

# CHAPTER 11

## Remittances

### Introduction

**11.1** Cross-border remittances - household income from foreign economies arising mainly from the temporary or permanent movement of people to those economies - have grown rapidly in recent years.<sup>41</sup> IMF estimates show their global value (measured as global receipts of "workers' remittances" and "compensation of employees") rising from \$144 billion in 2002 to \$395 billion in 2008, or at an average annual rate of 18 per cent (table 11.1). Some of the increase may reflect valuation effects due to price and exchange rate movements and some may be a result of better measurement, but much of it is real, largely the

result of increased international migration and declining transfer costs. Although remittances are not necessarily connected to migration, in practice most remittances are accounted for by funds sent by migrants to relatives in their countries of origin. Because of this, the largest migration corridors - Mexico to the United States and other Commonwealth of Independent States (CIS) countries to the Russian Federation, for example - also tend to be the most important corridors for remittance transfers, although nations with large and widely dispersed migrant populations, such as India and China, are also major remittance recipients (charts 11.1 and 11.2).

**Table 11.1 Compensation of employees and workers' remittances, 2002-2008**

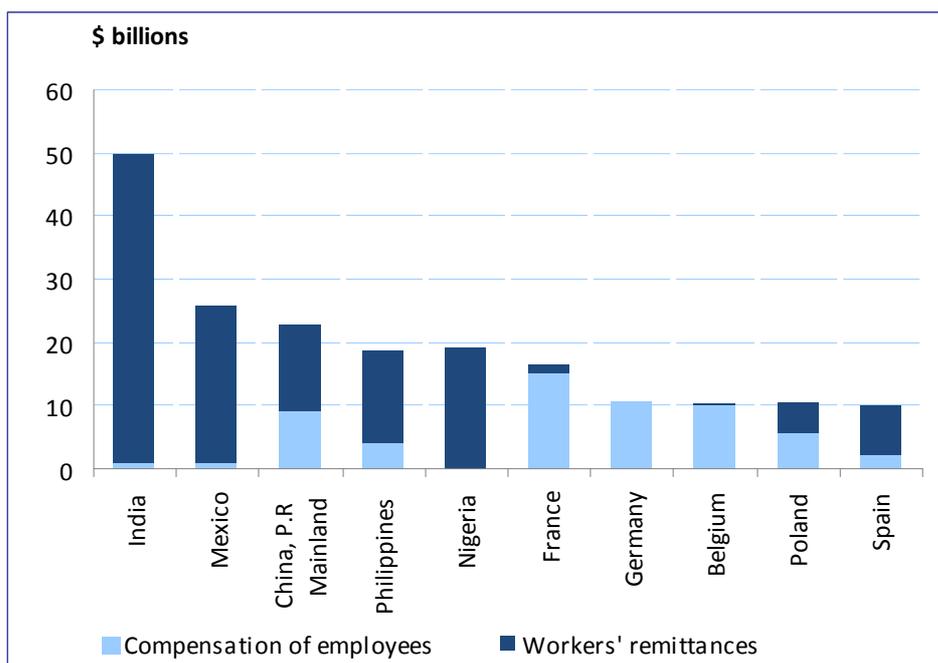
	<i>\$ millions</i>						
	2002	2003	2004	2005	2006	2007	2008
Compensation of employees							
Credit	49,532	60,135	71,881	78,527	86,459	103,907	119,738
Debit	57,331	67,921	77,671	86,609	96,255	117,962	141,945
Global discrepancy	7,799	7,786	5,790	8,083	9,797	14,055	22,207
Workers' remittances							
Credit	94,050	114,138	128,267	167,038	200,310	242,509	275,645
Debit	77,524	81,255	91,994	99,657	118,068	144,735	164,407
Global discrepancy	-16,526	-32,883	-36,273	-67,381	-82,242	-97,774	-111,238
Sum of compensation of employees and workers' remittances							
Credit	143,581	174,273	200,148	245,565	286,769	346,416	395,383
Debit	134,855	149,176	169,665	186,266	214,323	262,697	306,352
Global discrepancy	-8,727	-25,097	-30,483	-59,299	-72,445	-83,719	-89,031

Source: *International Transactions in Remittances: Guide for Compilers and Users*, IMF, 2009b, updated with data from the IMF's balance of payments database.

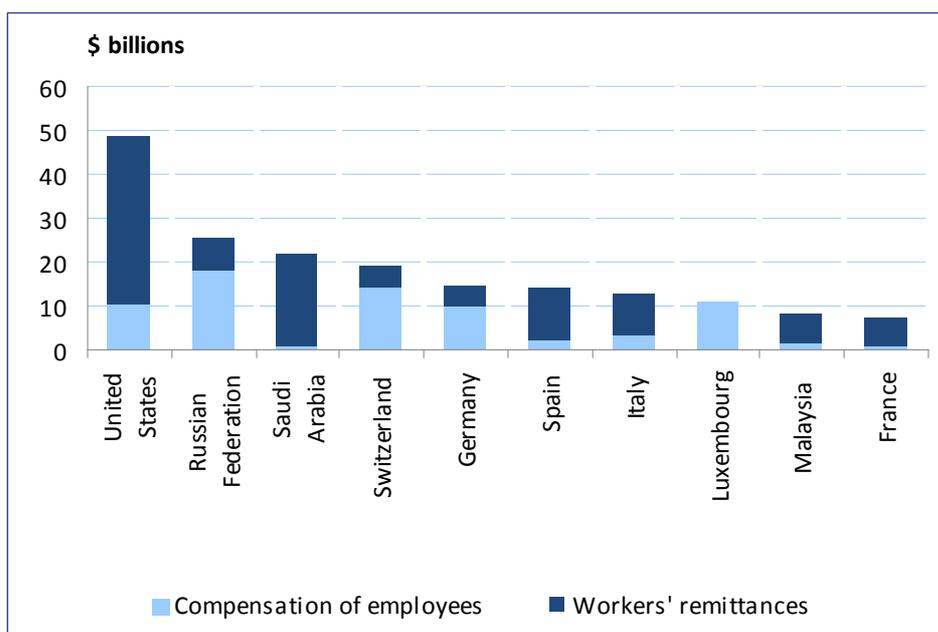
Note: This table uses BPM5 definitions. In particular, "workers' remittances" is defined as current transfers from employment income by migrants who are employed in new economies and considered residents there. In the list of standard components for the balance of payments accounts, "workers' remittances" has been replaced in BPM6 by "personal transfers", a somewhat broader concept.

<sup>41</sup> This definition is from appendix 5 of BPM6. As will be seen later, not all remittance flows arise from the movement of persons. However, all remittances and remittance-type flows are intended to benefit households, either directly or indirectly.

**Chart 11.1 Compensation of employees plus workers' remittances – credits in 2008**



**Chart 11.2 Compensation of employees plus workers' remittances – debits in 2008**



**11.2** As they have increased in size, remittances also have increased in importance at both individual and national levels. For individual recipients, remittances are often a significant source of household income, providing support for consumption, education, healthcare and potentially a path out of poverty. For individual senders, remittances represent an important link with family in the home country. At the national level, in addition to supporting household consumption, remittances may be an important source of foreign

exchange for net receiving nations. For net sending countries, the majority of which are more developed, remittances represent resource transfers to developing nations. Remittances can thus be seen as a type of development and humanitarian assistance, which can be considered in conjunction with government aid, private investment, and other resource flows in evaluating needs for aid.

**11.3** Remittances vary widely in their importance to national economies, which may lead to differences in the emphasis given by national statisticians to measuring and monitoring them. For net sending nations, the amounts transferred may be large in absolute terms, but their importance relative to total economic activity generally is small. For the United States, for example, outflows of workers' remittances and compensation of employees were \$49 billion in 2008, but that amount was only a fraction of 1 per cent as large as US GDP in that year. For net receiving nations, the situation often is reversed. Moldova, for example, reported only \$2 billion for 2008 as inflows of workers' remittances and compensation of employees, but that amount was one-third as large as its total GDP in that year.

**11.4** Although remittances are increasingly important to many economies, accurate measurement of remittances remains difficult. The difficulties in measurement can be illustrated by the large discrepancy between global receipts (credits) and payments (debits) of remittances (table 11.1). Although in reality, and by any definition, the amounts sent and received are the same, estimates of remittances based on reported payments tend to be considerably smaller than estimates based on reported receipts. In 2008, for example, reported payments, at \$306 billion, were only about three-fourths as large as reported receipts. Such differences suggest that at least some statistics on remittances lack the minimal level of reliability required for them to serve their intended purposes. They also may result in differences in perceptions about the adequacy of remittances as a source of assistance and of the need for other types of resource flow.

**11.5** Two main factors have complicated the measurement of remittances, namely differing definitions and difficulties in capturing the transactions. The problem of differing definitions has recently been addressed through the publication of standard statistical definitions in BPM6 and in *International Transactions in Remittances: Guide for Compilers and Users* (the *Remittances Guide*). Over time, these should result in greater consistency in definition. Historically, however, research and reports on remittances have often included as "remittances" one or more items not covered by the new definitions, such as money brought home by returning migrants, funds sent by migrants back to their countries of origin to purchase real estate, invest in local businesses, or otherwise for the migrant's own account, and the estimated value of volunteer time spent on international programmes. In some cases, the

definition employed has depended on the use of the statistics or on data availability. Economic accountants require a definition that is compatible with the rest of the national accounting framework and thus are concerned with details such as the residency status of the sender and the absence of a quid pro quo. Government aid officials and development professionals are often more concerned with total resource flows between countries, regardless of the residency of the sender or the presence or absence of a quid pro quo, to show the economic impact of these flows on sending and receiving countries.

**11.6** With regard to data capture, because of the small size of individual transactions and the sometimes uncertain status of those who make them, remittances data are difficult to collect using traditional methods. Individual remittance transactions often fall below reporting thresholds for banks and other financial institutions, and thus cannot be identified within the reported data. Money transfer operators (MTOs), the preferred vehicle of transfer for many migrants, may only settle net payments through the banking system, making it difficult to identify the underlying gross receipts and payments. In addition, remittance transactions are often effected outside the formal financial system, such as through hand-carry by returning migrants and workers or through unlicensed transfer businesses, both of which usually bypass formal reporting systems. Capturing data via household surveys may also be difficult, especially in countries where large portions of the migrant population lack legal status. Faced with these numerous and varied difficulties in data collection, some countries have chosen to estimate remittances using statistical modelling techniques that do not attempt to capture and sum individual transactions, but rather combine sample information on, or assumptions about, remittance behaviour by various demographic groups with information on the populations belonging to each group.

**11.7** This chapter describes recent efforts to address conceptual, definitional, and measurement challenges with regard to remittances and discusses challenges that remain. The next section provides background on the commonly used definitions of remittances and reviews the new definitions provided in the BPM6 and the companion *Remittances Guide*. Conceptual issues that may arise in defining and measuring remittances and the problems that mismeasurement may cause for national accounts are then discussed, followed by the practical measurement problems facing compilers and

suggestions for ways to overcome compilation difficulties. The chapter concludes with a discussion of ongoing activities and recommendations for future work.

## Background: development of guidelines

**11.8** Because they represent international transactions, remittances have long been addressed in the balance of payments framework. The fourth edition of the *Balance of Payments Manual*, published in 1977, included the item "workers' remittances", defined as "*unrequited transfers by those migrants (persons who have come to an economy and who stay, or are expected to stay, for a year or more) employed in their new economy.*" This item, with the definition slightly altered to state explicitly that it pertains only to *current* transfers, remained the single component specifically associated with remittances in the fifth edition (BPM5), published in 1993.

**11.9** In the 1990s, as global migration increased, transfers from migrants became increasingly important to many national economies, prompting government policymakers, development officials, and national compilers to focus increased attention on the size and nature of remittance transfers. The balance of payments item "workers' remittances" provided some information, but it did not completely cover the wide variety of remittance-type transactions between countries. The item workers' remittances is limited to current transfers by employed permanent migrants and thus excludes current transfers by non-migrants and by unemployed migrants, as well as any household-to-household capital transfers. It also excludes the resource flows to countries of origin that result from employment of their residents in other countries, as well as transfers made, not directly to households, but to non-profit institutions serving households (NPISHs).

**11.10** To construct a broader measure of remittances, analysts have often combined workers' remittances with two other items from the balance of payments, namely gross compensation of non-resident employees and migrants' transfers. While the resulting measure gives a more complete picture, it does not capture all flows that may be regarded as "remittances", which may include such items as capital transfers and transfers from non-migrants. In addition, the measure may overstate "remittances" to the extent that a portion of the compensation of employees payments does not flow back to home countries

but is spent by non-resident workers in host economies.

**11.11** Rather than use balance of payments statistics, public and private agencies and organizations have sometimes compiled their own estimates of remittances, occasionally by surveying migrant or recipient populations. These surveys have employed a variety of definitions of remittances and may sometimes have captured transactions that would not universally be regarded as within the scope of the remittances concept, such as purchases of real estate, business investments, and savings, which involve funds sent abroad but which are not transfers. One such broader estimate of cross-border giving has reflected the value of time spent by volunteers on international programmes, which represents assistance by residents of one country to residents of another but lies outside the scope of standard economic accounts.<sup>42</sup>

**11.12** The use of multiple compilation methods, each of them reflecting a different collection of transactions, has produced vastly different estimates of remittances. The wide variety of estimates has created confusion and uncertainty over their importance relative to other flows and their impact on sending and receiving countries.

### BPM6: a standardized definition

**11.13** The development of a standard balance of payments definition of remittances began at the Sea Island Summit in 2004, where Group of Eight (G-8) participants acknowledged the rapid growth and developmental impact of remittances in the action plan *Applying the Power of Entrepreneurship to the Eradication of Poverty*. The plan highlighted the need for better statistics on remittances and called for the G-8 countries to "*work with the World Bank, IMF, and other bodies to improve data on remittance flows and to develop standards for data collection in both sending and receiving countries.*" This statement led to the mandate of the United Nations Technical Sub-group on the Movement of Natural Persons (TSG), which worked in consultation with the IMF Committee on Balance of Payments Statistics and the Advisory Expert Group on National Accounts, to be extended to cover the definition of remittances. The TSG's recommended definitions have been incorporated in BPM6. Following the adoption of these definitions, a working group, which came to be known as the Luxembourg Group, was formed

<sup>42</sup> See Hudson Institute, 2010. This report estimates the value of such time spent by US volunteers as \$3.6 billion in 2008.

**Table 11.2 Remittance concepts in BPM6**

<i>Total remittances and transfers to NPISHs: a+b+c+d+e+f</i>					
<i>Total remittances: a+b+c+d</i>				(e)	(f)
<i>Personal remittances: a+b+c</i>			(d)	Current transfers to NPISHs	Capital transfers to NPISHs
(a)	(b)	(c)	Social benefits		
Personal transfers (part of current transfers)	Compensation of employees less taxes, social contributions, transport, and travel	Capital transfers between households			

Note: "Travel" as used in column (b) is as defined in BPM6 to include food, lodging, and other goods and services acquired for personal use by seasonal, border, and other short-term workers who are not resident in the economy in which they are employed.

under the auspices of the IMF to develop a compilation guide based on the BPM6 definitions. The resulting *Remittances Guide* provides further detail on the nature of remittances and outlines several compilation methodologies. The recommendations will be discussed further below.

**11.14** BPM6 introduces several increasingly broad categories of remittances (see table 11.2).<sup>43</sup>

**11.15** Personal transfers are a standard component of the balance of payments framework. Personal remittances, total remittances, and total remittances plus transfers to non-profit institutions serving households (NPISHs) are supplementary items. This structure allows compilers to publish a variety of remittance measures without altering the central balance of payments framework (although they may need to alter their data collection to align with the new guidelines).

**11.16** These concepts provide a broader and more fully articulated framework for the analysis of remittances than was available under BPM5. The item personal transfers (a component of the narrowest remittance measure, personal remittances) retains a focus on individual transfers from residents similar to that of the BPM5 concept of workers' remittances. However, it places the focus on the household-to-household nature of the transactions rather than on the employment status of the sender. Personal transfers include additional types of household-to-household transfers - such as transfers from non-migrants and non-workers - that are excluded from workers' remittances.

**11.17** Personal remittances comprise personal transfers, household-to-household capital transfers and the net compensation of non-resident workers. The item personal remittances approximates to the

commonly used calculation of remittances discussed above, although it does not include migrants' transfers, which under BPM6 are no longer regarded as transactions in the balance of payments.<sup>44</sup> Annex 11.1 presents a more detailed examination of the differences between the BPM5 and BPM6 remittance statistics using Russian data.

**11.18** The final three items incorporate social benefits and current and capital transfers to NPISHs. These transfers are not commonly thought of as remittances, but they are conceptually similar as they both provide direct support to households abroad. These broadest definitions are of interest to those wanting to determine the total amount of support provided to the households of one nation by those who are residing or working, or who have worked, in another.

**11.19** While no country currently publishes the full array of new remittance measures, many countries publish remittance-related components, usually including a measure of personal transfers (with many countries still showing "workers' remittances" as defined under BPM5) and gross compensation of employees. Available data suggest that, for many countries, personal transfers are the largest component of remittances, reflecting the broad base of potential senders and recipients and the social and economic importance of these transfers. For example, for India and the United States, respectively the largest receiving and

<sup>43</sup> See appendix 5 of BPM6 for additional information.

<sup>44</sup> BPM5 also recognized that migrants' transfers are not transactions in the true sense, but it nonetheless recommended recording them as such in order to provide contra-entries to flows of merchandise and other items resulting from migration. BPM6, in contrast, recommends that these items, which do not involve changes in ownership, be excluded from merchandise and other accounts, placing both those accounts and the account for transfers (secondary income) on a conceptually more correct basis.

**Table 11.3 Components required for compiling remittance items and their source: item and description**

<i>Item</i>	<i>Source and description</i>
1. Compensation of employees	Primary income account, standard component
2. Personal transfers	Secondary income account, standard component
3. Travel and transport related to employment of border, seasonal, and other short-term workers	Goods and services account, supplementary item
4. Taxes and social contributions related to employment of border, seasonal, and other short-term workers	Secondary income account, supplementary item
5. Compensation of employees less expenses related to border, seasonal, and other short-term workers	Primary income account (for compensation of employees), standard component  Goods and services account (for travel and transport expenses) and secondary income account (for taxes and social contributions), supplementary items
6. Capital transfers between households	Capital account, supplementary item
7. Social benefits	Secondary income account, supplementary item
8. Current transfers to NPISHs	Secondary income account, supplementary item
9. Capital transfers to NPISHs	Capital account, supplementary item

Source: BPM6, appendix 5, table A.5.1.

sending nations, personal transfers account for the majority of remittance flows (charts 11.1 and 11.2). However, in some countries, particularly those with a sizeable population of border workers, a large guest worker programme, or membership in an economic area that provides for labour movement within the area, compensation of employees is the largest component. This is the case, for example, for inflows to France, Germany, and Belgium and outflows from the Russian Federation, Switzerland, Germany, and the Netherlands. The relative importance of personal transfers and compensation of employees may differ between receipts and payments.

**11.20** Social benefits are likely to be the smallest component of total remittances, reflecting the relatively small population of long-term employees who return to their country of origin or retire abroad. Data from the US Social Security Administration, for example, indicate that social security payments made to beneficiaries outside the United States totalled \$3.5 billion in 2008, which accounted for only a small fraction of the value of US remittance components that can be separately identified. The relative importance of transfers to NPISHs is determined mainly by the size of the non-profit sector, which varies across countries.

**11.21** In addition to those items included in the definition of remittances, BPM6 also highlights the

analytical importance of two additional remittance-related data series: investment by migrants and travel. These items do not provide support directly to households, but they represent additional channels through which national economies interact with their migrant populations. Other potentially important data series are telecommunications and trade in "home goods" (goods, such as food, that migrants import or arrange to be shipped from relatives back home).

### **The statistical treatment recommended in international standards: conceptual issues**

**11.22** The release of BPM6 and the *Remittances Guide* represents a major advance in defining remittances and in providing statistical guidelines, both of which should result in higher quality, better understood, and more internationally comparable statistics. However, the fact that multiple remittance concepts are presented calls for extra care in interpretation and in communication with data users. Furthermore these concepts are made up of components that are treated quite differently in economics accounts. Table 11.3 shows the components required for compiling the different remittance measures and the different accounts from which they are constructed.

**11.23** Taken together, the various remittance concepts draw upon four different balance of payments accounts: (1) goods and services, (2) primary income, (3) secondary income, and (4) capital account. As noted in BPM6 (paragraph 2.13): *"The different accounts within the balance of payments are distinguished according to the nature of the economic resources provided and received."* These differences also are recognized in national accounts, and as a result the nature of any distortions in national accounts that may be caused by inaccuracies in the measurement of remittances can differ depending on which remittance component or components are mismeasured.

**11.24** Compensation of employees, for example, affects GDP, primary income, and disposable income in the home country (the country of permanent residence of the workers) but not in that of the host country (the country where they work). Thus, if it is mismeasured (or unrecorded), these items also will be mismeasured, as will saving - computed as the difference between disposable income and final consumption expenditure. Personal transfers, by contrast, are not reflected in GDP or in primary incomes, but they do affect disposable income. If they are mismeasured, GDP will be unaffected, but there will be errors in the measurement of disposable income and saving. Capital transfers are not reflected in GDP or in measures of income, but they do result in changes in national balance sheets of both donor and recipient economies, which would thus be distorted by their incorrect measurement.

**11.25** These differences in effects are a reflection of the fact that "remittances" is not a national or international accounts concept, but rather represents a grouping of a variety of items from these accounts in an effort to measure the total sum of country-to-country flows through which individuals or organizations residing or working in one country benefit households of another country. Because of the differences, for some purposes it may be useful to view the remittance aggregates in conjunction with information on their components, given the rather fundamental differences in the economic nature of the components. It may be particularly desirable to have information on net compensation of employees separately from that on the various items of transfers, since compensation alone represents income generated by productive activities of the recipient countries' own residents.

**11.26** From time to time questions have arisen about several items that are excluded from total

remittances but that are sometimes considered in a remittances context. It will be useful to review these, not to call into question the internationally agreed concepts and definitions, but rather to explore the boundary between remittance and non-remittance flows and because they are sometimes viewed in conjunction with the included items in studies and reports on international philanthropy and development assistance. In general, their effect is to broaden the remittance concept.

**11.27** Transfers to NPISHs are not included in the BPM6 measure of total remittances, yet these transfers may differ from household-to-household transfers only in the sense that intermediary institutions are involved in mediating funds that are donated by households in one country with the intent of benefiting households in another country. Among the items that have been excluded from total remittances, these transfers perhaps have the most in common with the included items, and their significance and relevance has been recognized by the new standards, even if they have not been included in the core remittance aggregates.

**11.28** The value of volunteer time spent on international programmes likewise represents benefits provided by residents of one country to residents of another. However, this value lies outside the scope of conventional economic accounts and therefore has not been recognized in statistical guidelines, even as a related concept.

**11.29** Investment by migrants in their countries of origin is recognized by BPM6 as a "related concept", but it is excluded from all of the remittances measures suggested in it and in the *Remittances Guide*.<sup>45</sup> However, migrants' investments may be in businesses that provide relatives or others in their countries of origin with employment opportunities and thus may benefit home-country households as well as the emigrant investors residing abroad. Thus, while migrants' investments in their countries of origin are excluded from the standard statistical measures of remittances, it must be acknowledged that they can have much in common with components that are included.

**11.30** Financial and non-financial assets of returning migrants are likewise excluded from all of the remittances measures, on the grounds that

<sup>45</sup> BPM6 does acknowledge that investment may be a vehicle for remittances in cases where relatives live rent-free in migrant-owned real estate, or are paid above market wages by migrant-owned businesses. In cases where these arrangements are known to compilers, estimates may be made to account for the remittance portion of these transactions.

they lie outside the current balance of payments framework. However, including the earnings of workers who stay abroad for less than a year and excluding the accumulated assets of workers who stay for a year or more before returning home may strike some as an arbitrary distinction, especially when only small differences in length of stay are involved. Perhaps reflecting this view, these values may sometimes be considered in a remittances context, even though they lie outside the standard definitions.

**11.31** Corporate giving raises equally difficult questions. A pharmaceutical firm's donation of medicines to a foreign relief organization could be included in current transfers to NPISHs (which are not limited to transfers made by households). However, what should be the treatment if the firm sells the medicines in developing countries at discounted prices, or even below cost? Economic accounting guidelines recommend recording transactions at market prices, so one might argue that the transaction should be recorded at market price and the discount shown as a type of transfer, relevant to remittances. However, the price received may be only a partial measure of the value of the sale to the firm, which may be rewarded for its benevolence through the accumulation of goodwill or the avoidance of regulations or price controls. In some cases, discounting may simply represent the profit-maximizing actions of a monopolist charging different prices to exploit demand differences in distinct markets. Perhaps reflecting these considerations, as well as practical difficulties in data collection, the value of this form of giving has not been recognized as a remittance component in the new international guidelines.

**11.32** Different questions about corporate giving arise when the giving is done, not across the border, but rather through affiliates located in recipient countries. Because foreign affiliates are treated in economic accounts as resident in their countries of location rather than in the countries of their owners, their donations in host countries are treated as transactions between residents and thus outside the balance of payments framework. Yet to the extent that the giving raises the foreign affiliate's costs and lowers its profits, the income received by the home-country parent firm would fall, making the cost to it of the donation much the same as if it had made the donation directly.

**11.33** From these examples, it is clear that the remittances concept is among the more difficult economic constructs to define and interpret. While the new guidelines have done much to clarify and expand remittance concepts, the complexity of the

concept and multiple potential uses of the data mean that conceptual difficulties remain.

## Measurement problems

**11.34** On top of these numerous conceptual issues is an equally varied array of measurement challenges, most of them relating to the personal transfers component. Personal transfers are typically small, household-based on both the sending and receiving ends, and capable of being sent through a wide variety of channels, making them difficult to capture using traditional methods of collection. Additional factors such as the legal status of the remitting population, the available financial infrastructure, and the residence of the sender also complicate the capture of data on personal transfers.

**11.35** In most countries, individuals have many options, both formal and informal, for sending personal transfers.<sup>46</sup> Widely used formal methods of sending monetary transfers include banks, credit unions and licensed MTOs. Funds sent through these channels enter the formal financial system and can be captured along with other types of financial flow. However, entry into the financial system does not completely eliminate the collection difficulty. Remaining issues include identifying gross flows (many institutions net their international transactions), determining the primary source and destination of the transfers, and distinguishing between personal transfers and other small financial transactions.

**11.36** Informal methods of monetary transfer include hand-carry, either by the senders themselves or through family members or friends, transfers through unlicensed MTOs, and hawala or similar area-specific informal systems.<sup>47</sup> When sent through these channels, the transferred funds do not enter the formal financial system and most established data collection systems miss them: money carried across a border often does not have to be declared below a certain threshold, unlicensed MTOs may operate outside the banking system, and hawala does not involve actual cross-border payments between households. Collecting data on transfers made through informal channels requires targeted methods, such as surveys of the sending or receiving populations. Statistical modelling may also help to overcome these difficulties.

<sup>46</sup> For a more comprehensive discussion of remittance channels, see the *Remittances Guide*.

<sup>47</sup> Hawala is a method of transfer, well established in Islamic communities, where instruction on payment, rather than the money itself, is sent across borders.

**11.37** Although in-kind transfers may also flow through formal channels, it is generally believed that most travel through informal channels. Formal methods of transfer include declared shipment via post or with a registered exporter. Informal methods include hand-carry and undeclared shipment via cross-border passenger or transport vehicles. Compared to money transfers, data collection for in-kind transfers faces an additional complication: determining the value of the remitted items. Formal shipments should have a declared value; however, because of their small size, they may fall below reporting thresholds. It may also be difficult to distinguish in-kind transfers from other small shipments. Informal shipments are not only difficult to track; they face the additional problem of valuation.

**11.38** A number of factors including geography, financial infrastructure, cost, and history may contribute to the choice of one transfer channel over others. Transfers between countries with a shared geographic border, especially a relatively open border, are more likely to be transmitted by hand or through established informal travel and trade routes. Financial infrastructure, such as the prevalence of banks in both countries and the ease of opening an account, affects the use of bank transfers. The cost of sending a transfer is also a consideration; so too is the convenience for both sender and recipient. International efforts made in recent years to decrease the cost of transferring through formal channels have led to an increase in the use of these channels. Finally, the familiarity and trust that the sender and recipient have in a transfer company or method is also an important factor; remitters are often highly loyal to their chosen transfer method.

**11.39** The combined effects of all of these factors are reflected in the choice of transfer channel. In some countries, this may result in a single channel dominating the market, potentially simplifying data collection as efforts can be focused on a single market segment. In countries where a variety of easily accessible transfer methods are available and no single channel dominates, data must be collected from multiple market segments or through other methods, such as surveys of senders or recipients.

**11.40** Factors other than the transfer channel also complicate measurement. The legal status of the migrant population is one factor; illegal residents may be more likely to use informal channels and are often difficult to contact or survey. Countries that are international banking centres may have funds sent from third countries

transit through their banking system, creating noise in the financial flows data. Finally, whatever the channel, it is difficult to determine length of residency of the sender, a key factor in distinguishing between personal transfers and compensation of employees.

**11.41** Measuring transactions in the broader remittance categories is also difficult. Although there may be official data associated with visa or tax records, the question of residence complicates the collection of data on compensation of employees. Additional complications arise if there is a large non-legal migrant workforce, or in countries with open guest worker programmes. Social benefits and transfers to NPISHs are likely to flow exclusively through formal channels; however, identifying these flows may be difficult. Data on social benefits, largely issued by the government, may be available through official records, although identifying and obtaining data from all potential benefit sources may complicate data collection. The difficulty of collecting data on transfers to NPISHs depends on the source of the transfer. As with personal transfers, small transfers from households will be difficult to identify, whereas large transfers from well-known charities or foundations will be more easily captured.

## Proposals for operational treatment in the accounts

**11.42** The *Remittances Guide* outlines four principal methods for compiling data on remittances: extracting the data from international transactions reporting systems (ITRS), direct reporting by MTOs, household surveys, and model-based methods.<sup>48</sup> Each of these approaches focuses on data capture from different segments of the remittance market, and each has strengths and weaknesses in terms of coverage, cost, and feasibility. Data compilers can use these methods singly or in combination. As the collection issues outlined above illustrate, remittances can take many forms, and more than one method is often needed to construct comprehensive estimates.

**11.43** An ITRS regularly collects data from banks (and possibly from enterprises) on transactions with non-residents. These systems often grew out of foreign exchange control systems and today are commonly used to collect data on international financial transactions. ITRS vary in

<sup>48</sup> The Center for Latin American Monetary Studies has also issued a guide, *Best Practices for the Compilation of International Remittances, 2006*. This guide is primarily intended for Latin American countries, but a number of its recommendations can be applied more broadly.

their degree of coverage, ranging from those that attempt to capture all transactions individually regardless of size to those that collect detailed data on only the major transactors and allow aggregated reporting for small transactions. They also vary in timeliness; data may be reported electronically at the time of transaction, or manually at less frequent intervals. For collecting remittance data, more detailed and timely reporting is, of course, preferable. However, collecting data on remittances is not the primary purpose of ITRS systems, and the systems often cannot be altered to fit the needs of remittance data compilers.

**11.44** Where they exist, ITRS can be an important source of data on remittances sent through formal channels, including licensed MTOs, whose international transactions are often conducted through the banking system. Because the ITRS system is already in place and legally enforced, this method of data collection usually is highly cost-effective and accurate. ITRS data are also comprehensive in that they cover all categories of remittances sent through formal channels, including social benefits and transfers to NPISHs.

**11.45** ITRS, however, often cannot provide the level of detail required by compilers. In systems with reporting thresholds, a significant portion of the data on remittance flows may not be collected. Within the data that are captured, it may be impossible to distinguish remittances from other small transactions, or to distinguish among the different categories of remittances, especially in systems that allow for the aggregation of transactions. Because an ITRS only captures those transactions actually settled through the financial system, the data will not reflect the gross flow of remittances if institutions net their transactions prior to settlement. In addition, in countries that are international banking centres, ITRS may over-report remittances to the extent that these transactions transit through the national financial system. Finally, ITRS cannot capture informal or in-kind transfers, both of which are substantial in many countries.

**11.46** Another method of data collection is a direct survey of MTOs.<sup>49</sup> This method is similar to ITRS in that the data are reported by a financial intermediary rather than by the sender or recipient. Unlike ITRS, the direct survey method gives compilers control over the level of detail collected, allowing them to overcome some of the

<sup>49</sup> The *Remittances Guide* notes that this method can also be applied to other remittance intermediaries, such as banks and hawala operations.

problems encountered when using ITRS. Specifically, compilers can request that MTOs report gross rather than net transactions and can set thresholds low enough to capture the majority of remittance transactions. In countries where MTOs are required to collect information on the purpose of transactions, compilers may be able to collect data on remittances separately from other small transactions.<sup>50</sup> Compilers may also be able to collect information on the cost, number and frequency of transfers, which is useful in understanding the nature and impact of remittances. If MTOs are the dominant transfer vehicle, a direct survey may allow compilers to collect the majority of transfer data in an accurate, timely and cost-effective manner. The case studies on cross-border remittance statistics in the Russian Federation and the Netherlands (annexes 11.1 and 11.5) present data collected from MTOs.

**11.47** Despite these advantages, data collected from MTOs are unlikely to capture the full range of remittance-type transactions. MTOs are primarily a vehicle for personal transfers and cannot serve as a source of data on the other components of remittances. Short-term workers may remit some of their compensation through MTOs prior to their return home. However, these transfers are considered part of compensation of employees, and it is unlikely that MTOs will be able to distinguish between transfers made by short- and long-term migrants. A survey of MTOs will not capture informal and in-kind transfers. Finally, where information on the purpose of the transfer is not collected, MTOs will be unable to distinguish personal transfers from other small financial transactions. To overcome these final complications, compilers may conduct periodic sample surveys of MTO users to determine what percentage of transactions are transfers.<sup>51</sup>

**11.48** Moving from surveys of financial intermediaries to surveys of senders and recipients leads to the method that may have the potential to produce the most comprehensive and detailed remittance statistics, namely a household survey. Focused on the units whose support is at the heart of the remittances concept, a well-designed household survey can collect data on all transfer channels and all remittance categories, although some categories can only be collected from

<sup>50</sup> National regulations, particularly those focused on combating money laundering and the financing of terrorism, often determine what information MTOs are required to collect from their customers.

<sup>51</sup> Another option is to assume that all transactions below a certain amount are personal transfers, although this can be expected to overstate remittances.

recipients. Household surveys can collect receipts and payments of personal transfers, net compensation of employees (provided the worker, or some member of his or her household, is present in the economy when the survey is conducted), and transfers to NPISHs. However, information on social benefits is only available from recipient households, and surveys of households will not cover institutional payments to NPISHs.<sup>52</sup> Household surveys can also collect supplementary data on the demographic profiles of senders and recipients and on the use and impact of remittances. The case study on the labour migration survey in Ukraine (annex 11.2) presents data on remittance flows and the demographic profile of remitters collected by a household survey.

**11.49** There are, however, significant difficulties in implementing household surveys. One of the most important is cost, which increases with the sample size. In most countries migration is a relatively rare event, necessitating a large sample size to ensure that the survey captures a representative group. One way of mitigating this cost is to build a focused sample frame by including a test question in a broadly-based existing survey to identify households engaged in remitting. Another is to limit the scope of the survey to those aspects of remittances that cannot be collected using other methods.

**11.50** Household surveys are also particularly vulnerable to reporter error. Such errors may be unintentional, resulting from a lapse in memory or misunderstanding of the survey questions. Carefully constructed survey questions that clearly explain the types of transactions and time period for which data are being collected can diminish these errors, although additional questions will also increase costs. Reporter errors may also be intentional, especially when the questions concern finances. Remittance senders may overstate the amount sent in an attempt to make themselves appear more generous, while recipients may understate their receipts to prevent additional taxation or for security reasons.

**11.51** Other disadvantages of household surveys include the lack of timeliness and difficulties in surveying unauthorized, transitory, or seasonal populations. The difficulty in surveying the migrant population may make household surveys a less useful tool in migrant-receiving countries than in migrant-sending countries.

**11.52** The final method of compilation, the model-based approach, moves away from collecting data on actual transfers and instead uses information on other economic and demographic factors to estimate remittance flows. Models offer a cost-effective way to compile comprehensive statistics, particularly in countries where remittances flow through many channels. Although they are most commonly used to compile statistics on personal transfers, models can also be designed to cover other remittance categories.

**11.53** There are two main modelling approaches, econometric and demographic.<sup>53</sup> Econometric models construct a mathematical relationship between remittance flows and various explanatory variables, such as GDP, per capita income, the exchange rate, interest rates, and the size of the migrant population. Demographic models take demographic data collected in censuses or other surveys and apply either an average amount remitted or a percentage of income remitted to the relevant population. For implementation, both types of models require some information about the size and characteristics of remittance transfers; however, this information can come from a one-time or infrequent survey, partner country data, or academic studies, greatly reducing the burden of data collection. The case study on estimates of remittances in the Czech Republic (annex 11.3) outlines the demographic model used to estimate remittances, and the case study on Bulgarian experience in developing estimates for remittances (annex 11.4) describes the model used by Bulgaria to estimate compensation of employees.

**11.54** As with the other methods, there are weaknesses in the model-based approach. Because models are built around the assumption of fixed relationships among variables, they are especially vulnerable to changes in patterns of remitting behavior. Models are also highly reliant on good source data. This is a particular concern for demographic models in countries where there is a large unauthorized population for which it may be difficult to obtain accurate data. Finally, because the resulting estimates are not based on actual flows, model outputs are difficult to verify.

**11.55** In addition to these four compilation methods, remittance-related data, especially for the broader components, may also be available from other sources. Government agencies managing visa and social security programmes

<sup>52</sup> Transfers from domestic NPISHs to foreign NPISHs or foreign households may be collected through a survey of NPISHs.

<sup>53</sup> A third method, the residual model, assumes that remittances account for the majority of imbalances in external flows.

often have administrative data on visa holders, employers, or social security payments abroad that compilers can use to estimate compensation and social benefits. Data on social benefit payments may also be available from public financial or tax filings of firms or pension funds. In some countries, private firms or non-profit organizations conduct research into migrant populations, private giving or other aspects of remittances, the results of which may be available to compilers.

**11.56** Countries may also be able to set up data exchanges with major remitting partners to collect data they are not able to collect themselves. The adoption of guidelines from the BPM6 and the *Remittances Guide* should increase the opportunities in this area by providing a set structure for organizing and publishing remittance estimates, allowing countries to check their remittance figures against those of their major partners. A supply and use (SU) framework may be useful in making these comparisons and testing the assumptions made in estimating remittances and related national accounts.

**11.57** To determine which method, or combination of methods, is most appropriate for a country, data compilers must be knowledgeable about their remittance market, including the prominent transfer channels and the characteristics of the relevant population. Where significant amounts of remittances travel through informal channels, a survey of MTOs will not provide a complete measure of personal transfers. Countries with a substantial unauthorized population will have difficulty using household surveys. To a large extent, knowing the market determines the collection method. Mexico, for example, combines direct reporting from MTOs and financial institutions with estimates of hand-carried transfers based on a monthly survey of international travellers. This method captures data on the two major transaction channels for transfers to Mexico.<sup>54</sup>

**11.58** Different methods are also often needed to collect data on different remittance categories. Although some countries may be able to collect the majority of personal transfers data from MTOs, other methods will need to be employed to collect data on compensation of employees. As an example, the United States uses demographic models to calculate personal transfers and compensation of employees, administrative data from the US government for social benefit

payments, and a survey of non-profit organizations, supplemented with data collected by the US government and a private organization, to calculate payments by NPISHs.<sup>55</sup> The use of different methods is further illustrated in the country case studies (annexes 11.1-11.5).

**11.59** Regardless of the methods employed, compilers need to stay abreast of new developments in the transfer market. Financial and technological innovations are continually expanding the transfer options available to remitters. Mobile banking - and with it mobile transfers - is increasingly popular in many countries, as are linked bank accounts, debit cards, and internet-based transfers. Current compilation methods may fail to capture transfers sent through these new channels. Changes in the demographic profile of the remitting population, such as age, origin, and legal status, may also affect the ability of a collection method to produce accurate estimates, as can changes in national financial regulations.

## Ongoing activities and recommendations for future work

**11.60** Work on improving remittance data continues at the international level. At the June 2008 Summit at Hokkaido Tokyo, the G-8 announced the creation of a Global Remittances Working Group (GRWG), coordinated by the World Bank, to carry forward international work on remittance issues. The GRWG is divided into four thematic areas, the first of which is "Data".<sup>56</sup> In June 2009, an International Technical Meeting on Measuring Remittances was held in Washington, DC to further refine the work program for the "Data" area. Participants proposed creating a new technical working group focused on improving remittance data that would meet annually to oversee and promote global and regional efforts to improve data, including the provision of technical assistance, and the exchange of metadata and bilateral data. In addition, the GRWG is in the process of creating a website to serve as a global repository for detailed metadata, bilateral data, and the results of ongoing research.

<sup>55</sup> In August 2008, the US Census Bureau conducted a survey of remitting behaviour as a one-time module attached to the monthly current population survey. The Bureau of Economic Analysis will explore the potential for the results of this survey to be used to refine the demographic model that it uses to estimate personal transfers.

<sup>56</sup> The other areas are "Interconnections with migration, development, and policy," "Payment and market infrastructure," and "Remittance-linked financial products and access to finance".

<sup>54</sup> See the website of the first meeting of the Luxembourg Group for information about collection methods in other countries at [www.imf.org/external/np/sta/bop/2006/luxgrp/060106.htm](http://www.imf.org/external/np/sta/bop/2006/luxgrp/060106.htm)

**11.61** Despite their potential power, until recently only limited work was done to develop household surveys as a tool for collecting remittance data. In an effort to address this knowledge gap, in January 2008 the UN Economic Commission for Europe (UNECE), World Bank, and US Census Bureau sponsored an Expert Group Meeting on the Contribution of Household Surveys to Measuring Remittances. Meeting participants have since formed the Task Force on Improving Migration and Migrant Data Using Household Surveys and Other Sources (the Suitland Working Group). Operating under the Conference of European Statisticians' Work Plan on Improved International Migration Statistics, this group will further examine these issues as well as the broader topic of using household surveys to measure migration. At a conference in March 2009, the Suitland Working Group further refined its work plan. Areas of focus include creating a draft module on migration and remittances to be included in nationally representative household surveys, linking administrative data with survey data, addressing data quality issues, and developing an online repository of household survey questionnaires.<sup>57</sup>

**11.62** At the regional level, the UNECE can support these continuing efforts by providing technical assistance for improved data collection and the conversion to BPM6 definitions. Several

regional institutions, including the Center for Latin American Monetary Studies, the IMF Middle East Technical Assistance Center, and the Statistical Office of the European Union (Eurostat), have conducted programmes to improve remittance data collection in member countries. UNECE members that have difficulty adjusting to the new BPM6 definitions, or that do not currently have adequate data collection methodologies, may benefit from assistance provided by the UNECE to refine or develop collection methods.

**11.63** Bilateral data sharing is another area where a regional UNECE initiative may be effective. Because migration is often a regional phenomenon, the sharing of data within a regional group can highlight asymmetries between major partner countries, which the countries concerned can then examine within the context of the larger region. The development of a centralized remittance database, either publicly available or restricted, may facilitate data sharing, and the development of an SU framework may facilitate the analysis of the data.

**11.64** Finally, as mentioned above, continued research is needed into emerging transfer methods and changes in the demographic profile of the remitting population. Research should be conducted at the national and regional levels to capture both country-specific developments and regional changes.

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<sup>57</sup> For additional information, see the conference website at <http://www.unece.org/stats/suitland/suitland.html>.

## Annex 11.1

### Cross-border remittance statistics in the Russian Federation

#### Introduction

**11.1.1** The Russian Federation tops the list of emerging market economies in terms of the number of migrants in its territory, while in terms of the value of remittances it is second only to the United States. Calculated on the basis of balance of payments data,<sup>58</sup> the value of remittances from the Russian Federation in 2007 stood at \$18 billion, or 7 per cent of the world's total.

**11.1.2** This annex illustrates some practical and methodological approaches adopted by the Central Bank of the Russian Federation in developing a statistical framework for cross-border remittances.

#### Statistics on cross-border transactions of individuals

**11.1.3** In 2004 the Central Bank of the Russian Federation initiated data collection on cross-border transactions of natural persons as part of its continuing effort to improve the quality of the Russian Federation's external sector statistics. The reporting population covers banks, MTOs and Russia's Federal Postal Service. The resulting database includes information on all international transactions of individuals, including remittances.

**11.1.4** In 2008, individuals' cross-border transactions (flows to the Russian Federation plus flows from the Russian Federation) were valued at \$51.9 billion, the equivalent of 3.1 per cent of the Russian Federation's GDP. Outflows exceeded inflows by \$30 billion (equivalent to 1.8 per cent of GDP).

**11.1.5** Remittances are only part of this

indicator because the latter includes data on (i) flows to the Russian Federation (or from the Russian Federation) in favour of (or from) resident individuals and non-resident individuals, and (ii) payments related to merchandise trade, trade in services, financial transactions, etc.

**11.1.6** The cross-border transactions statistics have attracted a wide range of users. The transactions show the interdependency of different economies. And they allow evaluation of the extent of households' involvement in banking sector transactions. The data also allow some assessment to be made of financial literacy, and help banks and MTOs to determine their shares in the money transfer market.

**11.1.7** Taking into consideration the great interest shown by banks and the media, the Bank of the Russian Federation has begun to publish statistical data on cross-border transactions on a quarterly basis. At present, users are particularly interested in data on the value of private cross-border transactions conducted through MTOs and the postal service. These data are disseminated as received; they come directly from banks that have clearing centres for MTOs, from MTOs that do not have clearing banks in the Russian Federation, and from reports on postal remittances.

**11.1.8** Comparison of the Central Bank of the Russian Federation data on cross-border transactions conducted via MTOs with mirror statistics provided by Georgia and Tajikistan shows broadly similar results (discrepancies in 2007 ranged from 2 to 5 per cent (table 11.1.1)).

**Table 11.1.1 Comparison of cross-border remittances**

	<i>\$ millions, and per cent</i>	
	<i>2006</i>	<i>2007</i>
Remittances from Russia to Tajikistan		
Bank of Russia data	957	1,632
National Bank of Tajikistan data	934	1,560
Discrepancy	3%	5%
Remittances from Russia to Georgia		
Bank of Russia data	344	558
National Bank of Georgia data	369	545
Discrepancy	-7%	2%

<sup>58</sup> The sum of the following balance of payments items: workers' remittances, compensation of employees and migrants' transfers.

### Economic definition of remittances

**11.1.9** The principal methodological problem the Central Bank of the Russian Federation faced was distinguishing between remittances and other cross-border transactions of individuals due to the lack of a single economic definition of remittances. The latest recommendations of international organizations and statistical fora are a major advance. The Central Bank of the Russian Federation believes that the aggregates introduced at the international level, such as personal remittances and total remittances, are a good statistical approximation to the definition of remittances.

**11.1.10** In the view of the Central Bank of the Russian Federation, and in agreement with international standards, remittances are:

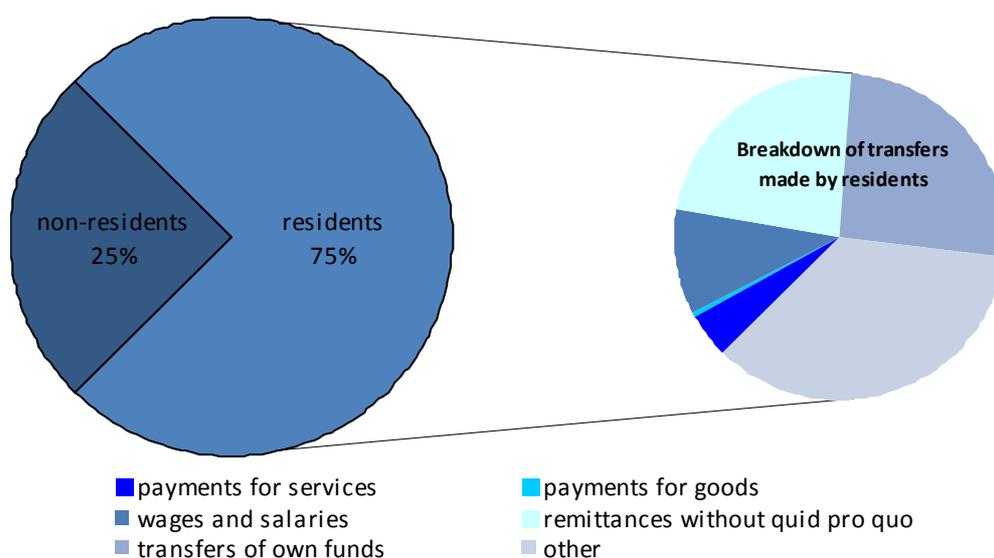
a. Resource flows from abroad to resident households of financial and other economic values related directly or indirectly to labour migration.

b. Resource flows from resident households of financial and other economic values related directly or indirectly to labour migration.

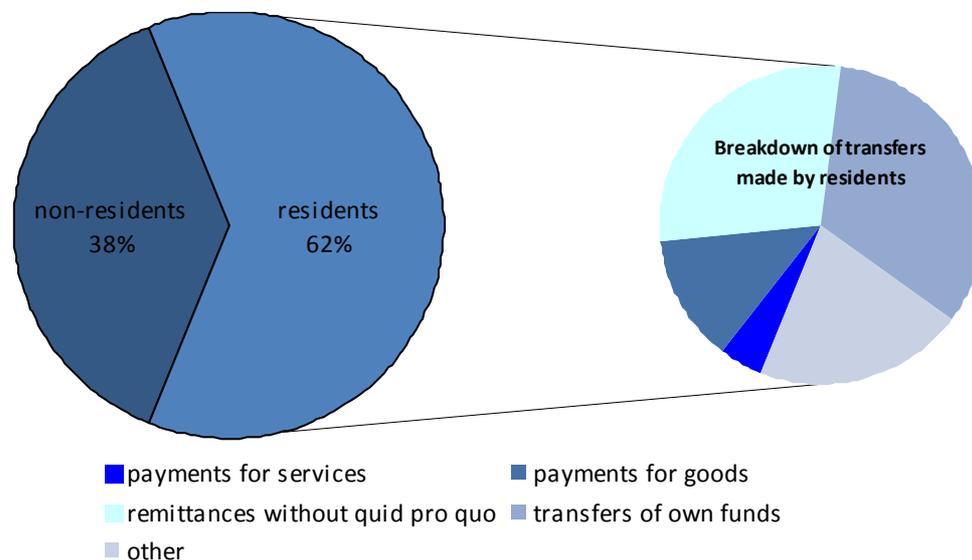
**11.1.11** Consequently, there are two major factors that should be taken into account when defining remittances: the final beneficiary (the household), and the fact that the movement of economic values is related to labour migration.

**11.1.12** In order to measure remittances, the Central Bank of the Russian Federation has disaggregated the indicators from the bank statements on individual cross-border transactions. The transactions have been divided into non-resident and resident, the latter being further

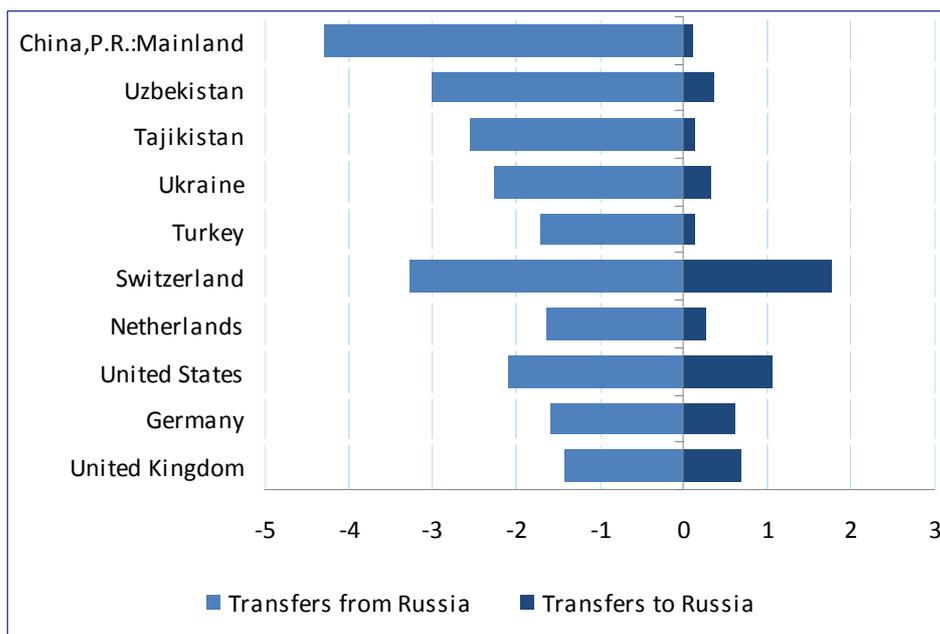
**Chart 11.1.1 Money transfers to the Russian Federation in favour of individuals, 2008**



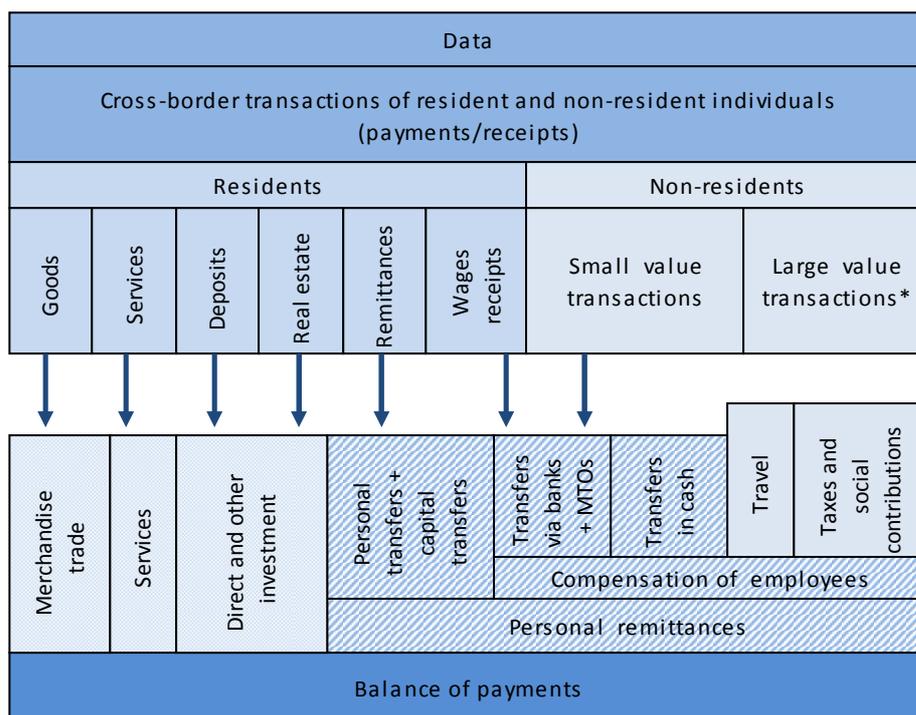
**Chart 11.1.2 Money transfers abroad from individuals in the Russian Federation, 2008**



**Chart 11.1.3 Cross-border transactions of individuals: data on top ten countries in 2008, \$ billions**



**Chart 11.1.4 Breakdown of cross-border transactions**



\*Merchandise trade

broken down by purpose.

**11.1.13** The problems are that too many cross-border transfers remain unclassified (18 per cent of payments and 33 per cent of receipts), and too many people have dual citizenship.

**11.1.14** The breakdown by country allows better analysis of data for the purpose of determining remittances in the true sense. Transfers to Uzbekistan, Tajikistan and Ukraine (amounting to \$7.8 billion in 2008, the equivalent of 0.5 per cent of the Russian Federation's GDP) seem likely to represent part of compensation of employees paid

**Table 11.1.2 Comparison of measures of personal remittances in BPM5 and BPM6, \$ billions**

	2004	2005	2006	2007	2008
<b>A. BPM5 framework (standard components related to remittances)</b>					
Income - compensation of employees					
Receivable (credit)	1.2	1.8	1.9	2.6	3.8
Payable (debit)	-1.5	-2.9	-6.1	-9.9	-18.0
Current transfers - other sectors					
Workers' remittances					
Receivable (credit)	0.9	0.6	0.8	0.9	0.8
Payable (debit)	-2.7	-3.1	-4.6	-6.9	-7.3
Capital account – migrants' transfers					
Receivable (credit)	0.4	0.6	0.7	1.2	1.4
Payable (debit)	-1.1	-1.0	-0.8	-0.9	-0.9
Remittances (credit)	2.5	3.0	3.3	4.7	6.0
Remittances (debit)	-5.2	-7.0	-11.5	-17.8	-26.1
<b>B. BPM6 framework (components related to remittances)</b>					
Personal remittances (supplementary item)					
Personal remittances (credit)	1.8	3.0	3.4	4.3	5.3
Net compensation of employees (receivable)	0.9	1.4	1.5	2.2	3.4
Compensation of employees (standard component)	1.2	1.8	1.9	2.6	3.8
less					
Taxes on income (paid to non-residents)	-0.1	-0.2	-0.1	-0.2	-0.2
Travel (import)	-0.2	-0.2	-0.2	-0.2	-0.3
Personal transfers (standard component)	0.9	1.6	1.9	2.1	1.9
Workers' remittances	0.9	0.6	0.8	0.9	0.8
Other household-to-household transfers	0.0	1.0	1.2	1.2	1.1
Personal remittances (debit)	-3.5	-5.8	-9.7	-16.2	-23.8
Net compensation of employees (payable)	-0.9	-1.9	-3.6	-6.3	-12.3
Compensation of employees (standard component)	-1.5	-2.9	-6.1	-9.9	-18.0
less					
Taxes on income (received from non-residents)	0.1	0.2	0.3	0.6	1.2
Travel (export)	0.5	0.9	2.2	3.0	4.5
Personal transfers (standard component)	-2.7	-3.9	-6.0	-9.9	-11.6
Workers' remittances	-2.7	-3.1	-4.6	-6.9	-7.3
Other household-to-household transfers	0.0	-0.8	-1.5	-3.0	-4.3

to migrant workers from these countries. This is confirmed by frontier control service data on the number of people who entered the Russian Federation, and data on average earnings.

**11.1.15** At the same time, the Russian Federation's negative balance with China (estimated at \$4.2 billion) is not supported by data on the number of Chinese nationals in the Russian Federation. Research suggests that some remittances to China declared by individuals as transfers without quid pro quo represent payment for imports brought to the Russian Federation without being cleared by customs.

**11.1.16** Large transfers are also a problem. It is common practice in the Russian Federation for unincorporated entrepreneurs to pose as private individuals and remit through MTOs payments related to merchandise trade. Declared as personal transfers to the banks and reported by them accordingly, such transactions involve considerable funds. Consequently transfers exceeding \$5,000

have been excluded from household-to-household remittances.

**11.1.17** The work has resulted in the separation of remittances from other individual cross-border transactions.

### Personal remittances

**11.1.18** "Personal remittances" is a supplementary item introduced in BPM6.

**11.1.19** Personal remittances are the sum of:

- Secondary income in the form of personal transfers.
- Primary income in the form of compensation of employees (less taxes, social contributions, transport and travel).
- Capital transfers between households.

**11.1.20** In the Russian Federation the item personal remittances has been calculated using balance of payments data.

**11.1.21** As a result of these calculations, personal remittances proved to be 10 per cent smaller on average than when calculated according to the BPM5 methodology. Deducting expenses incurred by foreign workers in the host country accounts for most of the decrease.

**11.1.22** The compilation of the new item was not challenging from the standpoint of determining net compensation of employees, because estimates of taxes and social contributions paid by temporary workers and the export and import of travel services were made regularly. Total compensation of employees has been estimated using statistical modelling techniques, using data on the number of residents temporarily employed in a foreign economy and the number of non-residents working in the Russian Federation (collected quarterly by the migration service) multiplied by the average income broken down by activity for non-resident employees and by country and activity for resident employees. Certain items are then deducted (i) estimated spending on accommodation, meals and other goods and services, and (ii) tax payments according to a flat personal income tax rate set in the Russian Federation and the weighted average tax rate for foreign countries. This approach allows net compensation of employees to be determined, split between funds remitted formally via banks (actual data taken from the banking statistics) and informal cash transfers as a residual.

**11.1.23** This model, given the size of the Russian Federation's territory, does not take into account temporary workers' transport expenses, as this is important only for border workers who regularly (daily or weekly) bear such expenses. Russian resident workers stay abroad and non-resident workers stay in the Russian Federation for 3-6 months on average.

**11.1.24** The item personal transfers (workers' remittances and other current transfers between households) has been taken as equal to: (i) the household-to-household remittances without quid pro quo reported by banks and MTOs, plus (ii) estimated transfers made by those non-residents (and estimated transfers in favour of those non-residents) whose legal and statistical residency status differ.

**11.1.25** Bank reporting cannot identify capital transfers, which are included with other current transfers between households.

### Further developments

**11.1.26** To expand the coverage of remittance statistics, the Central Bank of the Russian Federation plans:

a. To estimate the value of transfers from the Russian Federation through hand-carry. Cash transfers by non-residents (temporary workers) form part of compensation of employees, but resident transfers in the form of cash taken out of the country as "pocket" money or passing through third persons, and transfers in kind, are not registered in the secondary income account of the Russian Federation's balance of payments.

b. To publish personal remittances by country as supplementary statistical information to the balance of payments.

c. To include the institutions which make electronic transfers via the internet in the reporting population. Transfers from one electronic purse to another are a new way of making remittances, with few users so far. However, the advantages of this channel call for the organization of data collection. In the Russian Federation these transactions are conducted by unlicensed institutions which are not obliged to provide detailed statistics. The Central Bank of the Russian Federation is aware that illegal transfers (money laundering, etc.) may pass through these systems.

d. To compile mirror statistics with major recipient countries.

### Conclusion

**11.1.27** Remittances are a topical issue in the era of globalization, and the statistical monitoring of them should be elaborated. It will be useful to study this phenomenon not only from the standpoint of the impact of remittances on the economies that supply migrant workers, but also for the effect that migrant workers have on the economic development of host countries, knowledge of which would help to raise the social status of migrants and improve their working conditions.

## Annex 11.2

### Migrant workers' earnings and remittances: results of a labour migration survey in Ukraine

**11.2.1** In Ukraine, considerable information on personal remittances has been obtained in the framework of the project "*Labour migration survey in Ukraine*".<sup>59</sup> More information on the organization of the survey and the estimates of number of migrants is presented in annex 10.5.

**11.2.2** Assessment of real earnings of migrant workers is the most complex matter in sample surveys, largely because migrants are often unwilling to respond openly to questions related to earnings. A considerable proportion of migrant workers operate under pseudo-legal or illegal employment schemes.

**11.2.3** The methodology to estimate the actual amounts of migrant workers' earnings and remittances was based on labour migration data as well as on the ILO and Eurostat data on earnings of Ukrainian economic migrants in receiving countries.

**11.2.4** Earnings of migrant workers depend on:

- a. The number of migrant workers and their distribution by cohorts (depending on host country and activity area).
- b. The amount of work available (on average) to the representatives of each selected cohort of migrant workers.
- c. The wages of migrant workers in each cohort.

**11.2.5** Using the adopted methodology, amounts of earnings and remittances are estimated for the year 2007. Labour migration survey data on the number of migrants going abroad in 2007 and the first half of 2008 were used for the calculation.

**11.2.6** A limited selection of countries and activities are considered representative of earnings of migrants in other countries and other activities. Seven main countries hosting Ukrainians working abroad (Russian Federation, Italy, Czech Republic, Poland, Hungary, Spain and Portugal) and seven main activities (agriculture, industry, construction, wholesale and retail trade, hotels and restaurants,

transport and activities of households) were chosen.

**11.2.7** Remittance amounts (including bank transfers, money sent by informal channels and money taken back when migrants return to their home country) depend on both earnings and the cost of living in host countries. According to the survey findings, 22.5 per cent of migrants' earnings are spent in the countries of temporary residence. Transport costs of going abroad and back must be taken into account: in practice, migrants often use low-cost transport, and those working in more distant countries tend to go abroad for a long period. Thus remittances account for 70 per cent of total earnings, over €1.3 billion.

**11.2.8** About half of Ukrainian migrant workers originate from six western regions (Volyn, Zakarpattia, Ivano-Frankivsk, Lviv, Ternopil, and Chernivtzi). The remittances sent to households in these regions amount to around €700 million, the equivalent of over 20 per cent of the payroll in these regions. In Zakarpattia region (the territory with the highest prevalence of labour migration) remittances exceed half of the local payroll.

**11.2.9** People working abroad usually resort to strict economy. According to the survey data, 66.1 per cent of migrant workers spent in the host country less than a quarter of their earnings, and 29.9 per cent between a quarter and a half. Only 4.0 per cent of Ukrainians working abroad spent more than half of their earnings.

**11.2.10** Expenditures also depend on the legal status of migrant workers. Persons having a residence and work permit spent abroad a larger share of their earnings than illegal migrants, possibly because illegal migrant workers have uncertain status and have no plan (or possibility) to stay long in the host country. They save as much as they can in the time available. Considerable consumption expenditure coupled with a stable legal status could be evidence of an intention to reside abroad for a longer period, perhaps permanently. 3.2 per cent of men and 5.8 per cent of women spend abroad more than half of their earnings, which could suggest that some Ukrainians working abroad plan a longer or permanent migration.

<sup>59</sup> It is recognized that the methodology described in this annex allows only approximate estimation of the earnings and remittances sent by migrants to their families and relatives in Ukraine. However, these estimates are consistent with the reality. More accurate estimates of remittances sent by Ukrainian migrant workers will require more detailed studies including surveys improving the basis used for calculations.

**11.2.11** Expenditures largely depend on living costs and the period of stay in the host country. The longer the stay, the higher the expenditures for settling. Migrants working in Hungary, Poland and the Russian Federation had the lowest expenditures - 78.9, 76.9 and 72.0 per cent respectively of all migrants in these countries spent less than a quarter of their earnings. By contrast only 28.4 per cent of migrants in Spain, 49.1 per cent in Italy, and 55.7 per cent in Portugal spent such a small proportion of their earnings, reflecting higher living costs and the likelihood of longer continuous employment in these countries.

**11.2.12** 61.1 per cent of migrant workers sent money from abroad to their families in Ukraine. This does not mean that other migrant workers did not support their relatives. However, the distribution by host country reveals that migrants sent money to their relatives primarily from distant countries (Spain - 81.8 per cent, Italy - 78.6 per cent, Portugal - 71.3 per cent). Most migrants working in Hungary and Poland did not send money to their relatives. Approximately half of migrants working in the Russian Federation sent a portion of their earnings.

**11.2.13** The assumption is that migrants working in neighbouring countries transfer what is left of their earnings personally when returning to Ukraine.

**11.2.14** A higher proportion of men (62.3 per cent) than of women (58.8 per cent) send a portion of their earnings to Ukraine, though women make up a larger proportion among migrants in the countries from which the funds are remitted. This is evidence of a weakening of ties between women migrants and the home country.

**11.2.15** Persons who have a formalized legal status remitted a somewhat larger amount to Ukraine than migrants without a legal status, though their expenditures in the host country were also higher. On average in 2007 migrants with a residence and work permit remitted \$2,831. This is attributed to higher earnings in this cohort of migrants. At the same time migrants without legal status or whose status was not defined sent on average \$2,551 and \$2,511, respectively.

**11.2.16** Migrants working frequently abroad remitted markedly larger amounts. Migrants who

went to work abroad once in 2007 remitted \$2,353 on average, whereas those who went several times remitted \$2,821. Those who regularly went abroad to work every month remitted as much as \$3,451 in 2007 (probably a certain share was of a trade and business nature).

**11.2.17** Migrants spend most on essentials (foodstuffs, clothes and services) as reported by 72.0 per cent of migrant workers. The second heading is durables (39.3 per cent), and the third, purchase and reconstruction of property (apartments, houses), and new construction (29.1 per cent). Less frequently earnings were used to pay for studies by household members (12.4 per cent), loan repayment (10.4 per cent), savings (9.7 per cent), and medical treatment (6.5 per cent).

**11.2.18** Migrant workers' earnings sent to Ukraine contribute considerably to the quality of life in Ukraine.

**11.2.19** On the whole, 1.33 million households (or one in two surveyed) in 2007 received aid from abroad in cash or in kind, predominantly from family members and relatives; only 4.5 per cent received aid from friends and other acquaintances. Households received 89.2 per cent of the aid in cash, on average amounting to \$2,207 per household in 2007. Cash aid contributed on average 42.6 per cent to household aggregate income. The amount of aid to rural residents was 1.4 times that to urban residents.

**11.2.20** Welfare of households with migrant workers is largely secured by their work abroad. Thus 62.5 per cent of households perceived as wealthy received from migrants almost a half of their incomes. In the group perceived as mid-wealthy, such households made up 41.6 per cent. And for the group below mid-wealthy, such households accounted for only 36.6 per cent.

**11.2.21** A relationship can be observed between the level of wealth and amounts of cash aid received. One in three households perceived as mid-wealthy and one in two households perceived as below mid-wealthy or poor in 2007 received on average up to \$1,000. At the same time, one-third of wealthy households received \$2,001-\$3,000, and one-third over \$5,000.

## Annex 11.3

### Estimates of remittances in the Czech Republic

#### Introduction

**11.3.1** The Czech Republic has experienced a large inflow of foreign workers in recent years. Capturing the remittances of immigrants to their countries of origin in the national accounts and balance of payments has thus become important.

**11.3.2** The responsibility for remittances estimates was transferred from the Czech National Bank (CNB) to the Czech Statistical Office (CSO). The direct cause of the transfer was higher thresholds for obligatory identification of transactions by commercial banks, and increasingly popular use of credit cards. The former method of estimating remittances became ineffective because the remittance flows captured through the formal financial system (banks, credit unions and licensed MTOs) represented only a small portion of total remittances. Flows through formal channels do not allow full coverage of all transactions, and combining tourists' and migrant workers' money transfers means that the purpose of transactions cannot be properly identified. Moreover, data on flows through formal channels do not differentiate between short- and long-term migrants, which is important for the distinction between primary and secondary income flows. Currently, remittances can be estimated only by using statistical methods combining various information sources. However, the CSO has not accumulated sufficient experience in this area. Work has accordingly focused on the labour of foreigners in the Czech Republic, for whom the CSO has developed a general procedure to estimate income, expenses and remittances to their countries of origin. This aspect of remittances is the subject of this annex.

#### Estimate of foreigners' labour in the Czech Republic and remittances to their countries of origin

**11.3.3** Following the first attempts from the late 1990s, the current approach to the estimates is focused on meeting the needs of national accounts, balance of payments, and supply and use (SU) tables. Each of the three areas has specific requirements. National accounts require a distinction between primary and secondary income and a focus on gross wages (compensation of employees, taxes, and contributions to social and health insurance systems). Apart from the principal requirements of national accounts, the balance of

payments needs also a territorial breakdown, according to the main (groups of) countries of origin. The consumption and export of goods by short-term migrants needs to be divided according to commodities in the input-output tables and SU tables.

**11.3.4** The CSO's approach to the estimation procedure is based on these requirements. The description of the procedure below is limited to one direction of remittance flows - the flows from the Czech Republic to foreign countries. These flows include only those from migrant workers, and not from Czechs. The estimation procedure can be divided into four stages: (1) the number of foreigners working in the Czech Republic, (2) their income, (3) their expenses in the Czech Republic, and (4) their remittances. The sources and methods for estimating the number of foreign workers are explained in annex 10.1 to Chapter 10 on international labour movements. The remaining steps are outlined below.

#### Estimates of income of foreigners working in the Czech Republic

**11.3.5** Foreigners working in the Czech Republic are split into two categories, namely (a) employees, and (b) "entrepreneurs", or self-employed persons (who do not have an employment contract with a resident employer). Different approaches are necessary to estimate their income.

a. The estimates for employees are based on data on average wages of foreigners from statistical surveys conducted for the CSO by Trexima (a private agency). The data are structured according to the countries of origin. However, they are not structured according to activity, income groups and type of stay (long-term, short-term, and illegal). This is why activity and income breakdowns (as made by the CSO) cannot be regarded as reliable. In case of workers staying in the country for a short time (non-residents), the estimated gross wage is used to derive the contributions to social and health insurance systems and income taxes. In case of illegal workers, the contributions and taxes are not calculated, so the gross wage is regarded as the net wage.

b. The estimates for entrepreneurs aim to quantify the net income remaining for personal expenses and any remittances to their countries of origin. Estimates are based on information on their

**Table 11.3.1 Monthly incomes and expenditures of foreigners working in the Czech Republic, 2006, in koruna (CZK)**

	<i>Euro area</i>		<i>Other EU</i>		<i>Non-EU</i>		<i>Total</i>
	<i>Total</i>	<i>Managers</i>	<i>Total</i>	<i>Slovakia</i>	<i>Total</i>	<i>Ukraine</i>	
Number of persons	10,439	7,704	100,908	84,125	98 594	57,674	209,941
Average wages and salaries, gross	43,663	59,603	32,009	22,958	24,645	18,958	28,443
(-) Employees' social contributions	-3,506	-5,458	-7,450	-4,001	-2,870	-3,080	-2,370
(-) Taxes on income	-4,250	-8,012	-12,358	-5,032	-2,623	-3,107	-1,887
Wages and salaries, net	35,907	46,133	12,201	13,924	19,152	12,770	24,187
Individual consumption expenditure	16,884	17,206	7,182	7,471	4,666	4,220	6,482
of which:							
1.Food, non-alcoholic beverages	3,659	4,297	1,792	1,837	1,286	1,261	1,647
2.Alcoholic beverages, tobacco	1,911	2,218	860	880	618	600	799
3.Clothing and footwear	1,458	1,797	348	339	252	241	358
4.Housing, water, electricity, gas, etc.	4,369	2,961	1,987	2,220	879	570	1,585
5.Furnishings, household equip., etc.	524	597	182	182	107	103	163
6.Health	166	183	79	83	48	45	69
7.Transport	510	305	614	640	394	375	506
8.Communication	135	19	122	138	64	47	96
9.Recreation and culture	2,027	2,359	192	173	88	49	234
10.Education	27	0	36	36	18	16	27
11.Restaurants and hotels	258	264	587	564	727	748	637
12.Miscellaneous goods, services	1,840	2,206	383	380	185	165	362
Average "savings" per month	19,023	28,927	5,019	6,453	14,486	8,550	17,705

section of economic activity (according to NACE rev. 2) and the item "net lending/net borrowing" (B.9) in the respective section. The main weakness of this approach is that entrepreneurs can invest in their countries of origin instead of the Czech Republic, so their net lending may be larger than the average for the activity category, and the amount available for remittance abroad correspondingly higher. Moreover, some may be only token entrepreneurs, in practice working as employees; some may be students. Their registration as entrepreneurs is often motivated by the need to obtain a long-term visa to stay in the Czech Republic, which is easier if they claim to be entrepreneurs (in which case the amount available for remittance abroad may be lower than the approach would indicate).

#### **Estimates of expenses for final consumption of foreigners working in the Czech Republic**

**11.3.6** The expenses for final consumption of foreigners working in the Czech Republic are estimated in a combined structure according to groups of countries, type of stay (long-term, short-term, and illegal) and 12 COICOP classification groups. The data are based on family accounts statistics. Unfortunately, these statistics capture

only expenditure by Czech households. The data concerned are therefore corrected individually for each group. The resulting aggregate data for each group are then compared with the income data in the same group. Table 11.3.1 shows the estimated expenses broken down by the major groups of countries from which the migrants come. Net income and savings left for any remittances to the countries of origin are included for convenience.

**11.3.7** This approach has its weakness in a relatively arbitrary correction as the CSO lacks reliable information on consumption habits of some groups of foreigners (e.g. migrants from Vietnam and Ukraine).

#### **Estimates of remittances of foreigners working in the Czech Republic**

**11.3.8** Estimates of savings left for remittances to the country of origin vary considerably among different groups of foreign workers (see table 11.3.1). At an exchange rate of 26 CZK to the euro, amounts range from €250 to €600 per month.

**11.3.9** However, the estimate of remittances does not imply that the funds are transferred in the calculated amount and specified period. The actual money transfer is usually influenced by a number

**Table 11.3.2 Calculation of remittances from the Czech Republic, 2006**

<i>CZK millions</i>						
	<i>Non-residents: employees (legal)</i>	<i>Non-residents: employees (illegal)</i>	<i>Residents: employees</i>	<i>Residents: entrepreneurs</i>	<i>Economically inactive foreigners</i>	<i>Total</i>
Number of persons	69,235	7,117	133,589	95,889	62,650	368,480
D.11 Wages and salaries	16,239	1,110	40,644	NA	NA	N
D.12 Employers' social contributions	5,521	NA	13,821	NA	NA	NA
D1 Compensation of employees	21,760	1,110	54,465	NA	NA	NA
(-)D.51 Taxes on income	-1,721	NA	-5,220	NA	NA	NA
(-)D.6111 Employers' actual social contributions	-5,521	NA	-13,821	NA	NA	NA
(-)D.6112 Employees' actual social contributions	-1,949	NA	-4,877	NA	NA	NA
(-)D.611 Actual social contributions	-7,470	NA	-18,698	NA	NA	NA
(-)P31 Individual consumption expenditure	-3,949	-343	-12,040	-15,619	-2,155	NA
B.9 Net lending(+)/net borrowing(-)	NA	NA		75,558	NA	NA
Savings usable for remittances	8,620	767	18,507	59,939	-2,155	85,678
Remittances, total	8,620	767			16,938	26,325
Remittances, as per cent of savings	100%	100%			22%	31%
Monthly remittances per person (in euro)	399	345			95	229

of other factors connected with the purpose of the stay in the Czech Republic and the link to the country of origin. The transfer may be postponed or there may be no transfer at all. The worker may make the remittances regularly, from time to time or at the end of his or her stay. Or no remittances may be made if he or she obtains a permanent residence permit. For these reasons the actual transfers are estimated, for example, at only 10 per cent of the estimated savings in the case of Slovak citizens, and 90 per cent in case of managers from the euro area. For the short-term and illegal stays (of non-residents) it is expected that actual remittances are as calculated.

#### **Foreigners' labour and remittances captured in national accounts**

**11.3.10** The primary categorization of foreigners into residents and non-residents based on the duration of their stay is essential for correct quantification of all flows to be captured in national accounts. Table 11.3.2 shows the resulting figures for foreigners working in the Czech Republic in

2006. (Some data items are included to illustrate the calculation of remittances in table 11.3.2; they are not explicitly shown in the national accounts.)

#### **Conclusion**

**11.3.11** The procedure to estimate foreign labour in the Czech Republic and remittances to their countries of origin described above has a number of weaknesses, and many assumptions are not supported by firm data. This applies particularly to the estimates of expenses and remittances made. Nevertheless, the development of a general estimation procedure covering all required outputs can be looked upon as a first step to measure the relatively new, yet very significant, phenomenon in the Czech economy. The procedure is expected to be improved by the use of specially designed one-off statistical surveys. In order to identify the optimum approach, the CSO has set up a task force comprising representatives of different institutions dealing with the issues related to foreigners in the Czech Republic.

## Annex 11.4

### The Bulgarian experience in developing estimates for remittances

**11.4.1** In Bulgaria, data on remittances are very important for policymaking, analysis and research purposes. Receipts of remittances are an important and stable source of external financing. (For most developing countries these receipts are the second most significant external funding channel after FDI.)

#### General information

**11.4.2** The Bulgarian National Bank (BNB) has been responsible for compiling the balance of payments since 1991. Article 7 of the Foreign Exchange Law states that:

*"For the needs of the balance of payments statistics, registers shall be kept of each transaction and payment between a resident and non-resident, as well as in relation to each cross-border transfer and payment amounting to a sum determined by a regulation, issued by the BNB, but not less than BGN 5,000 as follows:*

- (a) by commercial banks and the BNB;*
- (b) by ministries and government agencies;*
- (c) by the Central Depository and issuers of registered securities on the capital market, with regard to which the existing legislation provides for registration with the Central Depository;*
- (d) by investment intermediaries, insurers and pension funds;*
- (e) by notaries, registrars, respectively."*

#### Data sources and estimation procedures

**11.4.3** In compiling the balance of payments, the BNB broadly complies with the definitions set out in BPM5.

**11.4.4** In the past, data on remittance inflows came mainly from the ITRS, which remains the source of remittance outflows (that is, remittances abroad by foreign workers in Bulgaria). Regulation number 27 on balance of payments statistics, in force since 2003, introduced a statistical declaration used by the commercial banks in classifying their clients by residence. Although the legal basis complies with the BPM5, keeping the register up-to-date is often a difficult task. Physical persons are asked to define their status. BNB staff regularly visit the banks and check the quality of their records. The enhanced ITRS, operational since 2006 (previously the data were reported in

aggregated form), has improved the quality of the information. Until March 2010 the main source of data on remittances in Bulgaria (especially from permanent migrants) remained the ITRS. Banks reported also transactions of MTOs on a net basis. The information from MTOs was indirectly derived from the ITRS. The BNB plans to start direct reporting from MTOs, which since February 2008 have been subject to licensing and supervision by the BNB, in the near future.

**11.4.5** Weaknesses of the old system, which necessitated the revision in the methodology for compilation of data on workers' remittances, were that only official (formal) channels were covered, and that there was a minimum threshold below which bank transactions are not reported.

**11.4.6** In March 2010 the BNB introduced a new methodology for estimating remittance inflows. The methodological issues concerning cross-border flows of permanent emigrants are described in two recent (March 2010) publications of the Statistics Directorate of the BNB, *"Model for estimation of item workers' remittances, credit"*, and, for cross-border flows from temporary emigrants (compensation of employees in the balance of payments), *"Changes in the methodologies for estimation of certain current account items"*. Both methodologies are based on the results of the border survey of Bulgarian and foreign travellers, carried out by the BNB through an external agency in the period August 2007-July 2008. In addition a survey among the Bulgarian tour operators and a household survey are used to estimate the flows related to unofficial employment abroad.<sup>60</sup>

#### Long-term emigrants (workers' remittances)

**11.4.7** As mentioned above, the data source for the debit item (remittances abroad by foreign workers resident in Bulgaria) is still the ITRS.

**11.4.8** The estimates of credits are now based on the product of the number of Bulgarian emigrants transferring money to their relatives and the amount of the average transfer. Such calculations are made separately for official and unofficial transfer channels. The sum of the money

<sup>60</sup> Further information on the methodology applied is available at the BNB's website: [www.bnb.bg/Statistics/StMethodologicalInstructions/index.htm?toLang= EN](http://www.bnb.bg/Statistics/StMethodologicalInstructions/index.htm?toLang= EN)

transferred via those two channels is recorded as the amount of workers' remittances to Bulgaria.

**11.4.9** Data from the State Agency for Bulgarians Abroad and from Bulgarian embassies are used to estimate the number of emigrants abroad. The first source has the advantage of providing information on the illegal emigrants as well. Additional adjustments are made to exclude students and short-term emigrants.

**11.4.10** Information on the number of emigrants remitting funds to Bulgaria, as a percentage of the total long-term emigrant population, and on the average transfer, is based on the BNB sample border survey mentioned above. In addition the survey provides information on the type of transfer channel used (formal or informal).

#### **Seasonal and border workers (estimation of compensation of employees)**

**11.4.11** The data source for the debit item (payments to foreign non-resident workers) is still the ITRS. The credit item is based on an estimate of the number of Bulgarian residents employed abroad short-term (for less than a year) multiplied by average earnings for each foreign economy.

#### **Estimation of compensation of employees**

**11.4.12** High unemployment in some areas of Bulgaria and the opportunity to stay in most EU countries for three months without a visa triggered unofficial migration. Its nature - short-term (within the permitted three months' stay) and shuttled (repeated unofficial employment for another three months) - seems to have led to an inflow of funds to Bulgaria via unofficial channels.

**11.4.13** Compensation of employees comprises wages, salaries, and other benefits (in cash or in kind) earned by individuals in economies other than those in which they are resident for work performed for and paid by residents of those economies. Employees, in this context, include seasonal or other short-term workers (less than one year) and border workers, whose centre of economic interest remains their home economy (BPM5, paragraph 269).

**11.4.14** There are several problems in collecting data on compensation of employees:

- a. The practical implementation of the concept of residence.
- b. The high threshold applied by the countries with settlement-based balance of payments collection systems.

c. The diversity of methods for transferring money. Along with transfers through banks and MTOs, there are significant informal transfers.

**11.4.15** Flows arising from unofficial employment are estimated by multiplying the number of residents working unofficially abroad by their income and expenditure per capita. The number of workers is an estimate based on (i) the number of Bulgarian citizens leaving the country giving travel as their reason for departure (border police data), (ii) a survey among Bulgarian tour operators on the number of Bulgarians who bought package holidays and made reservations for travelling abroad, run by the BNB at the end of 2005, and (iii) a separate survey of households.

**11.4.16** The model allows estimation of monthly incomes and expenditures, by country of employment. The incomes are included on the credit side of compensation of employees, and the expenditures are included in travel debits.

**11.4.17** Incomes of these unofficial workers are estimated by multiplying the number of workers and minimum wages in the respective country of employment. As the workers are unofficially employed, it is assumed that they receive the minimum wage in the respective country and do not pay any taxes, insurance, etc. The source for the levels of minimum wages is the report "*Minimum Wages 2005 - Major Differences between EU Member States*" (Eurostat, August 2005).

**11.4.18** Their living costs abroad are estimated by multiplying the number of workers and the cost of living in the respective country. It is assumed that Bulgarians unofficially employed abroad stay for three months and then return to Bulgaria (the legally allowed period to stay for tourist purposes is three months). However, in practice expenditures may be lower than estimated, as most of the shuttle employees can rely on the support of Bulgarians already working abroad.

**11.4.19** The unofficial status of these employees leads them to transfer income through informal channels. Most carry the money with them, or use bus drivers, relatives and friends to do so on their behalf.

**11.4.20** With the January 2010 data the BNB applies new methodology for estimation of Compensation of employees, credit. Data from the BNB border survey and from the national statistics office are used. The new methodology was applied for the first time with the data for January 2010, with back data revisions for the months of 2007,

2008 and 2009. It allows for more accurate modelling of the residency of the employer.

for estimating outward flows of remittances is also planned.

### **Future plans**

**11.4.21** The BNB plans to start direct reporting from MTOs in the near future. A new methodology

## Annex 11.5

### Estimating remittances in the Netherlands

#### Introduction

**11.5.1** This annex<sup>61</sup> describes some recent work by the central bank and Statistics Netherlands to improve estimates of outward remittances using data of payments abroad reported by MTOs (€0.6 billion in 2009). The reported amount is corrected for (estimated) non-remittance transfers, and then for (estimated) remittances through other channels. The results indicate that in 2009 some €1.5 billion was remitted abroad, about one-third via MTOs. The list of beneficiary countries in 2009 was headed by Surinam, Turkey and Morocco, recipients in total of over €500 million. Although the results appear reasonable, uncertainties remain in the absence of surveys among immigrant households in the Netherlands or mirror data from their home countries.

**11.5.2** As globalization and cross-border labour movements have increased, remittances have become increasingly significant for the Dutch balance of payments. In October 2009, the Netherlands had 3.3 million persons of foreign origin or with parents of foreign origin (20 per cent of the total population). Immigrants originate mainly from Turkey (380,000), Morocco (350,000), Surinam and the Netherlands Antilles (together almost half a million). During the 1995-2009 period, annual migration to the Netherlands fluctuated around 115,000 persons. In 2009, the inflow was 146,000 persons. Most migrants came from Germany, the Netherlands Antilles, the United Kingdom, Belgium, Turkey, the United States, Poland and Morocco. The growing numbers of immigrants have in recent years had a net upward effect on outward remittances.

#### Estimating outward remittances

**11.5.3** Estimates of outward remittances are based on transfers made through MTOs, the only regularly updated source of figures that presumably relate largely to remittances. An indication for this is the correlation between, on the one hand, the numbers of, and amounts involved in, MTO transfers to several countries and, on the other, the numbers of resident households originating from those countries. This is illustrated for the year 2009 by chart 11.5.1.

**11.5.4** In 2006-09, an annual average of €660 million was transferred abroad in 1.7 million transactions. Plotted against numbers of immigrant households from various countries of origin, both amounts and numbers of transactions were highest for countries having low GDP per head (represented in chart 11.5.1 by smaller dots; for similar numbers of households, the smaller dots lie usually above the larger dots, which represent richer countries).

**11.5.5** The fact that not all transfers made through MTOs are remittances calls for a downward adjustment. Conversely, upward adjustments must be made because remittances are not made only through MTOs, but also through bank transfers, in cash, etc. These latter factors vary from country to country, and statistics are not available. Therefore, both downward and upward adjustments are made indirectly, by breaking the total amounts for each country down into a few components on which information is available, making it easier to demarcate them and to also derive limits for the total amounts.

**11.5.6** For each country, three components/criteria play a particular role:

- The total average amount donated to relatives abroad by households that actually do make remittances whether via MTOs or otherwise.
- The percentage of this amount which is transferred through MTOs.
- The households from a country, as a percentage of all households from the country, that do, in fact, make remittances.

**11.5.7** For each of these components, an upper limit has been assumed. Multiplication of the three upper limits yields an upper limit on the average amount remitted through MTOs by all households from a particular country. These upper limits may now be compared to the actual amounts reported by MTOs. By capping as needed (to allow for the fact that MTO transfers may be for purposes other than remittances), and by grossing up (because remittances will also be made through other channels), a total estimate of remittances is obtained. For instance, if no more than one in four of the households from a particular country sends money home, for an average amount not exceeding some €4,000, and if probably half of these remittances are made through MTOs, then

<sup>61</sup> The annex is based on de Nederlandsche Bank, 2010.

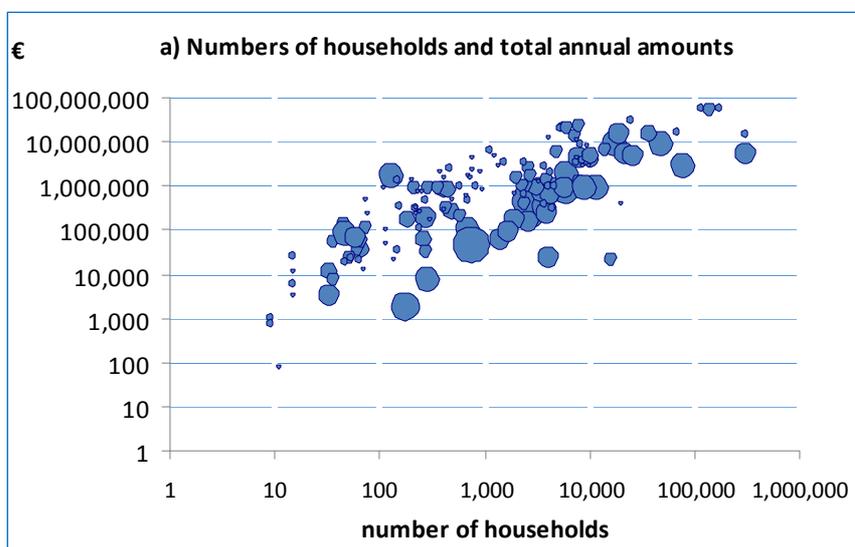
the MTO average for all households from that country should not exceed some €500, the product of the three maximums: €4,000 × ½ × ¼. Actual average MTO remittances per household of €800 a year would then reduce (cap) the MTO amount to 5/8 or €500. Next, the €500, which concerns only MTOs, may be grossed up, that is, multiplied by a certain factor, to yield the total remittances to the country in question. Here the scaling factor is at least 2 (because the MTO share of transfers is no more than one half).

**11.5.8** Capping prior to grossing up prevents overestimation of an already uncertain total amount, as MTO figures may also include non-remittances. The new method involving capping

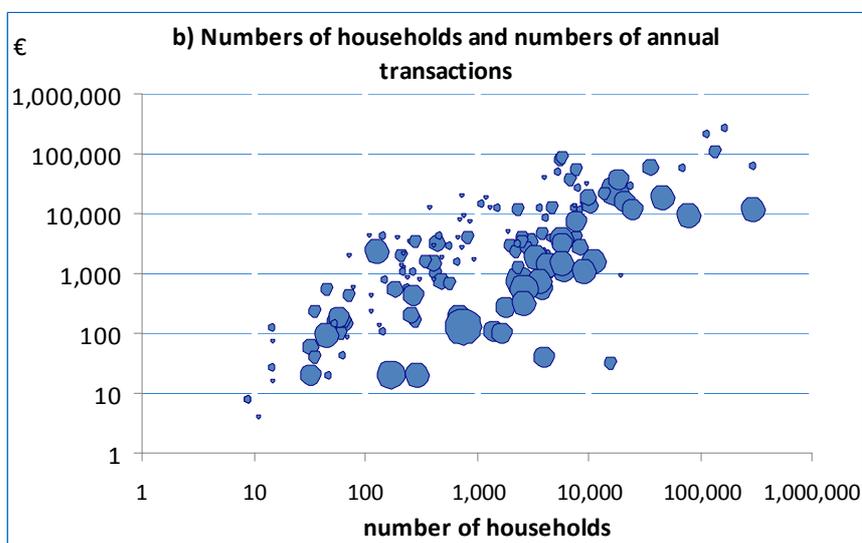
and grossing up has been fine-tuned for each country by relating the ceiling to a country's development and prosperity level (see box 11.5.1 at the end of this annex).

**11.5.9** For some countries, average MTO amounts per household, instead of being unusually high, are surprisingly low, especially in the case of Germany and Belgium. Remittances by immigrants from those countries, where relatives live comparatively close by, are likely to be made in cash rather than through MTOs. Yet even to Japan MTO remittances are relatively low. In order to obtain more plausible results, the MTO amounts for such countries are first brought into line with the - also comparatively low but less improbable -

**Chart 11.5.1 MTO remittances to and immigrant households from several countries (2009)**



Dots plot countries by MTO remittances received from the Netherlands (vertical axis) and by immigrant households in the Netherlands (horizontal axis)



Dot size varies with a country's per capita GDP in 2008 (source: IMF).

averages for other, similar countries, before they are multiplied by the assumed scaling factor. This adjustment is omitted only in cases where remittances may be assumed actually to be unusually low, on account of special circumstances such as war or civil unrest.

**11.5.10** Like the average MTO amounts, the average number of MTO transactions per household may also point to purposes other than private remittances, even if the amount per household does not (i.e. high average numbers of transfers are offset by lower average transaction amounts). In assessing the number of transfers, it should be taken into account that not all households make remittances. An average number of six transactions per year found for all households may not appear out of the ordinary at first glance, but is indeed unusual if only some 10 per cent of households actually do transfer income, since it would imply that households in that subgroup go to their MTO to make transfers no fewer than 60 times a year. Average transaction amounts may also be unusually high. This is why in addition to MTO amounts per household, numbers of MTO transactions per household and average MTO amounts per transfer are assessed.

**11.5.11** A numerical example may make this clearer. The figures relate to annual amounts in euro.

1. Given: Total amount transferred through MTOs to country A.: 800,000
2. Wanted: Total remittances (current private transfers) to country A: ?
3. Number of immigrant households from country A (source: Statistics Netherlands): 1,000
4. Average amount per household transferred through MTOs (1. divided by 3.): 800
5. Of which qualifying as remittance: 500
6. Minimum scaling factor (MTOs not the only channel): 2
7. Total average remittance per household (5. × 6.): 1,000
8. Total remittances to country A (3. × 7.): 1,000,000
9. Maximum average amount transferred through MTOs (for all households) based on the following, assumed, upper limits (10. × 11. × 12.): 500
10. The maximum percentage of households making remittances through MTOs and otherwise: 25%
11. Maximum total remittances by a household making remittances: 4,000
12. Maximum share of this transferred through MTOs (inverse of minimum scaling factor): 50%.

### Box 11.5.1 Assessment criteria for MTO amounts and MTO transaction numbers per household

1. *Total annual remittances by the households that actually make remittances.* The annual amount remitted by immigrant households from a particular country of origin depends on numerous factors. One major factor, in all probability, is the level of prosperity of relatives at home, to which migrants are likely to adjust the amounts they remit. This level of home country prosperity may also be an indicator of the migrant's level of education and thus of the income available for remittances. The higher this income, the higher the amounts that may be transferred. Taking this into account, a ceiling has been imposed on the total annual remittances, whether through MTOs or other channels, which ranges from some €3,000 for migrants from low-income countries to over €6,000 for households from the countries having the highest per capita incomes. These upper limits (applied to averages) imply that it is especially remittances to the poorer countries that serve as compensation for low income levels – up to four times a country's GDP per head. Note that these are upper limits: actual amounts are often considerably lower, as World Bank estimates also indicate.

2. *The MTO share in remittances.* The ratio of total to MTO remittances (a grossing up factor) is assumed to range from 1+ for immigrants from the countries with the lowest per capita incomes to 5+ for the richest countries. A higher ratio seems likely for at least countries of origin with a well-developed banking industry, because households from those countries will mainly use that channel, the more so since MTO transfers are more costly than bank transfers. By contrast, households from less developed countries are likely to use mostly MTOs to transfer income, because few relatives in such countries have a bank account at all. For simplicity's sake a country's per capita GDP has provisionally been taken as a proxy for the level of development of the local banking industry.

3. *The share of households making remittances.* According to Statistics Netherlands, one in four immigrant households sends money abroad. A 2006 survey on this topic targeted a few large immigrant population groups numbering many households that have lived in the Netherlands for several years and whose ties to their country of origin may have become weaker over time. Among more recent arrivals from similar countries, the share of households making remittances could be considerably higher. The same applies to immigrants from poorer countries (not covered in the survey), who may be more likely to continue lending income support to their less prosperous relatives at home. Taking this into account, it is assumed that the share of households making remittances may be as high as 90 per cent among immigrants from the very poorest countries. Households from more prosperous countries are assumed to make fewer remittances for the purpose of remedying relatives' poverty. It is assumed that no more than some 20 per cent of these make remittances.

4. *The number of MTO transactions per household that actually makes remittances.* The average annual number of MTO transactions per household making remittances may be related to the home country's level of development. In countries with a less developed banking industry, MTOs are used more often than elsewhere for receiving remittances and for other transactions. This is also suggested by the higher number of transactions per household for groups of immigrants from countries where per capita GDP is lower, which may be associated only in part with a possible preference for more frequent but smaller transfers. It is therefore assumed that the number of MTO transfers per household declines as the home country's per capita GDP increases, and that as MTOs are used less often to remit money, other channels are used more frequently, about 12–15 times (maximum) per year. The assumption is that regular remittances are usually made after each monthly pay day in the Netherlands. This implies a ceiling on the number of MTO transactions of about 10 for households from the very poorest home countries and of 2–3 for households from the more prosperous countries.

Added to the assessment criteria for MTO amounts and MTO transaction numbers per household is a criterion for the average MTO amount per transaction, as this may be unusually high, pointing to non-remittance transfers. The average transaction amount is assumed to vary (with the home country's prosperity level) between €500 and €900. The €900 ceiling was determined by a simple outlier analysis.