Properly estimating and monitoring personal remittance flows have become critical for many countries of origin because of the macroeconomic effects of such flows and their potential contribution to poverty reduction and development. Yet there are significant issues surrounding the remittance data currently available.

**Discrepancies**

Remittance data are based on information provided by countries—both sending and receiving—in their annual balance of payments (BoP) reports. Estimating remittances, however, is a complex endeavor, and countries use different methods. Most BoP reports are based on some combination of direct reporting from commercial banks and other financial intermediaries; household surveys to account for transfers through informal channels, among other things; and estimation models.

There are, however, significant inconsistencies in estimates of remittances. In principle, the total received (remittance inflows, as reported by countries that received them) should be equal to the total sent (remittance outflows, as reported by countries from which they are sent). But there is a significant gap, which has widened since the early 2000s. In 2020, the reported remittances received exceeded the remittances sent by almost 40 percent (figure S5.1). Such inconsistencies can also be observed in bilateral remittances data (box S5.1).

**Figure S5.1** In 2020, the gap between global estimates of remittances received and sent reached 40 percent

![Graph showing the gap between remittances received and sent](https://data.imf.org/?sk=7A51304B-6426-40C0-83DD-CA473CA1FD52)


**Note:** The figure includes remittances for all countries reporting balance of payments data to the International Monetary Fund (IMF). Inflows are reported by the countries to which remittances are sent. Outflows are reported by the countries from which remittances are sent. As per the IMF’s *Balance of Payments and International Investment Position Manual*, 6th edition (IMF 2009a), personal remittances include only the standard components of personal transfers and employee compensation. Missing data for Vietnam and the United Arab Emirates are replaced with estimates from KNOMAD Data, Global Knowledge Partnership on Migration and Development, World Bank, Washington, DC, https://www.knomad.org/data.
Box S5.1 Testing the inflow-outflow gap at the country level

The most commonly used remittances database, the Bilateral Remittances Matrix, contains data on remittance inflows and outflows, as well as estimated bilateral flows by corridor. However, the estimated amounts are not fully consistent because of the gap between reported inflows and outflows in balance of payments (BoP) reports. For example, the total outflow reported by a country in its BoP should, in principle, equal the sum of all bilateral outflows originating from that country, but often it does not (figure SB5.1.1). The difference is sometimes positive, sometimes negative; there is no clear pattern. Although many of these discrepancies could be attributed to normal estimation errors, large gaps—such as in the United Kingdom, Spain, and Canada, as well as in Luxembourg and Switzerland—suggest broader issues. For the United States, the gap suggests an underreporting of remittance outflows in the BoP by a staggering US$125 billion.

Figure SB5.1.1 Remittance estimation gaps are significant in many economies


Note: Imputed outflows represent the sum of all bilateral outflows originating from a country based on Bilateral Remittances Matrix estimates. Reported outflows are based on balance of payments data. Only economies with at least US$3 billion in either recorded or imputed outflows are included.

b. Ratha and Shaw (2007). The breakdown by bilateral corridor is based on the total amount of remittances received by a given country, the share of workers from that country in each destination country, and the difference in gross domestic product per capita between origins and destinations.
Inconsistency with other economic measures

The observed gaps in the measurement of remittances raise a question: in the face of large discrepancies, which estimates are more reliable—inflows data from remittance recipients or outflows data from remittance-sending countries? One way to address this question is to compare the trends in remittance inflows and outflows with the underlying economic fundamentals.4

Economic fundamentals are based on changes in the main factors that drive remittances: (1) the number of migrant workers; (2) their average income; and (3) the share of that income they send back to their country of origin. Assuming that the share of income remitted by migrants was constant between 2000 and 2020, the economic fundamental estimates increased by 84 percent between 2000 and 2020; the reported outflows increased by 96 percent; and the reported inflows increased by 177 percent (figure S5.2). In other words, at the global level the economic fundamentals are consistent with the observed growth in reported remittance outflows, but they cannot explain the increase in reported inflows.

Global trends, however, mask significant variations across countries, where both inflows and outflows can be inconsistent with economic fundamentals and fluctuate dramatically (figure S5.3). In Guatemala, for example, the reported remittance inflows grew over four times faster than what the economic fundamentals would suggest. In Nigeria, remittance inflows jumped by almost 10 times in one year and then declined, even though economic fundamentals suggest they should have increased steadily. Remittance outflows from China overall follow the economic fundamentals, but with large annual variations. Remittance outflows from the euro area also increased much faster than economic fundamentals and then declined, once again suggesting measurement issues.

**Figure S5.2 At the global level, outflow remittance reports are closer than inflow remittance reports to economic fundamentals**

![Graph showing normalized values of inflows, outflows, and economic fundamentals from 2000 to 2020.](image)


**Note:** As per the International Monetary Fund’s *Balance of Payments and International Investment Position Manual*, 6th edition (IMF 2009a), personal remittances include only the standard components of personal transfers and employee compensation for both inflows and outflows. Missing data for Vietnam and the United Arab Emirates are replaced with estimates from KNOMAD Data, Global Knowledge Partnership on Migration and Development, World Bank, Washington, DC, https://www.knomad.org/data. Economic fundamentals are estimated based on (1) the global number of migrants; (2) migrants’ income as proxied by the global gross domestic product (GDP) per capita weighted by the number of migrants in each country; and (3) a stable share of income remitted. Weights for the year 2000 are used for 2001–09, and weights for the year 2010 are used for 2011–19.
Figure S5.3 At the country level, reports of both inflows and outflows can be inconsistent with economic fundamentals


Note: As per the International Monetary Fund’s Balance of Payments and International Investment Position Manual, 6th edition (IMF 2009a), personal remittances include only the standard components of personal transfers and employee compensation for both inflows and outflows. Economic fundamentals are the product of real gross domestic product (GDP) per capita (constant US$) and the total number of migrants. For Guatemala and Nigeria (inflows), economic fundamentals are the total number of emigrants multiplied by a composite real GDP per capita of destination countries, weighted by migrant share. For China and the euro area (outflows), they are a product of the total number of immigrants and real GDP per capita. Data on personal transfers are not available in the balance of payments for the euro area between 2008 and 2012.
Underlying challenges

The gaps in remittance estimates reflect challenges many countries are facing in compiling data from various sources:

- **Measurement of informal flows.** Large amounts of remittances are transferred via informal channels, such as hawala, or carried by hand across borders, typically because of lower fees, more favorable exchange rates, or better accessibility. Most countries use surveys and models to estimate such transfers, but doing so accurately is notoriously challenging. When large amounts shift from informal to formal channels—or vice versa—large variations in reported flows sometimes occur, even though the actual amounts transferred did not change to the same extent. For example, during the COVID-19 pandemic, lockdowns and border closures between the United States and Mexico raised the costs of informal channels prohibitively. Some migrants thus shifted from informal channels to formal channels, such as banks or mobile operators, which are easier to capture in official statistics. This shift led, in turn, to an increase in formal remittances, in spite of the economic slowdown.

- **Inconsistent estimation methods.** Many countries use a combination of instruments to estimate remittances, including financial institution reports, household surveys, and econometric models. For example, Mexico’s central bank relies on monthly reports by remittance firms and surveys of incoming Mexican nationals at the US border. Similarly, the Philippine central bank tracks amounts transferred through the banking sector and uses surveys to estimate transfers through informal channels. By contrast, the US government relies on an economic model to assess the amounts of remittances sent to other countries. The model uses data on the number of foreign-born residents, their income, the share of their income remitted, and other demographic indicators. Although based on similar principles, these approaches rely on different instruments, yielding results that are not fully consistent.

- **Classification issues.** As per the International Monetary Fund (IMF) guidelines, personal remittances include only the standard components of personal transfers and employee compensation for both inflows and outflows. However, some small cross-country transactions are often classified in the BoP as remittances, even though they may be payments for international trade in goods or services or the repatriation of savings. For example, when Pakistani migrants in Dubai repatriated their savings in the wake of the 2008–09 Great Recession, these flows were counted as remittances.

- **Administrative capacity.** In some low- and middle-income countries, statistical offices have limited administrative capacity, which compounds the remittance estimation issues. The quality of financial reporting from banking institutions and mobile operators also varies across countries. Complementary sources of information, such as household and enterprise surveys or administrative data, can be expensive, and many countries do not use them in a systematic manner. This practice limits the universal applicability of sophisticated estimation methodologies.

Looking forward, improving the measurement of remittance flows is critical to enable countries of origin and destination to manage them at both the macroeconomic and microeconomic levels. The current discrepancies and inconsistencies across countries suggest the need for a significant effort to improve the accuracy and comparability of remittance data. This effort will require enhancing the implementation of shared guidelines, as provided by the IMF, encouraging the widespread use of both complementary sources of information, such as household and enterprise surveys, as well as administrative data; and strengthening statistical capacity where needed, including in low- and middle-income countries. Such efforts are urgent because the emergence of new money transfer operators and the diversification in the way person-to-person transactions are conducted are transforming the ways in which migrant workers are sending remittances.
Notes

2. IMF (2009a).
3. Each cross-border financial transaction should be recorded as both an inflow in the remittance-receiving-country’s BoP and an outflow in the remittance-sending-country’s BoP.
5. Hawala is an informal method of transferring remittances. A payment is made by the remitter to an intermediary in the remitting country. The intermediary asks his or her partner in the country to which the remittance is sent to arrange a payment in local currency to the beneficiary. The debt between the partners is then settled at a later time through other mechanisms (Afram 2012).

References