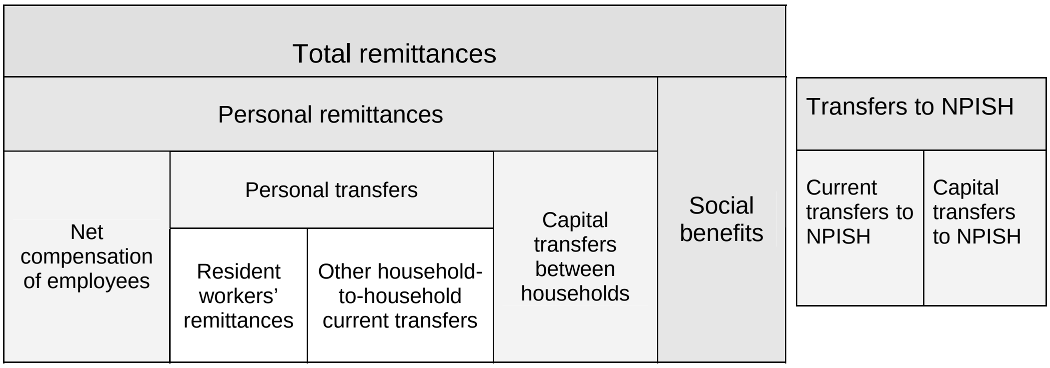
b) **Personal remittances.** This item is defined as *"Personal transfers + net compensation of employees + capital transfers.* This is a broader household-to-household concept than personal transfers. Short-term and cross-border worker compensation is included on a net rather than gross basis, together with capital transfers between households.

c) **Total remittances.** This item completes the concept of total **direct** remittances received by households by incorporating non-household sector remitters. It is defined as *"Personal remittances + social benefits"*, with the latter payable directly to households by governments, corporations or NPISH.

d) **Total remittances and transfers to NPISH.** This final item, which is self-defining, rounds out the concept of total cross-border support to households by recognizing that some of it may be received indirectly through the intermediation by domestic NPISH of funds received directly from abroad.

Figure 1

New BOP remittance definitions recommended by TSG[8]



Source: See footnote 8.

Remittances and the household financial position

As mentioned above, the TSG has recommended the adoption of a new standard item "***personal transfers***" to replace the BPM5 component "workers remittances". Personal transfers are defined as "*all current transfers in cash or in kind made, or received, by resident households to or from other non-resident households."* By adding the *net compensation of employees* and *capital transfers between households* to personal transfers, a concept of "***personal remittances"*** is arrived at. The further addition of *social benefits* provides a concept of "***total remittances"***.

All these items have in common that the direct beneficiary is a household, although the senders may either be other households (in the case of personal transfers, net compensation of employees and capital transfers between households) or governments and corporations

8 The chart presentation is adapted from Maldonado, René "Problemas en la Medición de Remesas", CEMLA, 2006.

(social benefits). Most are ***flow*** concepts, with the exception of capital transfers between households which add and detract from ***stocks.***

Capital transfers are defined as those which transfer ownership of fixed assets, or funds conditional on the purchase or disposal of fixed assets by either or both parties. Clearly these are more likely to contribute to the financial position of households, to the extent that the latter contemplates the ownership of fixed assets.

The additional income represented by the flow concepts, however, may raise total beneficiary household income above the zero savings threshold and allow for the accumulation of financial assets. Since the remittance beneficiary households are likely to be concentrated in the lower income segments of the population, it would appear reasonable to assume that the flow concepts will be directed mostly towards consumption. However, to the degree that remittances may catalyze the inclusion of beneficiary households in the formal banking sector, their impact on the financial position of these households may be more significant.

Distinguishing among personal and capital transfers between households for purposes of compilation will prove challenging. While the former are likely to be smaller and periodic, the latter will tend to be larger and less frequent. In this context the data provided by ITRS and direct reporting systems may require complementary information arising from household surveys that include sections on remittances. For this purpose the IWGIDR recommended that the International Household Survey Network could provide a useful tool in comparison of data, metadata and methodology.

The structure of remittances markets

While the conceptual simplification provided by the new definitions should improve matters (and certainly make them no worse) as far as knowing which flows are to be measured and included under the different categories of remittances, the actual compilation methodologies to be employed will depend on the availability of data.

Understanding a concept is no guarantee of the ability to measure it precisely. Everyone understands the concept of trade in foreign merchandise, and it is generally accepted that customs data are a good proxy for the flows in question. However, it is also recognized that customs do not verify 100% of the contents of bills of lading, that invoicing may not be entirely transparent and that a certain amount of "informal" trade does not pass through customs.

Similarly, a more precise measurement of remittances will require a better understanding of the channels through which they flow, and the relative importance of each. This is liable to vary by national markets, according to such factors as regulation (or the absence of it), financial inclusion, cost, available payments systems technology and even cultural habits.

The following Figure 2 illustrates in a very schematic manner the various channels through which personal remittances may flow from origin to destination.[9] As with international trade, a primary distinction is drawn between institutional and informal channels, the former comprising the delivery of remitted funds through established business entities whether or not they are authorized to engage in such activity. The informal channels consist mainly of the physical transportation of cash or gifts brought into the home country by individuals (the actual remitter, friends and relatives, or couriers), or the use of non-established outfits such as the "hawala" type systems.

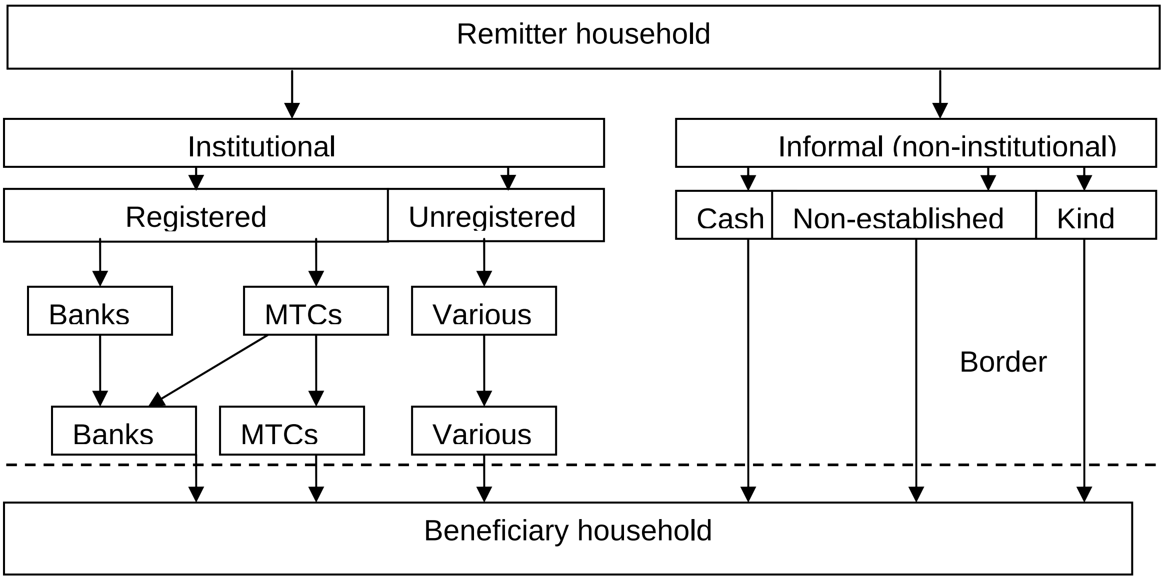
[9] Adapted from Wilson, John *op. cit.*

Within the institutional channels there are registered and unregistered intermediaries, the latter consisting of entities formally established for other commercial purposes that offer money transfer services as an irregular side activity to their own cross-border transactions. They should not be confused with the agent network of the registered intermediaries, which usually consists of small commercial establishments on both sides of the border operating under contractual, commission-based arrangements.

The registered intermediaries themselves are banks (as well as other depository institutions) that offer international money transfer services in their product menu, and the specialist money transfer companies (MTCs) such as Western Union or Moneygram. Some MTCs use banks for the actual cross-border transfer of funds from the gathering points to the distribution centre, as illustrated by the diagonal arrow in Figure 2.

Figure 2

Possible channels of delivery for personal remittances



Source: See footnote 9.

Clearly the availability and quality of data from registered intermediaries is far superior to that from others. This provides a strong justification for regulators to require registration and impose obligatory reporting requirements on companies wishing to participate in the remittances industry. To the extent that the industry is able to provide sound, efficient, cost-effective, competitive and transparent services,[10] the incentive to resort to unregistered or informal channels should be reduced, and the quality of statistical coverage should improve.

Data on the unregistered and informal channels must obviously come from the users rather than the providers, and it is in this context that household surveys at both ends of the remittance corridors can prove useful in estimating the overall volume of the flows and arriving at approximate conclusions regarding the market shares of the different channels. The following table provides illustrative figures for remittances markets for selected Latin American recipient countries and for the USA and Japan as originating markets.

10 See “General Principles for International Remittances Services” (draft), The World Bank and the Committee on Payment and Settlement Systems (BIS), March 2006.

Table 3

Remittance delivery channel shares in selected LAC recipient and originator markets

	MTC	Banks	Other
	%	%	%
Recipient markets			
Bolivia	29	33	38
Brazil	1	94	5
Dominican Republic	79	9	12
Ecuador	68	16	16
El Salvador	47	34	19
Guatemala	79	7	14
Honduras	64	18	18
Mexico	47	44	9
Originating markets			
United States	79	8	13
Japan		93	7

Sources: (1) MIF-IADB Survey of Remittance Beneficiaries, as reported in Orozco, Manuel "Conceptual Considerations, Empirical Challenges and Solutions for the Measurement of Remittances", CEMLA, August, 2005 (2) Bendixen & Associates, presentation by Sergio Bendixen "Understanding Remittances to Latin America", at Joint Conference on Remittances, ADB, Manila, Philippines, September 2005.

The first point to be made regarding Table 3 is that the figures should be interpreted with some caution. Beneficiary respondents receiving payment through bank branches may not be sure if the bank is acting on own account or as an agent for an MTC. Other channels may not be entirely informal or unregistered (for example, the use of the postal system or courier services), and may even include some of the more innovative delivery systems (such as stored value card ATM withdrawals) that the respondent does not associate with a depository institution.

Nevertheless, some clear conclusions may be drawn: (a) while informality is a non-negligible factor in most markets, the bulk of transactions flows through registered institutional channels; (b) with the exception of the Japan-Brazil corridor, MTCs appear to have a significantly larger market share than banks throughout the region; and (c) market structure by channel can vary significantly from country to country, both within the region and in originating countries (in this respect, the contrast between USA and Japan is striking).

The multiplicity of delivery channels and participants is not the only structural aspect of remittances markets that complicates measurement, however. Other structural features of institutional channels to be considered from a compilation viewpoint are:

1) The very high number of very low value transactions.

2) The large networks of originating and delivery agents on both sides of the border.

3) Funds do not always flow in a direct path from remitter to beneficiary. MTCs often use banks as origination and payment agents, and must use them for the actual cross-border transfer of funds.[11]

4) Batching and netting of transactions at the agent, MTC and bank levels makes it difficult to interpret raw data on financial flows.

5) Geographical allocation of origin is sometimes hindered by the use of regional processing centres by intermediaries.

6) At some point in the flow there is normally a currency conversion, which can involve new parties to the transaction.

In this context, following the intertwining "flow of funds" may prove frustrating for compilation purposes. Fortunately, however, the "information flows" are far more transparent than the "financial flows" and must remain under control of the service provider throughout the entire transaction. At the very least the service provider must retain data on origination, amount, destination and payment mode.

Different approaches to remittance compilation

As mentioned at the outset, different countries employ different compilation methodologies, or some combination of them. The resources invested in these efforts can usually be related to the importance of remittances to the economy in question. The growing impact of remittance flows on recipient economies calls for an improvement in the methodologies employed, and the choice of compilation techniques should reflect the structure of the remittance markets in question and the data sources available.

It is in fact somewhat misleading to speak of compilation methodologies as if these were ready-made alternatives to be applied according to the particular characteristics or constraints of a given situation. It is more appropriate to think in terms of data sources, and perhaps then refer to "families of methodologies" according to the relative weight they attach to each data source.

The main ***institutional*** data sources for remittance compilation are the following:

1) **International transactions reporting systems**. The provision of ITRS data is for the most part a responsibility of the banking system, with origins in exchange controls and more recent AML-CFT provisions. Banks are required by regulators to report individual cross-border transfers carried out on behalf of their customers (usually exceeding a given threshold level), and to provide information pertaining to the nature of the transaction and the origin or destination of funds in a standardized format. Given the advances in information technology, this reporting requirement places a low burden on the banking system and makes available to compilers a large volume of raw data at a low cost. Nevertheless, there are various shortcomings associated with ITRS data for the specific purpose of measuring remittances: (a) since typically remittances fall beneath the reporting threshold,[12] they would be included in the lump sum reported for small transactions, thus making their extraction subject to estimation and creating the potential for misclassification; (b) MTC financial flows through the banking system will be reported through ITRS

[11] In certain cases (such as the US-Mexico ACH "Directo a México"), central banks provide substitute facilities for private correspondent banking relationships.

[12] Currently set at 12,500 euros in the Eurozone countries.

subject to the netting, batching and geographical uncertainties mentioned in the context of financial flows; and (c) the ITRS data does not cover flows through informal or unregistered delivery channels.

2) **Direct reporting systems.** Given the difficulties of interpreting financial flow data through bank ITRS, a more attractive alternative from the compilation viewpoint would be to require institutional providers of remittance services to supply more detailed reports on a regular basis according to a pre-designed format, based on the "information flows" accompanying transactions. MTCs and banks directly engaged in remittance activity on own account would provide from their data bases a list of all transactions into and out of the national jurisdiction below a given "remittance threshold", including information on origin (geographical, institutional vs. personal) and mode of delivery (cash pick-up vs. credit to bank account). While this would allow for greater accuracy in identifying and estimating remittances through institutional channels, it would still not solve the "informality problem". Although it would imply a "start-up" burden for institutional reporters, once installed the running costs should not be excessive. From the compiler's perspective, DRS are superior to ITRS.

Despite the difficulties in interpretation, institutional data has the indisputable advantage of reflecting actual transactions and therefore providing more certainty. Other sources of data require a more inferential approach to compilation, relying more on estimation than actual measurement. In addition to institutional reporting systems, other sources of data are:

3) **Household surveys.** Information obtained from surveys can be very useful in complementing institutional data, especially since it can help estimate the degree of informality in the remittances market (thus allowing for the "grossing up" of institutional data) and provide information on innovative delivery channels. Information can be obtained by inserting appropriate questions (frequency, amount, mode of delivery, relationship to remitter, etc) in existing household surveys in recipient countries, or by implementing independent surveys of migrant communities abroad or of travelers at border entry points. The main drawbacks of household surveys are that: (a) they are costly from the sampling viewpoint, since neither remitters nor beneficiaries are distributed evenly among the respective populations; in this respect a sub-sample of positive respondents to a regular survey may be useful; (b) the information obtained may be subject to "recall" uncertainties and upward/downward disclosure bias.

4) **Demographic data.** The existence of reliable statistics on migrant population abroad and immigrant population at home, combined with behavioral information obtained from surveys ("propensity to remit"), can provide broad estimates of both inward and outward remittance flows.

5) **Counterpart data**. This implies employing the data compiled by "partner" countries in cases where a geographical breakdown of remittances is available. Given the uncertainties attached to data quality and the various methodologies employed by compilers abroad, this does not appear as a reliable source for aggregation.

As mentioned above, different countries will have varying degrees of access to the different data sources and, what is more important, may or may not be prepared to invest more time and effort in improving them. In all cases, even where institutional data is the main input, some degree of estimation will be required. This will call for certain assumptions that must be regularly checked and updated.

As far as remittance compilation methodologies are concerned, one can imagine a spectrum of possibilities ranging from the intensive use of directly reported institutional data complemented by informality estimates from household surveys, to a complete reliance on data models based on population statistics and behavioral parameters. Furthermore, different approaches may apply to the different components of total remittance flows.

Conclusions

In view of the particular features inherent to each market, it is difficult to recommend a standardized compilation methodology down to the last detail for universal adoption. However for regions and countries sharing common characteristics, a set of “best practices” aimed at harmonizing efforts with a view to promoting comparability and aggregation is both a feasible and worthwhile undertaking.

Given the preponderance of registered institutional delivery channels in the LAC region, and indeed the dominant market share of MTCs within them, there would appear to be a prima facie case for relying on direct institutional reporting as the primary source of quality data for purposes of statistical measurement of remittance flows to the region. Periodical household surveys should complement these efforts by providing additional information on informal delivery channels. All other available data sources should be regularly tapped upon to provide overall estimates of remittance flows through data models, as a means of confronting and validating results.

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