GLOBAL FINANCIAL INTEGRITY

# Illicit Financial Flows from Developing Countries: 2002-2011

**Dev Kar and Brian LeBlanc**
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*Global Financial Integrity Wishes to Thank the Ford Foundation and the Financial Transparency Coalition for Supporting this Project*

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Global Financial Integrity (GFI) is pleased to present here its analysis of **Illicit Financial Flows from Developing Countries: 2002-2011.**

We estimate that illicit financial outflows from the developing world totaled a staggering US$946.7 billion in 2011, with cumulative illicit financial outflows over the decade between 2002 and 2011 of US$5.9 trillion. This gives further evidence to the notion that illicit financial flows are the most devastating economic issue impacting the global South.

Large as these numbers are, perhaps the most distressing take-away from the study is just how fast illicit financial flows are growing. Adjusted for inflation, illicit financial flows out of developing countries increased by an average of more than 10 percent per year over the decade. Left unabated, one can only expect these numbers to continue an upward trend. We hope that this report will serve as a wake-up call to world leaders on the urgency with which illicit financial flows must be addressed.

Each year we strive to present the most accurate estimates of the amount of money passing illicitly out of poor countries due to crime, corruption, and tax evasion. In last year's study, we introduced the Hot Money Narrow model—in place of the World Bank Residual model which we had utilized in previous studies—as a more precise method for measuring strictly illicit flows.

Our team of economists led by Dr. Dev Kar continues to make advances in honing our estimates. This year we add improvements to our research methodology centered around trade misinvoicing. Previously, by utilizing aggregated bilateral trade data rather than disaggregated bilateral trade data, our methodology had a tendency to significantly understate the trade component of illicit financial outflows by inadvertently netting illicit inflows from illicit outflows between many countries. As such, this is the first GFI study to utilize disaggregated bilateral trade data for 17 of 151 countries in the study which report in the necessary detail.

Moreover, our earlier estimates had the potential to overstate illicit financial flows when trade was misinvoiced between two developing countries. To adjust appropriately, this study is the first of GFI's to look at misinvoicing between developing countries and advanced economies, and then scale those findings up to account for the percent of trade conducted between developing economies.

Finally, by previously omitting data from Hong Kong as a trade intermediary, our estimates had the potential to overstate illicit outflows from many Asian nations. For the first time we are able

to incorporate trade data from the Hong Kong Customs and Excise Department into our trade misinvoicing estimates, providing a more accurate estimate of this major component of illicit flows.

GFI's data, however constructed, remain extremely conservative, as we still do not capture the misinvoicing of trade in services (rather than the trade in goods), same-invoice trade mispricing (such as transfer mispricing), hawala transactions, and dealings conducted in bulk cash. This means that much of the proceeds of drug trafficking, human smuggling, and other criminal activities which are often settled in cash are not included in these estimates. It also means that much of abusive transfer pricing conducted between arms of the same multinational corporation are not captured in our figures.

While progress has been made by world leaders over the past year in agreeing to some improvements in measures to achieve greater global financial transparency, much of the conversation has been focused on curtailing abuses within the developed world. As this report highlights, it is urgent that developing nations be brought fully into the discussion.

We thank Dev Kar and Brian LeBlanc for their excellent work in producing this analysis. The support of the Ford Foundation and the Financial Transparency Coalition is gratefully acknowledged and appreciated.

**Raymond W. Baker**
President
Global Financial Integrity
December 11, 2013

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## Charts and Tables with the Report

# Abstract

This update on illicit financial flows from developing countries, the fourth in an annual series, finds that US$946.7 billion in illicit outflows left the developing world in 2011, up from US$832.4 billion in 2010. Compared to our 2012 report, this report utilizes significant enhancements to the methodology for estimating trade misinvoicing and analyzes for the first time possible drivers of illicit flows using panel data from 55 developing countries for a ten-year period (2002-2011). The revision to the methodology of estimating trade misinvoicing (which comprises about 80 percent of illicit outflows) reduces China's outsized role in driving illicit financial flows, due mainly to our previous studies not specifically incorporating the use of Hong Kong as a trade entrepôt, without significantly impacting our total illicit financial flows figure. In that respect, this is probably the first study that has explicitly incorporated data from the Hong Kong Census and Statistics Department to correct for trade distortions that arise from Hong Kong's role as a trade entrepôt. While regression analysis using panel data finds scant evidence that macroeconomic conditions drive illicit flows, certain regulatory measures (such as export proceeds surrender requirements) and governance-related factors (such as corruption) seem to do so. There is scope to extend this research on the drivers of illicit flows by incorporating more countries and data series and by extending the time period analyzed to twenty years or longer.

# Executive Summary

This annual update on illicit financial flows from developing countries incorporates a number of methodological enhancements and analyzes possible drivers of trade misinvoicing, by far the largest component of illicit flows. While there are no changes to the basic model used (e.g., coverage of countries, focus on gross outflows only) since the first update was published in January 2011, the current version adjusts previous estimates of trade misinvoicing by explicitly recognizing the role of Hong Kong as a trade entrepôt. Furthermore, we now estimate trade misinvoicing for major developing countries that report bilateral trade data based on their trade with each advanced country (i.e., on a country-by-country basis). The previous method involved estimating misinvoicing by comparing each developing country's trade with the world in the aggregate. While the "Hong Kong effect" reduces our estimate of overall trade misinvoicing, the country-by-country approach increases the total amount of outflows identified; on net, these effects combine to produce a much more accurate and representative depiction of the global problem that illicit flows pose to the developing world.

**Nominal illicit outflows from developing countries amounted to US$946.7 billion in 2011, up 13.7 percent from US$832.4 in 2010.** Controlled for inflation, illicit outflows from developing countries increased in real terms by about 10.2 percent per annum.

We find that the pattern of illicit outflows, trend rate of growth, and impact in terms of GDP all vary significantly among the five regions. **Asia accounts for 39.6 percent of total illicit outflows from developing countries compared to 61.2 percent of such outflows in the 2012 IFF Update.** Asia's much larger share of total illicit outflows in the 2012 IFF Update resulted from an overestimation of China's trade misinvoicing due to the "Hong Kong effect." Correcting for the Hong Kong effect sharply reduces the share of outflows from Asia. Nevertheless, Asia still has the largest share of illicit flows among the regions, and six of the top 15 exporters of illicit capital are Asian countries (China, Malaysia, India, Indonesia, Thailand, and the Philippines).

**Developing Europe (21.5 percent) and the Western Hemisphere (19.6 percent) contribute almost equally to total illicit outflows.** While outflows from Europe are mainly driven by Russia, those from the Western Hemisphere are driven by Mexico and Brazil.

**The Middle East and North Africa (MENA) region accounts for 11.2 percent of total outflows on average.** MENA's share increased significantly from just 3 percent of total outflows in 2002, reaching a peak of 18.5 percent in 2009, before falling to 12 percent in 2011. **In comparison, Africa's share increased from just 3.9 percent in 2002, reaching a peak of 11.1 percent just before the Great Recession set in (2007), before declining to 7 percent in 2011, roughly on par with its average of 7.7 percent over the decade.**

The volume of total outflows as a share of developing countries' GDP increased from 4.0 percent in 2002 to 4.6 percent in 2005. Since then, barring a few upticks, illicit outflows have generally been on a declining trend relative to GDP, and were 3.7 percent in 2011.

The ranking of various regions based on their respective IFFs to GDP ratios looks quite different from the ranking based on the volume of outflows. **For instance, while Africa has the smallest nominal share of regional illicit outflows (7.7 percent) over the period studied, it has the highest average illicit outflows to GDP ratio (5.7 percent), suggesting that the loss of capital has an outsized impact on the continent.** Illicit outflows at an average of 4.5 percent of regional GDP also significantly impact developing Europe. Outflows per annum from Asia amount to an average of 4.1 percent of regional GDP, and leakages of illicit capital from MENA and the Western Hemisphere equal about 3.5 percent of regional GDP. However, in the case of MENA, outflows as percent of GDP increased significantly from 1 percent in 2002 to 6.8 percent in 2009, before declining to 3.9 percent in 2011. In contrast, barring a few upticks, outflows from the Western Hemisphere as a share of regional GDP have declined steadily from 4.1 percent in 2002 to 2.6 percent in 2011.

**The MENA region registered the fastest trend rate of growth in illicit outflows over the period studied (31.5 percent per annum) followed by Africa (20.2 percent), developing Europe (13.6 percent), Asia (7.5 percent), and Latin America (3.1 percent).** The sharply faster rate of growth in illicit outflows from the MENA region is probably related to the rise in oil prices.

The 2012 IFF Update showed that certain MENA countries like Saudi Arabia, UAE, and Qatar can have large errors and omissions due to the incorrect or incomplete accounting of sovereign wealth fund transactions in the balance of payments. Therefore, including these countries along with other countries that do not have this issue may distort the ranking of exporters of illicit capital. If we exclude these countries, then cumulative outflows from the top fifteen exporters of illicit capital amount to US$4.2 trillion over the decade ending 2011 comprising slightly over 70 percent of total outflows. The top three exporters of illicit capital were China (US$1,076 billion), Russia (US$881 billion), and Mexico (US$462 billion). **Six of the top 15 exporters of illicit capital are in Asia (China, Malaysia, India, Indonesia, Thailand, and the Philippines), two are in Africa (Nigeria and South Africa), four are in Europe (Russia, Belarus, Poland, and Serbia), two are in the Western Hemisphere (Mexico and Brazil), and one is in the MENA region (Iraq).**

Trade misinvoicing comprises the major portion of illicit flows (roughly 80 percent on average). Balance of payments leakages (Hot Money Narrow measure) fluctuate considerably and have generally trended upwards from just 14.2 percent of total outflows in 2002 to 19.4 percent in 2011. However, there is little reason to believe that purely statistical errors in compiling balance of payments data have trended upwards for developing countries as a whole.

The study finally focuses on possible drivers of illicit flows using a cross section of 55 developing countries for which data are available for the ten year period 2002-2011. Regression analyses using the panel data find scant evidence that macroeconomic drivers impact trade misinvoicing. Rather, we find trade misinvoicing to be driven largely by a set of four factors—three of a regulatory nature and one governance-related. The regulatory drivers are the export proceeds surrender requirement (EPSR) and the extent of capital account openness, while the governance related driver is the state of overall governance in the country, which we represent with the World Bank Control of Corruption indicator.

Although there are some serious limitations in formulating the EPSR as a dummy variable, we find that exporters seem to view it as a confiscatory measure. Hence, they seek to circumvent it by retaining funds abroad through export under-invoicing.

The panel data regressions also show that an increase in corruption increases trade misinvoicing while capital account openness leads to greater export misinvoicing in both directions if openness is not accompanied by stronger governance. In fact, as the experience of developed countries show, greater openness and liberalization in an environment of weak regulatory oversight can actually generate more illicit flows.

# I.  Introduction

1.  The problem of illicit financial flows (IFFs) has attracted increasing attention in recent years from policymakers and international organizations. At the 10th Plenary Meeting of the Leading Group on Innovative Financing for Development in Madrid on February 27, 2012, the Secretary General of the United Nations, Ban Ki-moon, noted that curbing illicit financial flows shows great promise as an additional and innovative revenue source to supplement official development assistance (ODA). He clearly recognized that such additional sources of revenue are among the most important necessities for future development and recommended that countries move quickly to implement policies to curtail illicit flows. At the 25th Meeting of the International Monetary and Financial Committee of the IMF in Washington, DC on April 21, 2012, Helen Clark, the Administrator of the United Nations Development Programme, recognized that curbing illicit flows can help bridge the gap between official development assistance and the level of resources needed to achieve the Millennium Development Goals (MDGs), particularly at a time when fiscal pressures are hindering donor countries from expanding ODA.

2.  Illicit flows constitute a major source of domestic resource leakage, which drains foreign exchange, reduces tax collections, restricts foreign investments, and worsens poverty in the poorest developing countries. Illicit flows are all unrecorded private financial outflows involving capital that is illegally earned, transferred, or utilized, generally used by residents to accumulate foreign assets in contravention of applicable capital controls and regulatory frameworks. Thus, even if the funds earned are legitimate, such as the profits of a legitimate business, their transfer abroad in violation of exchange control regulations or corporate tax laws would render the capital illicit.

3.  IFFs are difficult to estimate statistically due to the fact that many illicit transactions tend to be settled in cash, as parties involved in such transactions take great pains to ensure that there is no incriminating paper trail. Hence, economic methods and data sources tend to significantly understate IFFs. In order to avoid understating the problem of illicit flows, we shall always use the robust (non-normalized) estimate of IFFs rather than the conservative (or normalized) estimates (see paragraph 6).

4.  The present study makes important improvements to the methodology of estimating IFFs used in previous studies, including the one published by Global Financial Integrity (GFI) in December 2012 *(Illicit Financial Flows from Developing Countries: 2001-2010*, henceforth the "2012 IFF Update"). For this reason, estimates of illicit flows provided here cannot be strictly compared to those in previous IFF updates.

5.  The report is organized as follows: Section II discusses the methodology used in this report to calculate IFFs and points out the changes implemented relative to the 2012 IFF Update.

Section III describes trends in illicit financial flows over the period studied, 2002-2011. Section IV analyzes the drivers of trade misinvoicing, a key conduit for IFFs, using various panel regressions. The final section summarizes the main conclusions of this study.

# II. Methodology

6.  There are two broad channels through which capital can flow illicitly out of a country in a measurable manner – leakages from the balance of payments and the deliberate misinvoicing of external trade. Note that we do not net out illicit inflows from illicit outflows when estimating how much capital is leaving the developing world each year. This methodology differs from academic literature on capital flight, in which inflows and outflows of capital are netted out. Our focus on gross outflows is based on the premise that illicit inflows do not provide a benefit that offsets the initial loss of capital through outflows, as they cannot be taxed or used to boost productive capacity. Instead, illicit inflows are much more likely to drive the underground economy than be invested in the official economy. Therefore, our estimates of both balance of payments leakages and trade misinvoicing are based on gross outflows only.

7.  There are two methods of capturing leakages of capital from the balance of payments – the World Bank Residual (WBR) method and the Hot Money Narrow (HMN) method. The reasons for excluding the WBR method based on the change in external debt (CED) were discussed at length in Section II of the 2012 IFF Update. Nevertheless, they are worth recapitulating briefly. In essence, the WBR/CED approach may not exclude legitimate financial flows that are incorrectly recorded in the balance of payments. Claessens and Naude (1992) show that the balance of payments identity (essentially, "source of funds equals use of funds") and nomenclature necessarily imply that some of the gap between a country's source of funds and use of funds may also include legitimate capital flows. As we are only concerned with the illicit portion of capital flight, the narrower HMN estimate based on the Net Errors and Omissions (NEOs) term in the balance of payments is a more suitable measure of such flows.

8.  The main drawback of the HMN approach is that NEOs not only reflect unrecorded illicit flows but also errors in recording balance of payments transactions. It is impossible to disaggregate the portion of statistical errors inherent in the NEOs from illicit flows. Nevertheless, economists have used the HMN measure because its results have been consistently negative and increasing for many developing countries, representing large illicit outflows, and there is no reason to believe that errors in statistical recording have increased. In fact, the statistical capacities of developing countries have strengthened through technical assistance provided by international organizations and through better data mining and processing, suggesting that the influence of statistical errors on the HMN measure should have decreased over time.

9.  Consistent with other studies on capital flight, we supplement the HMN estimates with estimates of the deliberate misinvoicing of a country's exports and imports. Bhagwati (1964) and others have shown that trade misinvoicing is one of the key conduits through which economic agents illegally move money out of (and into) developing countries. Traders can

move money out of a country through *under*-invoicing exports or *over*-invoicing imports. Likewise, traders can move money into a country through *over*-invoicing exports or *under*-invoicing imports. Since the act of deliberately falsifying invoices is illegal in most countries, we consider our trade misinvoicing estimates to reflect completely illicit outflows.

10. Because estimates of illicit outflows are inherently imprecise, we present a lower and upper bound of such outflows. We apply a normalization process to filter out estimates that are less than or equal to 10 percent of a country's exports. This process yields the lower bound of illicit outflows from a country or region. The 10 percent threshold was not chosen arbitrarily but was based on the findings in the IMF Committee on Balance of Payments Statistics Annual Reports. For instance, the 2012 Annual Report shows that the global good balance (exports minus imports), which should be zero as the exports of all countries must equal imports by others for the world as a whole, averages around 1.5 percent of world exports. If this discrepancy is due solely to statistical errors, then such errors are unlikely to exceed 1.5 percent of exports on average. In contrast, the filter used for normalization accepts trade misinvoicing estimates that are equal to or more than 10 percent of a country's exports as likely due to illicit flows, providing a much more conservative estimate. Non-normalized illicit outflows that do not pass through such a filter comprise the upper bound of transfers from the country through trade misinvoicing.

11. There are two important methodological changes between this report and the 2012 IFF Update. The first involves a revision of which countries, or country groups, are used as trading partners for the basis of our Gross Excluding reversals (GER) method. The need for this change resulted from acknowledging potential complications arising through comparing trade between two developing countries, and also from problems arising through using disaggregated, versus aggregated, trade data (see paragraphs 12-14 for a detailed explanation). The second adjustment became necessary because the use of Hong Kong as a trade entrepôt *overstated* illicit outflows through trade misinvoicing (see paragraphs 15–17 on the "Hong Kong effect").

12. Previous IFF updates estimated trade misinvoicing for each country in relation to its exports and imports with that of the world *as a group* using the IMF's Direction of Trade Statistics (DOTS). Using the world as a group *understates* the amount of gross outflows through trade misinvoicing because traders within a country may bring in capital illicitly from some trading partners and move capital out illicitly into others. To illustrate, consider a Country A with only two trading partners, Country B and Country C. Now, assume that a comparison of bilateral trade between Country A and Country B shows a $100 *outflow* from Country A while comparison of the bilateral trade between Country A and Country C shows a $100 *inflow* from Country C. If we were to estimate Country A's trade misinvoicing figures based on its trade with the whole world (Country B's trade plus Country C's trade), it would appear as if Country

A has no trade misinvoicing. For this reason, we will now estimate trade misinvoicing by using data for countries' individual trading partners instead of the world totals whenever such data is available. This has had a large impact on our IFF figures for many countries. Russia's figures, for example, are more than double under the new methodology than in previous updates.

13. The underlying assumption behind all trade misinvoicing models is that many residents in weakly governed countries prefer to acquire foreign assets in an advanced economy rather than domestic assets. In contrast, if the countries on both sides of a trade transaction have serious governance issues (such as two developing countries), then a comparison of their bilateral trade data cannot reveal from which country capital is being transferred in an illicit manner (Bhagwati, 1964). Since the existence of import over-invoicing in one country is mathematically equivalent to export under-invoicing in the other (both indicative of an illicit outflow), one is never sure which side of the equation is to be believed. It is not that both parties cannot misinvoice trade at the same time—they can and sometimes do, in a phenomenon known as "same-invoice faking"—but bilateral trade discrepancies cannot be the basis for estimating illicit flows if there is such a "double coincidence of wants" for foreign assets. Thus, we choose to calculate trade misinvoicing estimates only between developing countries and advanced economies and then proportionately scale the estimates to the developing countries' total trade. This approach has also been adopted by Ndikumana and Boyce (2002) and others.

14. Furthermore, the "country-by-country" approach can only be applied for developing countries that consistently report their merchandise trade on a bilateral basis. However, a majority of developing countries do not do this or only report data intermittently. Of the 150 developing countries for which we estimate IFF figures, only 17 report bilateral trade data that covers the time period of this study (2002-2011). For the majority of developing countries, we are compelled to apply the previous methodology of comparing total trade against world totals. The mix of methodologies employed in this study is not problematic, however, as any inaccuracy it contributes would lead to underestimated trade misinvoicing figures. Additionally, this potential understatement is unlikely to be significant due to the fact that eight of the top eleven exporters of illicit capital report bilateral trade data.

15. The second adjustment to the methodology is necessary due to the "Hong Kong effect." The revision takes into account the bilateral trade discrepancies that arise due to the re-exports of goods through Hong Kong. Interested readers should refer to Appendix 2 for a detailed discussion. In short, the use of Hong Kong as a trade entrepôt creates the appearance of trade misinvoicing due to the fact that goods merely passing through Hong Kong as re-exports to their ultimate destination (say, the United States) are recorded differently by the country of origin (say, China) and the country of consignment (the United States). This

discrepancy between how China and the United States record the re-exported goods creates artificial, rather than actual, trade misinvoicing, thereby overstating illicit outflows from China.

16. The Hong Kong effect is most pronounced in the case of China, but not limited to Chinese goods. Over the period of 2001 to 2012, approximately $3.61 trillion worth of merchandise was re-exported through Hong Kong in this manner, 62 percent of which originated in China. A few researchers have attempted to correct for the re-exports of Chinese goods through Hong Kong when calculating trade misinvoicing estimates, but none of the existing methods account for the re-exports of any other country that uses Hong Kong as an entrepôt. To our knowledge, this is the first paper that uses actual data from the Hong Kong Census and Statistics Department to correct for any artificial trade misinvoicing created by the use of Hong Kong as an entrepôt for all developing countries. For instance, India, the Philippines, and Thailand re-exported a total of $286 billion worth of goods through Hong Kong over the same period.

17. It is important to note, however, that our estimates only correct for re-exports through Hong Kong and not for re-exports from other trade entrepôts such as Singapore and Dubai. However, Hong Kong is by far the largest re-exporter by volume of the three aforementioned trade entrepôts. It is also the only entrepôt that records re-export data by country of origin and country of destination, which allows researchers to estimate trade misinvoicing using bilateral trade data (this data is available, for a fee, from the Hong Kong Census and Statistics Department). While Singapore's re-exports average 43 percent of its total trade, Hong Kong's re-exports are close to 97 percent of its total trade. Furthermore, only a fraction of Singapore's re-exports involve developing countries. For this reason, we do not believe that other entrepôts significantly affect our global estimates of illicit flows, although we plan to continue to incorporate new re-export data from other entrepôts as it becomes available.

18. These two methodological changes tend to impact illicit outflows from developing countries in opposite directions, with the net effect varying significantly by country. On the one hand, the "Hong Kong effect" greatly reduces China's contribution to global illicit flows, driving down global totals and Asia's share in illicit outflows. On the other, analyzing trade misinvoicing by developing countries with each advanced country (the "country-by-country" approach) increases illicit outflows from many large, weakly governed countries such as Russia and India.

# III. Illicit Financial Flows from Developing Countries

19.    In this section, we begin by pointing out the differences between the 2012 IFF Update and the present study in our estimates of illicit flows. We then discuss the pattern of illicit outflows from developing countries and regions, highlighting the main trends. The section concludes with a ranking of countries based on our revised methodology for estimating trade misinvoicing, pointing out any major changes from the ranking in the 2012 IFF Update.

20.    As noted in paragraph 2, estimates of illicit outflows are likely to be understated for a number of reasons. The trends and patterns of illicit flows discussed in this section are therefore based on the non-normalized (or robust) Hot Money Narrow (HMN) plus Gross Excluding Reversals (GER) estimates, although the normalized (or conservative) measure is also included for reference. Moreover, while our yearly estimates are presented in nominal terms, any discussion regarding trends will be based on real figures, adjusted for inflation to constant 2005 dollars.

## A. Trends and Patterns

21.    The overall differences between our estimates of total illicit flows from all developing countries under the methodologies in this report and in the 2012 IFF Update are minor (Table 1). We estimate that the average illicit outflows per year are approximately 12 percent lower using the current methodology compared to the methodology used in 2012. This difference has narrowed in recent years, however, to between 0.7 to 3.1 percent mostly through China's decreased use of Hong Kong as a trade entrepôt. The share of Hong Kong re-exports of Chinese goods has declined from about 61 percent in 1995 to less than 12 percent in 2008 (Ferrentino et al, 2008).

**Table 1.  Illicit Financial Flows from Developing Countries:**
**Current (2013) and Previous (2012) Estimates**
(in billions of US dollars or percent)

| Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2013 HMN+GER Non-Normalized | 270.3 | 301.5 | 384.5 | 498.9 | 511.4 | 594.0 | 789.5 | 770.3 | 832.4 | 946.7 | 5899.5 | 550.3 |
| 2012 HMN+GER Non-Normalized | 299.8 | 359.0 | 490.0 | 615.1 | 588.7 | 669.9 | 871.3 | 776.0 | 858.8 | . | 5528.6 | 614.3 |
| Nominal Difference | -29.5 | -57.5 | -105.5 | -116.2 | -77.3 | -75.9 | -81.8 | -5.7 | -26.4 | . | . | -64.0 |
| Percent Difference | -9.9% | -16.0% | -21.5% | -18.9% | -13.1% | -11.3% | -9.4% | -0.7% | -3.1% | . | . | -12% |

22.    The most notable changes between the 2012 IFF Update and the current one are differences in individual country figures. Correcting for the problem of re-exports from Hong Kong significantly dampened China's dominance of IFFs in the developing world, causing China's share of the total IFFs to decrease from 47 percent as presented in the 2012 IFF Update to only 19 percent in this report. The drastic reduction in China's IFF number was almost entirely

offset by the increases in a number of other country's GER figures as a result of the new GER methodology, which uses individual advanced economies as the trading partner (see Section II) instead of the world as a group. The most notable change occurred in our numbers for Russia, which moved from the fifth largest cumulative exporter of illicit capital to the second, even displacing China as having the largest IFF figure in 2011.

23.    The new regional breakdowns, presented below in Section III.B, are more in line with each region's respective share of developing and emerging market GDP, suggesting that the new figures are more realistic than previous years. The reduction of China's outsized role in driving total IFFs highlights that illicit flows are a *global* problem rather than merely a problem affecting mostly Asia.

24.    Controlled for inflation, illicit flows from developing countries increased by 10.2 percent per annum between 2002 and 2011. The volume of total outflows as a share of developing country GDP increased from 4.0 percent in 2002 to 4.6 percent in 2005. Since then, illicit outflows have generally been on a declining trend relative to GDP, and were 3.7 percent in 2011.

25.    The global economic slowdown that started at the end of 2008 had a dampening impact on illicit outflows. In real terms, illicit outflows grew at a faster rate before the recession than after, most likely due to the sputtering global recovery. The decrease in growth rates that occurred between 2008 and 2011 reversed its path in 2011, however, marking the first year illicit outflows exhibited an increasing growth pattern since the recession began.

### Chart 1.  Non-Normalized vs. Normalized Illicit Financial Flows, 2002-2011
(in millions of constant US dollars, base year 2005)
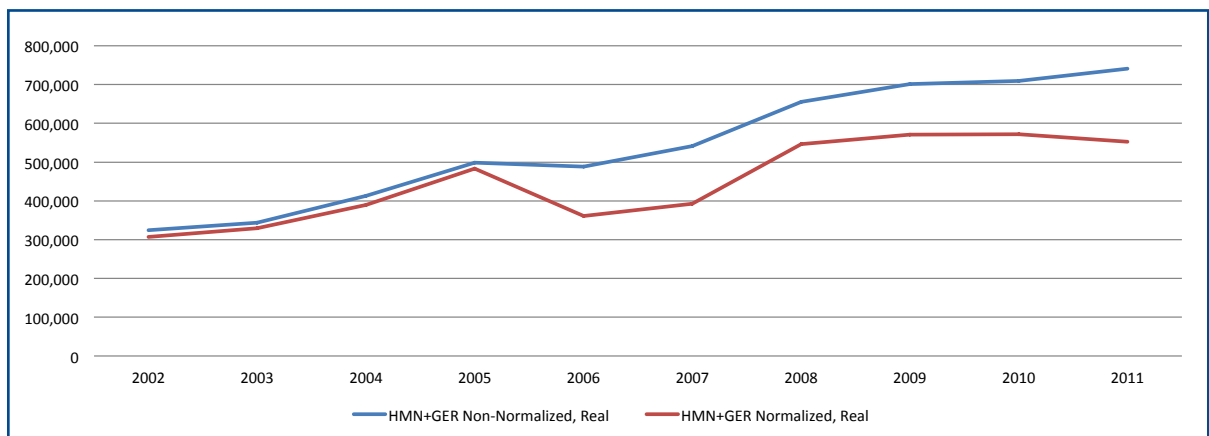
26. Regression analysis using panel data on 55 developing countries also supports the finding that growth in the official economy drives more illicit outflows (see Section IV). However, econometric models used in case studies by GFI on India, Mexico, and Russia have found mixed empirical evidence linking real GDP growth and capital flight or illicit flows.

27. In the case of India, we found that while the link between growth and broad capital flight—as measured by the WBR model adjusted for trade misinvoicing—was statistically insignificant for the period as a whole (1948-2008), there was strong evidence that the much faster rates of economic growth following India's economic liberalization in 1991 stimulated more capital flight. In the case of Mexico, on the other hand, we found real economic growth to be negatively related to broad capital flight, as estimated by the WBR method adjusted for trade misinvoicing. This is the traditionally expected result, wherein economic growth builds more confidence among economic agents to invest domestically so that the licit component of capital flight abates. In the case of Russia, we studied illicit outflows estimated by the HMN+GER method rather than broad capital flight as in the cases of India and Mexico, and found that real GDP growth was positively and significantly related to illicit outflows. In this case, economic expansion provided more opportunities to generate and transmit more illicit capital given the lack of improvements in governance.

28. Hence, our case studies show that the empirical link between economic growth and capital flight or illicit flows is mixed, suggesting that the relationship between growth and capital flight is complex. An expanding economy can stimulate growth in the underground economy by offering more opportunities to make money (through, for example, a larger number of government contracts, which can be subject to bribes and kickbacks). Alternatively, faster economic growth can foster more investor confidence, leading to a reduction in capital flight.

**Table 2. Non-Normalized Illicit Financial Flows by Region, 2002-2011**
(in billions of constant US dollars, base year 2005, or percent)

| Region/Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average | Trend Rate of Growth | Percent of Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Africa | 12.5 | 12.7 | 19.8 | 36.4 | 46.6 | 59.9 | 61.2 | 68.1 | 49.8 | 52.0 | 419.1 | 41.9 | 20.2% | 7.7% |
| Asia | 152.8 | 156.1 | 187.3 | 193.2 | 198.6 | 213.5 | 216.2 | 235.5 | 307.0 | 284.8 | 2,144.8 | 214.5 | 7.5% | 39.6% |
| Developing Europe | 57.3 | 77.0 | 79.4 | 86.0 | 93.4 | 121.5 | 137.8 | 163.9 | 147.2 | 199.8 | 1,163.2 | 116.3 | 13.6% | 21.5% |
| MENA | 9.7 | 8.2 | 24.1 | 63.8 | 53.7 | 37.7 | 115.6 | 129.9 | 76.1 | 87.4 | 606.4 | 60.6 | 31.5% | 11.2% |
| Western Hemisphere | 90.7 | 88.4 | 99.7 | 117.2 | 92.1 | 105.6 | 121.0 | 102.1 | 126.9 | 116.2 | 1,059.9 | 106.0 | 3.1% | 19.6% |
| All Developing Countries | 325.0 | 344.4 | 412.4 | 498.5 | 486.5 | 540.2 | 653.8 | 701.4 | 709.0 | 742.1 | 5,413.4 | 541.3 | 10.2% | 100.0% |

29. Over the period studied, the Middle East and North Africa (MENA) region registered by far the fastest trend rate of growth in illicit outflows (31.5 percent per annum), followed by Africa (20.2 percent), developing Europe (13.6 percent), Asia (7.5 percent), and Latin America (3.1 percent). Normalized (conservative) estimates reflect the same basic pattern of illicit outflows.

30. The substantially faster rate of growth in illicit outflows from the MENA region is probably related to the rise in oil prices. We will test the link between oil prices and illicit flows from the oil-exporting countries in Section IV.

31. Asia accounts for 39.6 percent of total illicit outflows from developing countries over the period studied, compared to 61.2 percent of such outflows as reported in the 2012 IFF Update. Asia's much larger share of total illicit outflows resulted from an overestimation of trade misinvoicing by China due to the "Hong Kong effect". Adjustment for re-exports through Hong Kong as discussed in Section II significantly reduces illicit outflows from China, thus driving down Asia's share. Nevertheless, Asia still retains the largest share of IFFs, as indicated in Chart 2, and six of the top 15 exporters of illicit capital are Asian countries (China, Malaysia, India, Indonesia, Thailand, and the Philippines).

## Chart 2. Cumulative Non-Normalized Illicit Financial Flows by Region
(in percent)
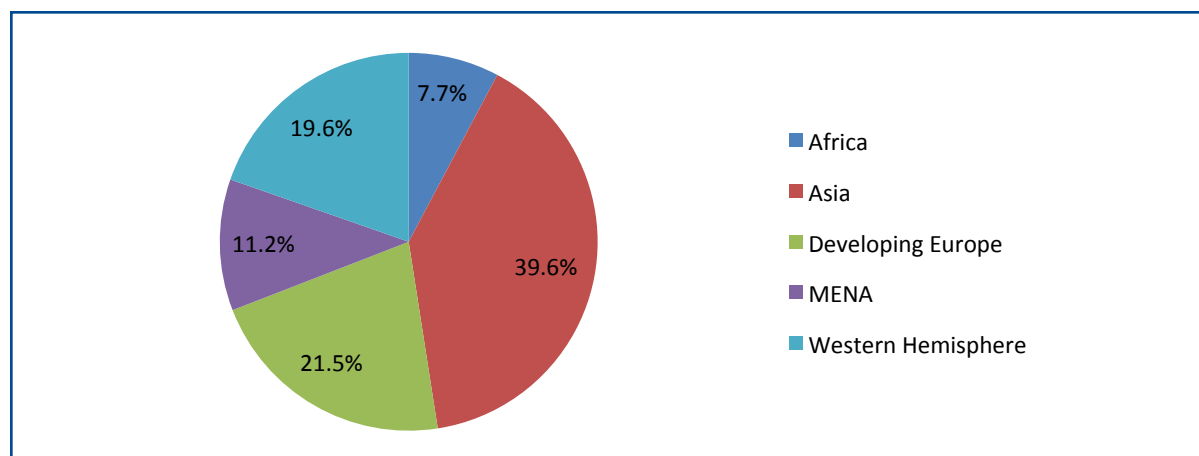


32. Developing Europe (21.5 percent) and the Western Hemisphere (19.6 percent) contribute almost equally to total illicit outflows from the developing world. Europe's second largest share in total outflows is almost entirely driven by Russia, while the Western Hemisphere's share is driven by Mexico and Brazil.

33. Illicit outflows from the MENA region account for 11.2 percent of total outflows on average. MENA's share has increased significantly from just 3 percent of total outflows in 2002 but decreased from its peak of 18.5 percent in 2009. Similarly, Africa's share of 7.7 percent has increased from just 3.8 percent in 2002, but has decreased from its peak of over 11 percent in 2007.

## Chart 3. Illicit Financial Flows vs. Illicit Financial Flows to GDP by Region, 2002-2011
### (billions of constant US dollars, base year 2005, or in percent)



**Africa**

**Asia**

**Developing Europe**

**MENA**

**Western Hemisphere**

- Non-Normalized Illicit Financial Flows, Real
- Illicit Financial Flows to GDP

34.  There are various ways of assessing the adverse impact of illicit flows on an economy, but its ratio to GDP is a widely used indicator. The ranking of various regions based on IFFs to GDP looks quite different from the ranking based on the volume of outflows. For instance, while illicit outflows from Africa comprised just 7.7 percent of developing country outflows in 2011, at an average of 5.7 percent of GDP over the period studied, the loss of capital has an outsized impact on the continent. The ratio peaked at 8.1 percent of GDP in 2009 and declined to 5.3 percent of GDP in 2011, as a result of a fall in trading volumes due to the global recession rather than GDP growth. Chart 4 presents a heat map of average illicit flows to GDP for all developing countries that indicates how significantly the intensity with which illicit flows impact African countries varies. Elsewhere, Russia is noticeably more impacted by illicit flows than China and India.

35.	Illicit outflows also significantly impact developing Europe, averaging 4.5 percent of regional GDP and having risen from 4.3 percent of GDP in 2002 to 5.8 percent of GDP in 2011. Outflows from Asia amount to an average of 4.1 percent of regional GDP, which reflects a similarly significant impact. Leakages of illicit capital from MENA and the Western Hemisphere average about 3.5 percent of regional GDP. In the case of MENA, outflows as a percentage of GDP increased significantly from 1 percent in 2002 to 6.8 percent in 2009, before declining to 3.9 percent in 2011. In contrast, outflows from the Western Hemisphere as a share of regional GDP declined from 4.1 percent in 2002 to 2.6 percent in 2011.

## Table 3. Illicit Financial Flows to GDP, Non-Normalized 1/
(in percent)

| Region/Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Africa | 3.3% | 2.7% | 3.7% | 5.9% | 7.0% | 7.8% | 7.6% | 8.1% | 5.3% | 5.3% | 5.7% |
| Asia | 4.7% | 4.5% | 4.9% | 4.7% | 4.3% | 3.9% | 3.5% | 3.3% | 3.8% | 3.2% | 4.1% |
| Developing Europe | 4.3% | 5.0% | 4.2% | 4.0% | 3.8% | 4.0% | 4.1% | 5.6% | 4.6% | 5.8% | 4.5% |
| MENA | 1.0% | 0.8% | 2.0% | 4.7% | 3.5% | 2.2% | 6.0% | 6.8% | 3.7% | 3.9% | 3.5% |
| Western Hemisphere | 4.1% | 4.1% | 4.2% | 4.4% | 3.1% | 3.1% | 3.4% | 2.8% | 3.0% | 2.6% | 3.5% |
| All Developing Countries 2/ | 4.0% | 3.9% | 4.2% | 4.6% | 4.0% | 3.7% | 4.1% | 4.2% | 3.8% | 3.7% | 4.0% |

1/ Calculated as total IFFs from regional group over total regional GDP
2/ Calculated as IFF world total over emerging and developing economy GDP

36.	Table 15 of the 2012 IFF Update showed that the net errors and omissions as a percentage of the financial account balance for ten countries with large sovereign wealth funds—China, the United Arab Emirates, Norway, Saudi Arabia, Singapore, Kuwait, China (Hong Kong), Russia, Qatar, and the United States—were significant. We showed that the net errors were very large relative to the financial account balance for Saudi Arabia, Qatar, and the United Arab Emirates, possibly as a result of incomplete or incorrect recording in the balance of payments of transactions related to their sovereign wealth funds. Including these countries along with other countries that do not have this issue may distort the ranking of exporters of illicit capital. We therefore exclude Saudi Arabia, United Arab Emirates, and Qatar from the top 15 countries with the largest illicit outflows presented in Table 4, but a full ranking can be found in the Appendix. Additionally, although Costa Rica is technically the 14th largest exporter of capital according to our data, we exclude it from the ranking because its IFF to GDP ratio of 28 percent is significantly higher than the other countries on the list and could be due to statistical discrepancies. A full ranking can be found in the Appendix.

37.	Cumulative illicit outflows from the top fifteen exporters of illicit capital (excluding Saudi Arabia, United Arab Emirates, Qatar, and Costa Rica) amount to US$4.2 trillion over the decade ending 2011, which is slightly over 70 percent of total outflows from all developing countries (Table 4). China (US$1,076 billion), Russia (US$881 billion), and Mexico (US$462 billion) lead the group. In fact, six of the top 15 exporters of illicit capital are in Asia (China, Malaysia, India, Indonesia, Thailand, and the Philippines) while two are in Africa (Nigeria and South Africa), four are in Europe (Russia, Belarus, Poland, and Serbia), two are in the Western Hemisphere (Mexico and Brazil), and one is in the MENA region (Iraq).

**Chart 4. Heat Map of Average Illicit Financial Flows to GDP Ratio for Developing Countries, 2002-2011** (in percent)
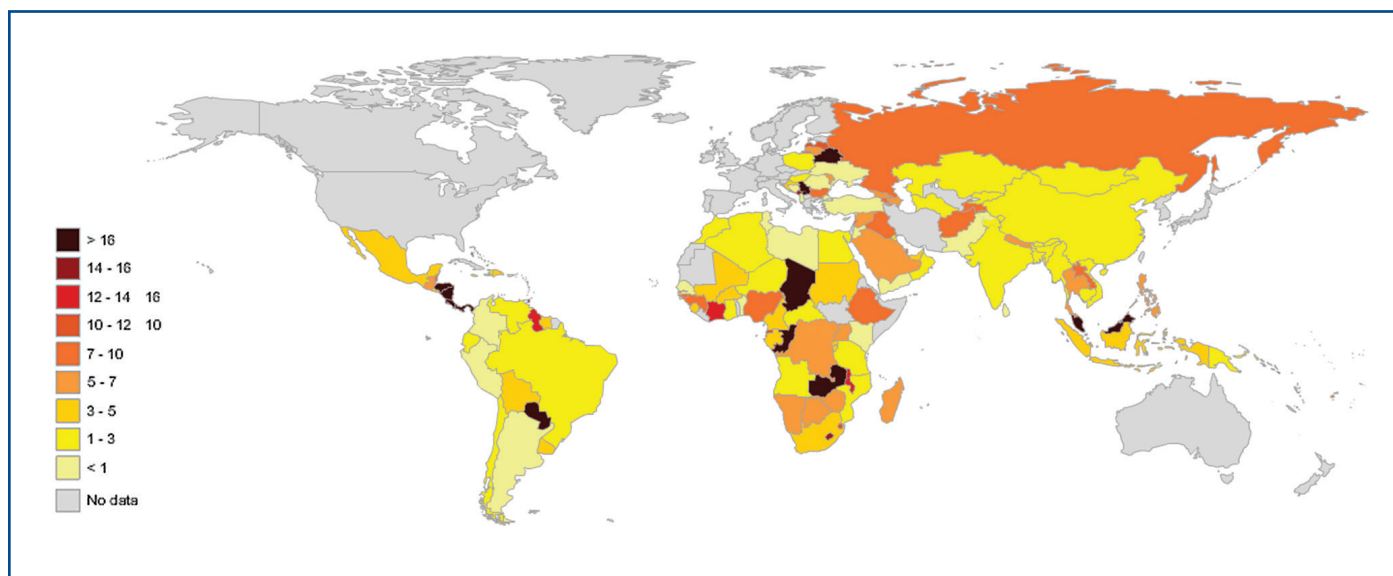


Chart design by E.J. Fagan.

38. Eight of the top ten exporters of illicit capital as identified in the 2012 IFF Update are also among the top ten countries by IFFs in this study. These are China, Russia, Mexico, Malaysia, India, Saudi Arabia, Indonesia, and Nigeria. The two countries that are not among the top ten here, the Philippines and the United Arab Emirates, are ranked numbers 11 and 13

**Table 4. Cumulative Illicit Financial Flows from the Top Fifteen Developing Economies, 2002-2011** (in millions of US dollars or percent)

| Rank | Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | China, Mainland | 67,498 | 69,284 | 87,757 | 90,315 | 94,555 | 112,056 | 102,972 | 133,921 | 165,860 | 151,348 | 1,075,566 | 107,557 |
| 2 | Russian Federation | 26,517 | 41,304 | 47,136 | 57,502 | 66,825 | 82,069 | 103,972 | 129,459 | 135,033 | 191,145 | 880,960 | 88,096 |
| 3 | Mexico | 35,621 | 38,085 | 40,738 | 47,746 | 47,749 | 58,592 | 65,151 | 38,128 | 51,954 | 38,094 | 461,859 | 46,186 |
| 4 | Malaysia | 19,737 | 20,763 | 26,733 | 35,294 | 36,720 | 36,809 | 41,123 | 34,507 | 64,511 | 54,184 | 370,381 | 37,038 |
| 5 | India | 7,893 | 10,068 | 18,697 | 20,021 | 27,569 | 33,108 | 44,645 | 28,615 | 68,383 | 84,933 | 343,932 | 34,393 |
| 6 | Brazil | 8,899 | 12,069 | 15,897 | 16,827 | 10,681 | 17,364 | 22,174 | 22,399 | 32,289 | 34,095 | 192,692 | 19,269 |
| 7 | Indonesia | 14,795 | 16,549 | 18,436 | 13,259 | 16,036 | 18,432 | 27,319 | 20,556 | 16,842 | 19,604 | 181,827 | 18,183 |
| 8 | Iraq | . | . | . | . | . | 3,660 | 19,668 | 18,139 | 22,282 | 15,029 | 78,778 | 15,756 |
| 9 | Nigeria | 0 | 0 | 1,681 | 17,867 | 19,164 | 19,321 | 24,188 | 26,377 | 20,787 | 12,889 | 142,274 | 14,227 |
| 10 | Thailand | 4,954 | 6,080 | 7,246 | 11,987 | 11,513 | 10,427 | 20,550 | 14,769 | 24,238 | 29,114 | 140,877 | 14,088 |
| 11 | South Africa | 1,290 | 0 | 2,542 | 3,387 | 9,893 | 18,730 | 19,787 | 17,515 | 3,858 | 23,732 | 100,732 | 10,073 |
| 12 | Philippines | 4,897 | 8,256 | 9,215 | 13,412 | 9,978 | 10,063 | 8,021 | 5,636 | 7,200 | 12,192 | 88,870 | 8,887 |
| 13 | Belarus | 2,546 | 3,154 | 3,917 | 4,144 | 5,608 | 9,080 | 14,976 | 9,207 | 8,365 | 14,088 | 75,085 | 7,508 |
| 14 | Poland | 1,110 | 1,961 | 421 | 787 | 0 | 3,302 | 12,161 | 10,045 | 10,462 | 9,144 | 49,393 | 4,939 |
| 15 | Serbia, Republic of | 5,469 | 7,409 | 9,776 | 6,433 | 5,278 | 4,070 | 212 | 5,603 | 2,655 | 2,462 | 49,367 | 4,937 |
| | Total of top 10 as percent of total | 201,226 | 234,981 | 290,190 | 338,981 | 361,568 | 437,083 | 526,919 | 514,875 | 634,717 | 692,053 | 4,232,593 | 28,217 |
| | | 74% | 78% | 75% | 68% | 71% | 74% | 67% | 67% | 76% | 73% | 72% | |
| | Developing World Total | 270,252 | 301,512 | 384,528 | 498,921 | 511,355 | 594,036 | 789,530 | 770,298 | 832,438 | 946,677 | 5,899,548 | 589,955 |

respectively, while the new entrants to the top ten, Brazil and Thailand, are ranked numbers 6 and 9 respectively. Hence, the methodological revisions implemented in this study do not appear to have substantially disturbed the rankings.

## b. Share of HMN and GER in Totals IFFs

39.     Both the HMN and GER components of illicit outflows include statistical errors – in the former, such errors arise in the recording of balance of payments credit and debit transactions, while in the latter, errors arise in the recording of trade statistics by reporting countries and their advanced-country trading partners. In fact, statistical errors are inherent in the compilation of *almost all* economic data. The question of errors is therefore a question of degree and not incidence.

40.     While both HMN and GER include statistical errors, it is impossible to separate the statistical errors from the illicit outflows captured by these indicators. However, there are two reasons why one can presume that statistical errors inherent in HMN are greater than those in GER (errors in both are on a net basis, in that positive and negative errors offset one another). First, HMN-related errors cover current account, capital account, and financial account transactions, while GER-related errors only cover trade-related errors, a significantly narrower scope. Second, HMN-related errors arise out of the recording of both visible and invisible transactions whereas trade-related transactions involve only visible merchandise, most of which is subject to taxes (such as most imports and some exports), making it both easier and far more likely to be tracked and properly recorded.

41.     *The Balance of Payments Manual, Sixth Edition* (BPM6) notes that while the IMF cannot issue guidelines to compilers on what would constitute an acceptable or reasonable size of net errors and omissions, they can assess it in relation to items such as GDP, positions data, and gross flows (paragraph 2.26, BPM6). Accordingly, Table 5 presents the variance, a statistical indicator of how much a variable fluctuates over time, in the HMN to GDP ratio and the average share of HMN in total IFFs for each region for the sample period (2002-2011). A highly variable HMN to GDP ratio could mean that more of a country's HMN figure is due to statistical discrepancies than to capital flight. We find that the variance of the HMN to GDP ratio is highest for Africa, followed by the MENA region, Asia, the Western Hemisphere, and developing Europe.

## Table 5. Variance in HMN to GDP Ratio
### (in percent)

| Region | Average Variance in HMN to GDP Ratio | Average Percent of HMN in Total IFF |
|---|---|---|
| Africa | 0.324 | 38.1% |
| Asia | 0.219 | 13.1% |
| Developing Europe | 0.048 | 15.7% |
| MENA | 0.252 | 73.0% |
| Western Hemisphere | 0.062 | 12.7% |
| Total | 0.188 | 22.1% |

42. The result is consistent with what we would expect; it is well-known that balance of payments statistics are less reliable for African countries. Moreover, the MENA region's relatively high variance in the HMN to GDP ratio may be due to incomplete or incorrect recording of balance of payments transactions related to sovereign wealth funds.

43. At the same time, both MENA and Africa's shares of HMN in total IFFs are much higher—73 percent and 38.1 percent respectively—than other regions, which are in the 12.7 to 15.7 percent range. This implies that illicit flows from MENA and Africa may be somewhat overstated to the extent that HMN is overstated due to statistical errors.

44. We now analyze the breakdown between balance of payments leakages (HMN) and trade misinvoicing (GER) in total illicit outflows from developing countries. On average, GER comprises nearly 80 percent of total outflows, with HMN amounting to just 20.3 percent of total outflows (Table 6). While the share of HMN fluctuates considerably, it has generally trended upwards from just 14.2 percent of total outflows in 2002 to 19.4 percent in 2011. There is little reason to believe that purely statistical errors in compiling balance of payments data have increased over time for developing countries as a whole. If anything, technical assistance by multilateral institutions and on a bilateral basis, together with better training of statisticians, should have reduced errors for the group. Hence, the upward trend in HMN for developing countries would indicate that leakages of illicit capital from the balance of payments are increasing over time.

**Table 6. Share of Real HMN in Real HMN+GER Non-Normalized, 2002-2011**
(in millions of constant US dollars, base year 2005, or in percent)

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average | Trend Rate of Growth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HMN | 46,110 | 46,918 | 36,248 | 125,355 | 92,532 | 92,078 | 170,591 | 214,823 | 207,024 | 143,451 | 1,175,130 | 117,513 | 20.2% |
| GER | 278,316 | 296,670 | 376,421 | 373,566 | 396,010 | 449,461 | 484,881 | 486,386 | 502,246 | 597,693 | 4,241,649 | 424,165 | 8.0% |
| HMN+GER | 324,426 | 343,587 | 412,669 | 498,921 | 488,542 | 541,539 | 655,472 | 701,209 | 709,270 | 741,144 | 5,416,779 | 541,678 | 10.2% |
| Share of HMN in total | 14.2% | 13.7% | 8.8% | 25.1% | 18.9% | 17.0% | 26.0% | 30.6% | 29.2% | 19.4% | – | 20.3% | 9.1% |

# IV. Drivers of Illicit Financial Flows: Evidence from Pooled Data

## A. General Considerations

45.  One of the advantages of using panel data, which pools cross-sectional and time series data, is that we can effectively assess dynamics with a relatively short time series. Panel data also allow the researcher to control for variables that are impossible to observe or measure such as cultural factors or differences in business practices across countries. In our case, the dependent variables, import and export misinvoicing, are measured over a time series of only ten years (2002-2011). This allows us to analyze different variables that drive trade misinvoicing both between countries and over time.

46.  We use trade misinvoicing rather than the broader measure of illicit flows (HMN+GER) because of the HMN component's known issues with including errors in compiling balance of payments (see paragraph 8). While trade misinvoicing estimates are also subject to errors in compiling trade statistics, the extent of such errors is much smaller than in the HMN measure, suggesting that we can reasonably make assumptions from the regression analysis of trade misinvoicing using panel data.

47.  Panel data can be modeled with what are known as "fixed" or "random" effects. Fixed-effects is used whenever the researcher is only interested in analyzing the impact of variables that vary over time, while random-effects is used when there is reason to believe that differences across entities have some influence on the dependent variable. Running the Hausman test on each regression found that random-effects was preferred over fixed-effects for the purpose of this study (regressions for export-misinvoicing failed the F-test using the random-effects model, so regression results are presented using regular OLS in Table 7). The regression results reported in Table 7 assess the drivers of trade misinvoicing over a short, ten-year period for a wide group of 44-55 developing countries. The developing countries included in each regression were chosen on the basis of data availability only.

## B. Interpreting the Results

48.  The panel data on export and import misinvoicing and potential drivers involve two groups of countries, which are listed in the Appendix. Data availability on exports and imports on a bilateral basis as well as data on the independent variables (the potential drivers) determined the coverage of countries. Panel regressions seeking to explain export misinvoicing are based on a group of 55 developing countries, while those testing the drivers of import misinvoicing cover 44 countries. Moreover, both export and import misinvoicing are estimated in two ways – the extent of export and import misinvoicing as a share of exports and imports

(columns "a" and "b") and the absolute value (i.e., without regard to sign) of export and import misinvoicing as a share of total exports and imports of a country. In the first method, export under-invoicing has a positive sign (representing a capital outflow) while export over-invoicing has a negative sign (representing a capital inflow). The signs are taken as they are in the panel regressions. The second method estimates the amount of export and import misinvoicing regardless of the direction of illicit flows they generate. Random effects panel regressions are carried out for import misinvoicing while regular ordinary least squares (OLS) regressions analysis is used to study the drivers of export misinvoicing.

49. Our analysis shows that a set of three common variables basically drove export misinvoicing in the 55 developing countries over the period 2002-2011 (see Table 7). Two are regulatory in nature—export proceeds surrender requirements (EPSR) and capital account openness— and the third is the state of overall governance in the country. These drivers were found to be statistically significant in explaining the direction of export under- and over-invoicing. The variables, as they are listed in Table 7, are defined as follows: EPSR is the presence of export proceeds surrender requirements; Corruption is the percentile rank of the World Bank's Control of Corruption index; KAOPEN is the Chinn-Ito Capital Account Openness Index; Fiscaldef_gdp is the fiscal deficit to GDP ratio; $\Delta$ExtDebt is the percentage change in a country's external debt position; FDI_gdp is the net foreign direct investment to GDP ratio; and Tariff is the average effective tariff rate.

## Table 7: Results of Panel and OLS Regressions

| Independent Variables | Dependent Variables | | | |
|---|---|---|---|---|
| | a | b | c | d |
| Constant | 0.450*** | -0.088* | 0.566*** | 0.186*** |
| EPSR | 0.304** | 0.028 | 0.240* | -0.016 |
| Corruption | -0.008*** | 0.001* | -0.008*** | -0.003*** |
| KAOPEN | 0.312*** | -0.005 | 0.263*** | 0.010 |
| Fiscaldef_gdp | 0.002 | 0.001 | 0.001 | -0.001 |
| $\Delta$ExtDebt | -0.034 | -0.005 | -0.067 | 0.057* |
| FDI_gdp | -0.766 | -0.198** | -0.900* | 0.145 |
| Tariff | | -0.0003** | | 0.005*** |
| Ygrow | 0.002 | -0.004*** | 0.005 | 0.004*** |
| Rho 1/ | | 0.790 | – | 0.620 |
| $R^2$ | 0.112 | – | 0.092 | – |
| Number of Countries | 55 | 44 | 55 | 44 |
| Number of Observations | 545 | 396 | 545 | 396 |

a = export misinvoicing over total exports
b = import misinvoicing over total imports
c = absolute value of export misinvoicing over total exports
d = absolute value of import misinvoicing over total imports
1/ Random-effects panel model conducted for b and d and regular OLS regression for a and b

50. The EPSR is a requirement levied on exporters in many developing countries that requires them to repatriate any foreign currency obtained through international trade in return for local currency, sometimes at a specified exchange rate (IMF's Annual Report on Exchange Arrangements and Exchange Restrictions, 2006). This measure is typically implemented to

supply the government with a source of valuable foreign reserves that it can use to provide macroeconomic stability. EPSR leads to export under-invoicing when exporters see the repatriation requirement as a confiscatory measure. Since foreign currency, particularly US dollars or Euros, is often more stable than local currency, companies involved in exporting goods may resort to under-valuing their exports in order to avoid having to surrender their foreign currency. In the presence of a high inflation or volatile local exchange rates, as is often a problem in the developing world, companies that conduct international trade often rely on foreign reserves of capital in the same manner that governments do. Although this paper makes no recommendation as to whether EPSRs are good for developing countries or not, regression results suggest that their presence can influence exporters to under-value their exports in order to hold foreign exchange in offshore bank accounts instead of onshore in foreign currency accounts.

51. Data on the EPSR were obtained from the IMF's Annual Report on Exchange Controls and Exchange Regulations and are represented by a dummy variable (1 for countries with EPSR in force and 0 for those with no EPSR). There are some serious limitations of capturing the EPSR in this fashion. For instance, the dummy variable approach does not allow us to capture the extent of the control—some countries may have a 50 percent surrender requirement, while others may have a 100 percent surrender requirement. The time period over which exporters may retain the foreign exchange proceeds can also vary and thus also cannot be captured by a simple dummy variable approach. Clearly, the complexities of capital account regulations and their impact on trade misinvoicing are a thorny problem for researchers, but the fact that panel regressions using even a simple indicator of the EPSR find it to be a significant driver of export misinvoicing is quite interesting.

52. We also find that *de facto* capital account openness (represented here by the Chinn-Ito Capital Account Openness Index). leads to greater export misinvoicing in both directions. This is possibly in contention with many studies on trade misinvoicing, however, and the results should be taken with caution. Bhagwati's seminal article on the determinants of capital flight from developing countries in 1974 suggests that the high level of *de facto* capital controls present in developing countries incentivizes traders to circumvent these restrictions through trade misinvoicing. Using this logic, the easing of *de facto* restrictions on capital movements should result in *less* trade misinvoicing over time since legal channels are now available for shifting capital abroad. The surprising fact, however, is that much of the developing world has gone through substantial capital account liberalization since the 1970s and the problem of trade misinvoicing has only worsened. One explanation for this may be that openness and liberalization alone cannot curtail misinvoicing if such liberalization is not accompanied by greater regulatory oversight. Rather, openness in the presence of weak governance can be a prescription for more illicit flows.

53.   The World Bank Governance Indicators capture the extent of corruption in specific countries by measuring the world percentile rank of the country's corruption indicator – an increase in the percentile rank denotes a reduction in corruption, as there are relatively fewer countries with less corruption, while a decline in the percentile rank reflects more corruption relative to other countries in the world. The panel data regressions find that if there is a decline in the percentile rank (i.e., corruption increases), export misinvoicing increases so that the coefficient is negative.

54.   Regarding import misinvoicing, the most interesting finding is that the average effective tariff rate on imports (obtained from the World Trade Organization) is significantly related to import misinvoicing – an increase in rates will increase import under-invoicing. At the same time, we found that higher tariff rates leads to a reduction in import over-invoicing by raising the cost of moving capital out of the country. But the relationship is complex. If importers are able to offset the higher cost through reductions in taxable profits or gains in black markets (for example by selling the imports at a higher cost without declaring the profits), then they will still over-invoice even at the higher tariff rate.

55.   The EPSR, as expected, is not statistically relevant in explaining import misinvoicing. Once again, the percentile rank of the country in controlling corruption is negatively related to import misinvoicing. The statistical significance of this relationship is stronger when we measure import misinvoicing without regard to direction (99 percent confidence interval) than taking account of the direction of flows. We did not find capital account openness to be significant in explaining import misinvoicing

56.   By and large, we do not find any macroeconomic factors—such as the fiscal deficit, change in external debt, net FDI flows, etc.—to be consistently significant in explaining export or import misinvoicing across all four regressions. However, we find that real GDP growth is positively and significantly related to import misinvoicing, in that growth by itself will drive rather than curtail misinvoicing if overall governance does not improve. We found a similar result in our case study on India.

# V. Conclusion

57.    Illicit financial flows involve capital that is illegally earned, transferred, or utilized and are unrecorded, unlike broad capital flight which consists of a mix of licit and illicit capital. Our estimates show that the developing world lost US$946.7 billion due to illicit financial flows, up 13.7 percent from US$832.4 billion in 2010.

58.    We present a revised methodology for estimating trade misinvoicing given China's use of Hong Kong as a trade entrepôt. While there are other trade entrepôts like Singapore and Dubai, Hong Kong is by far the largest such entrepôt in the world. Estimates of illicit outflows in the 2012 IFF Update are on average about 12 percent higher than those shown in this study, due mainly to the overestimation of trade misinvoicing arising from the "Hong Kong effect".

59.    Illicit flows from developing countries increased at a trend rate of 10.2 percent per annum in real terms over the period 2002 and 2011, with faster growth rates before the global economic slowdown than after. The volume of total illicit flows averaged approximately 4.0 percent of GDP over the period studied.

60.    The study also highlights the pattern of illicit outflows from developing countries on a regional basis. We find that:

   • The Middle East and North Africa (MENA) region registered the fastest trend rate of growth in illicit outflows (31.5 percent per annum) followed by Africa (19.8 percent), developing Europe (13.6 percent), Asia (7.5 percent), and the Western Hemisphere (3.1 percent);
   • Asia accounts for 39.6 percent of total illicit outflows from developing countries, driven by outflows from China, Malaysia, India, Indonesia, Thailand, and the Philippines, which rank among the top fifteen exporters of illicit capital from the developing world;
   • Developing Europe (21.5 percent) and the Western Hemisphere (19.6 percent) contribute almost equally to total illicit outflows from the developing world, while outflows from the MENA region account for 11.2 percent of total outflows. Developing Europe's second-largest share of total outflows is almost entirely driven by Russia, while the Western Hemisphere's share is driven by Mexico and Brazil. Oil-exporting countries dominate illicit outflows from the MENA region; and
   • Africa leads other regions in terms of the illicit outflows to GDP measure. Analyzing illicit flows as a share of GDP allows for a better measure of the impact such outflows can have on a country. For instance, while illicit outflows from Africa comprise just 7.7 percent of developing country outflows, this loss at an average of 5.7 percent of GDP per annum has an outsized impact on the continent.

61. Cumulative outflows from the top fifteen exporters of illicit capital (excluding Saudi Arabia, the United Arab Emirates, Qatar and Costa Rica) amount to US$4.2 trillion over the decade ending 2011, slightly over 70 percent of total outflows from developing countries (Table 4). China (US$1,076 billion), Russia (US$881.0 billion), and Mexico (US$461.9 billion) lead the top 15 group. Six of the top 15 exporters of illicit capital are in Asia (China, Malaysia, India, Indonesia, Thailand, and the Philippines), two are in Africa (Nigeria and South Africa), four are in Europe (Russia, Belarus, Poland, and Serbia), two are in the Western Hemisphere (Mexico and Brazil), and one is in the MENA region (Iraq).

62. We find no evidence that various macroeconomic drivers significantly impact trade misinvoicing. Regression results suggest that export misinvoicing is driven by capital account restrictions—namely export proceeds surrender requirement (EPSR) and capital account openness—and by corruption, as measured by the World Bank's Control of Corruption index. Import misinvoicing is shown to be driven by growth in real income, the corruption, and the average effective tariff rate on imports.

# Appendix 1. Tables

## Table 1. Geographical Regions

| Africa (48) | Asia (27) | Developing Europe (26) | MENA (17) | Western Hemisphere (33) | Advanced Economies (36) |
|---|---|---|---|---|---|
| Angola | Afghanistan | Albania | Algeria | Antigua and Barbuda | Australia |
| Benin | Bangladesh | Armenia, Republic of* | Bahrain, Kingdom of | Argentina | Austria |
| Botswana | Bhutan | Azerbaijan, Republic of | Egypt | Aruba | Belgium |
| Burkina Faso | Brunei Darussalam | Belarus* | Iran, Islamic Republic of | Bahamas, The | Canada |
| Burundi | Cambodia | Bosnia and Herzegovina | Iraq | Barbados | Cyprus |
| Cameroon | China, Mainland* | Bulgaria* | Jordan | Belize | Czech Republic |
| Cape Verde | Fiji | Croatia | Kuwait | Bolivia | Denmark |
| Central African Republic | India* | Georgia | Lebanon | Brazil* | Finland |
| Chad | Indonesia* | Hungary | Libya | Chile* | France |
| Comoros | Kiribati | Kazakhstan | Morocco | Colombia | Germany |
| Congo, Democratic Republic of | Lao PDR | Kosovo, Republic of | Oman | Costa Rica | Greece |
| Congo, Republic of | Malaysia* | Kyrgyz Republic | Qatar | Dominica | Hong Kong |
| Cote d'Ivoire* | Maldives | Latvia* | Saudi Arabia | Dominican Republic | Iceland |
| Djibouti | Mongolia | Lithuania* | Syrian Arab Republic | Ecuador | Ireland |
| Equatorial Guinea | Myanmar | Macedonia, FYR | Tunisia | El Salvador | Israel |
| Eritrea | Nepal | Moldova | United Arab Emirates | Grenada | Italy |
| Ethiopia | Pakistan | Montenegro | Yemen, Republic of | Guatemala | Japan |
| Gabon | Papua New Guinea | Poland | | Guyana | Korea |
| Gambia, The | Philippines* | Romania | | Haiti | Luxembourg |
| Ghana | Samoa | Russian Federation* | | Honduras | Malta |
| Guinea | Solomon Islands | Serbia, Republic of | | Jamaica | Netherlands |
| Guinea-Bissau | Sri Lanka | Tajikistan | | Mexico | New Zealand |
| Kenya | Thailand* | Turkey | | Nicaragua | Norway |
| Lesotho | Timor-Leste, Dem. Rep. of | Turkmenistan | | Panama | Portugal |
| Liberia | Tonga | Ukraine | | Paraguay* | Singapore |
| Madagascar | Vanuatu | Uzbekistan | | Peru | Slovak Republic |
| Malawi | Vietnam | | | St. Kitts and Nevis | Slovenia |
| Mali | | | | St. Lucia | Spain |
| Mauritania | | | | St. Vincent and the Grenadines | Sweden |
| Mauritius | | | | Suriname | Switzerland |
| Mozambique | | | | Trinidad and Tobago | Taiwan, Province of China |
| Namibia | | | | Uruguay | United Kingdom |
| Niger | | | | Venezuela, Rep. Bolivariana de | United States |
| Nigeria | | | | | |
| Rwanda | | | | | |
| Sao Tome and Principe | | | | | |
| Senegal | | | | | |
| Seychelles | | | | | |
| Sierra Leone | | | | | |
| Somalia | | | | | |
| South Africa | | | | | |
| Sudan | | | | | |
| Swaziland | | | | | |
| Tanzania | | | | | |
| Togo* | | | | | |
| Uganda | | | | | |
| Zambia* | | | | | |
| Zimbabwe | | | | | |

* denotes developing countries who report bilaterally to all advanced economies
Note:    Advanced economies only used for conducting trade misinvoicing estimates
Source:   IMF Direction of Trade Statistics

## Table 2. Country Rankings by Largest Average Non-Normalized IFF Estimates, 2002-2011
### (in millions of US dollars)

| Rank | Country | Average IFF (where data is available) | Rank | Country | Average IFF (where data is available) |
|---|---|---|---|---|---|
| 1 | China, Mainland | 107,557 | 38 | Vietnam | 2,216 |
| 2 | Russian Federation | 88,096 | 39 | Ethiopia | 2,024 |
| 3 | Mexico | 46,186 | 40 | Dominican Republic | 1,937 |
| 4 | Malaysia | 37,038 | 41 | Zambia | 1,934 |
| 5 | India | 34,393 | 42 | Togo | 1,847 |
| 6 | Saudi Arabia | 26,643 | 43 | Guatemala | 1,754 |
| 7 | Brazil | 19,269 | 44 | Azerbaijan, Republic of | 1,706 |
| 8 | Indonesia | 18,183 | 45 | Hungary | 1,690 |
| 9 | Iraq | 15,756 | 46 | Lithuania | 1,664 |
| 10 | Nigeria | 14,227 | 47 | Bangladesh | 1,608 |
| 11 | Thailand | 14,088 | 48 | Croatia | 1,574 |
| 12 | United Arab Emirates | 11,464 | 49 | Bahamas, The | 1,563 |
| 13 | South Africa | 10,073 | 50 | Algeria | 1,522 |
| 14 | Philippines | 8,887 | 51 | Argentina | 1,491 |
| 15 | Costa Rica | 8,065 | 52 | Congo, Republic of | 1,468 |
| 16 | Belarus | 7,508 | 53 | Nicaragua | 1,324 |
| 17 | Qatar | 6,282 | 54 | Equatorial Guinea | 1,280 |
| 18 | Poland | 4,939 | 55 | Colombia | 1,202 |
| 19 | Serbia, Republic of | 4,937 | 56 | Morocco | 1,192 |
| 20 | Chile | 4,520 | 57 | Ecuador | 1,151 |
| 21 | Paraguay | 4,012 | 58 | Romania | 1,123 |
| 22 | Venezuela, Rep. Bolivariana de | 3,897 | 59 | Liberia | 1,026 |
| 23 | Brunei Darussalam | 3,837 | 60 | Bahrain, Kingdom of | 983 |
| 24 | Panama | 3,809 | 61 | Peru | 909 |
| 25 | Turkey | 3,728 | 62 | El Salvador | 897 |
| 26 | Egypt | 3,588 | 63 | Chad | 895 |
| 27 | Honduras | 3,155 | 64 | Botswana | 845 |
| 28 | Trinidad and Tobago | 2,646 | 65 | Uruguay | 816 |
| 29 | Kazakhstan | 2,640 | 66 | Nepal | 805 |
| 30 | Sudan | 2,610 | 67 | Oman | 776 |
| 31 | Aruba | 2,590 | 68 | Uganda | 739 |
| 32 | Bulgaria | 2,559 | 69 | Myanmar | 684 |
| 33 | Kuwait | 2,512 | 70 | Cameroon | 661 |
| 34 | Syrian Arab Republic | 2,405 | 71 | Armenia, Republic of | 623 |
| 35 | Lebanon | 2,327 | 72 | Ukraine | 622 |
| 36 | Latvia | 2,317 | 73 | Angola | 605 |
| 37 | Cote d'Ivoire | 2,314 | | | |

| Rank | Country | Average IFF (where data is available) |
|------|---------|-----------|
| 74 | Macedonia, FYR | 559 |
| 75 | Libya | 544 |
| 76 | Malawi | 532 |
| 77 | Namibia | 504 |
| 78 | Georgia | 453 |
| 79 | Tanzania | 453 |
| 80 | Turkmenistan | 430 |
| 81 | Montenegro | 430 |
| 82 | Madagascar | 419 |
| 83 | Lao PDR | 414 |
| 84 | Congo, Democratic Republic of | 402 |
| 85 | Jamaica | 401 |
| 86 | Afghanistan | 376 |
| 87 | Mali | 375 |
| 88 | Bolivia | 350 |
| 89 | Zimbabwe | 335 |
| 90 | Swaziland | 331 |
| 91 | Djibouti | 319 |
| 92 | Ghana | 316 |
| 93 | Guinea | 313 |
| 94 | Burkina Faso | 296 |
| 95 | Fiji | 275 |
| 96 | Tajikistan | 275 |
| 97 | Gabon | 268 |
| 98 | Moldova | 247 |
| 99 | Yemen, Republic of | 239 |
| 100 | Lesotho | 233 |
| 101 | Papua New Guinea | 232 |
| 102 | Sri Lanka | 223 |
| 103 | Guyana | 221 |
| 104 | Rwanda | 211 |
| 105 | Barbados | 196 |
| 106 | St. Vincent and the Grenadines | 192 |
| 107 | Vanuatu | 182 |
| 108 | Samoa | 135 |
| 109 | Cambodia | 133 |

| Rank | Country | Average IFF (where data is available) |
|------|---------|-----------|
| 110 | Mongolia | 129 |
| 111 | Niger | 113 |
| 112 | Belize | 109 |
| 113 | Mauritius | 107 |
| 114 | Solomon Islands | 106 |
| 115 | Suriname | 106 |
| 116 | Albania | 103 |
| 117 | Pakistan | 102 |
| 118 | Mozambique | 87 |
| 119 | Kenya | 86 |
| 120 | Kyrgyz Republic | 83 |
| 121 | Dominica | 81 |
| 122 | Burundi | 74 |
| 123 | Maldives | 72 |
| 124 | Sierra Leone | 71 |
| 125 | Jordan | 68 |
| 126 | Haiti | 68 |
| 127 | Gambia, The | 59 |
| 128 | Guinea-Bissau | 56 |
| 129 | Seychelles | 54 |
| 130 | Grenada | 49 |
| 131 | St. Lucia | 47 |
| 132 | St. Kitts and Nevis | 47 |
| 133 | Benin | 41 |
| 134 | Cape Verde | 39 |
| 135 | Tunisia | 31 |
| 136 | Comoros | 27 |
| 137 | Tonga | 26 |
| 138 | Bhutan | 25 |
| 139 | Central African Republic | 20 |
| 140 | Sao Tome and Principe | 15 |
| 141 | Bosnia and Herzegovina | 14 |
| 142 | Antigua and Barbuda | 12 |
| 143 | Timor-Leste, Dem. Rep. of | 11 |
| 144 | Senegal | 1 |

## Table 3.   Illicit Financial Flows (HMN+GER Normalized)
### (in millions of US dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Afghanistan | 1,512 | 892 | 668 | 527 | 161 | 0 | 0 | 0 | 0 | 0 | 3,760 | 376 |
| Albania | 0 | 0 | 0 | 86 | 107 | 270 | 161 | 0 | 0 | 277 | 901 | 90 |
| Algeria | 0 | 0 | 0 | 189 | 1,962 | 500 | 3,358 | 2,673 | 1,265 | 2,184 | 12,131 | 1,213 |
| Angola | 68 | 822 | 0 | 574 | 0 | 1,641 | 1,236 | 0 | 0 | 17 | 4,358 | 436 |
| Antigua and Barbuda | 40 | 5 | 19 | 11 | 11 | 8 | 4 | 7 | 0 | 11 | 116 | 12 |
| Argentina | 1,890 | 1,428 | 0 | 0 | 0 | 0 | 0 | 0 | 606 | 3,603 | 7,527 | 753 |
| Armenia, Republic of | 86 | 217 | 219 | 352 | 386 | 806 | 1,124 | 832 | 1,045 | 1,163 | 6,229 | 623 |
| Aruba | 805 | 1,226 | 2,189 | 3,537 | 3,708 | 3,935 | 4,919 | 1,842 | 125 | 3,611 | 25,897 | 2,590 |
| Azerbaijan, Republic of | 87 | 112 | 50 | 126 | 2,462 | 8,539 | 845 | 3,854 | 990 | 0 | 17,063 | 1,706 |
| Bahamas, The | 772 | 1,001 | 1,062 | 1,842 | 1,330 | 1,622 | 2,086 | 1,670 | 2,219 | 2,030 | 15,634 | 1,563 |
| Bahrain, Kingdom of | 651 | 700 | 1,509 | 2,249 | 2,304 | 1,694 | 30 | 66 | 0 | 0 | 9,202 | 920 |
| Bangladesh | 349 | 830 | 840 | 644 | 2,648 | 2,583 | 179 | 1,034 | 2,191 | 1,168 | 12,465 | 1,246 |
| Barbados | 301 | 329 | 574 | 534 | 69 | 54 | 7 | 0 | 65 | 0 | 1,934 | 193 |
| Belarus | 2,546 | 3,154 | 3,917 | 4,144 | 5,608 | 9,080 | 14,976 | 9,207 | 8,365 | 14,088 | 75,085 | 7,508 |
| Belize | 73 | 119 | 90 | 99 | 84 | 173 | 152 | 104 | 72 | 120 | 1,086 | 109 |
| Benin | 0 | 61 | 117 | 0 | 0 | 0 | 0 | 6 | 195 | 0 | 379 | 38 |
| Bhutan | . | . | . | . | 0 | 137 | 0 | 0 | 0 | 11 | 148 | 25 |
| Bolivia | 854 | 174 | 625 | 374 | 105 | 112 | 0 | 454 | 802 | 0 | 3,500 | 350 |
| Bosnia and Herzegovina | 0 | 0 | 0 | 0 | 0 | 68 | 74 | 0 | 0 | 0 | 142 | 14 |
| Botswana | 0 | 161 | 293 | 0 | 0 | 0 | 0 | 1,801 | 352 | 0 | 2,607 | 261 |
| Brazil | 8,899 | 12,069 | 15,897 | 16,827 | 0 | 3,152 | 22,174 | 22,399 | 32,289 | 34,095 | 167,800 | 16,780 |
| Brunei Darussalam | 2,766 | 2,471 | 1,592 | 4,653 | 5,786 | 6,864 | 8,440 | 5,796 | 0 | 0 | 38,369 | 3,837 |
| Bulgaria | 1,828 | 2,591 | 2,306 | 3,019 | 986 | 3,052 | 4,229 | 0 | 0 | 0 | 18,011 | 1,801 |
| Burkina Faso | 128 | 107 | 287 | 194 | 198 | 328 | 396 | 409 | 381 | 535 | 2,963 | 296 |
| Burundi | 6 | 14 | 19 | 112 | 131 | 63 | 26 | 154 | 51 | 161 | 737 | 74 |
| Cambodia | 280 | 366 | 448 | 12 | 72 | 45 | 45 | 8 | 29 | 26 | 1,332 | 133 |
| Cameroon | 177 | 264 | 861 | 465 | 941 | 1,261 | 1,540 | 0 | 0 | 483 | 5,992 | 599 |
| Cape Verde | 19 | 33 | 5 | 8 | 27 | 11 | 123 | 40 | 89 | 30 | 387 | 39 |
| Central African Republic | 67 | 13 | 0 | 0 | 0 | 0 | 0 | 35 | 33 | 30 | 179 | 18 |
| Chad | 1,076 | 399 | 499 | 429 | 734 | 988 | 874 | 1,161 | 1,188 | 1,598 | 8,946 | 895 |
| Chile | 2,846 | 724 | 270 | 1,329 | 1,526 | 450 | 8,046 | 0 | 498 | 352 | 16,040 | 1,604 |
| China, Mainland | 67,498 | 69,284 | 87,757 | 90,315 | 0 | 0 | 0 | 41,383 | 52,936 | 13,766 | 422,938 | 42,294 |
| Colombia | 0 | 0 | 1,750 | 0 | 0 | 0 | 123 | 0 | 0 | 0 | 1,873 | 187 |
| Comoros | 9 | 6 | 15 | 16 | 24 | 20 | 21 | 28 | 27 | 106 | 272 | 27 |
| Congo, Democratic Republic of | 576 | 412 | 597 | 924 | 567 | 170 | 0 | 0 | 0 | 0 | 3,246 | 325 |
| Congo, Republic of | 220 | 1,039 | 3,054 | 665 | 2,151 | 1,722 | 2,630 | 616 | 1,758 | 0 | 13,855 | 1,386 |
| Costa Rica | 2,358 | 3,440 | 4,653 | 5,291 | 5,377 | 5,536 | 6,815 | 8,727 | 17,340 | 21,111 | 80,648 | 8,065 |
| Cote d'Ivoire | 1,251 | 3,032 | 2,587 | 3,819 | 2,645 | 3,309 | 2,423 | 1,215 | 1,809 | 0 | 22,090 | 2,209 |
| Croatia | 638 | 1,355 | 1,305 | 1,288 | 1,722 | 1,659 | 2,266 | 1,680 | 921 | 1,532 | 14,366 | 1,437 |
| Djibouti | 164 | 206 | 229 | 277 | 356 | 278 | 399 | 298 | 478 | 501 | 3,186 | 319 |
| Dominica | 13 | 18 | 26 | 41 | 46 | 76 | 150 | 128 | 124 | 182 | 806 | 81 |
| Dominican Republic | 635 | 1,887 | 981 | 456 | 889 | 347 | 1,093 | 4,040 | 5,201 | 3,842 | 19,370 | 1,937 |
| Ecuador | 317 | 0 | 861 | 1,318 | 0 | 0 | 4,805 | 131 | 0 | 0 | 7,433 | 743 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Egypt | 1,507 | 1,248 | 3,156 | 5,098 | 4,483 | 4,730 | 6,070 | 0 | 2,145 | 6,414 | 34,851 | 3,485 |
| El Salvador | 1,085 | 642 | 657 | 1,070 | 932 | 1,027 | 882 | 955 | 928 | 793 | 8,971 | 897 |
| Equatorial Guinea | 0 | 0 | 0 | 0 | 0 | 0 | 1,970 | 2,875 | 2,906 | 3,223 | 10,974 | 1,097 |
| Eritrea | . | . | . | . | . | . | . | . | . | . | . | . |
| Ethiopia | 1,231 | 495 | 354 | 785 | 1,152 | 1,510 | 1,865 | 3,045 | 5,643 | 4,107 | 20,185 | 2,019 |
| Fiji | 199 | 254 | 239 | 159 | 408 | 240 | 391 | 276 | 252 | 330 | 2,747 | 275 |
| Gabon | 503 | 260 | 357 | 415 | 0 | 0 | 0 | 0 | 0 | 0 | 1,535 | 153 |
| Gambia, The | 18 | 10 | 30 | 54 | 30 | 72 | 64 | 40 | 134 | 135 | 587 | 59 |
| Georgia | 243 | 382 | 444 | 403 | 706 | 427 | 884 | 515 | 312 | 219 | 4,534 | 453 |
| Ghana | 0 | 0 | 0 | 0 | 0 | 37 | 374 | 1,342 | 721 | 691 | 3,164 | 316 |
| Grenada | 33 | 42 | 24 | 51 | 44 | 58 | 58 | 48 | 60 | 69 | 485 | 49 |
| Guatemala | 1,433 | 1,385 | 1,400 | 1,562 | 920 | 1,019 | 969 | 3,356 | 2,402 | 3,095 | 17,542 | 1,754 |
| Guinea | 116 | 316 | 421 | 292 | 290 | 633 | 251 | 0 | 373 | 436 | 3,128 | 313 |
| Guinea-Bissau | 44 | 0 | 37 | 23 | 13 | 193 | 5 | 42 | 74 | 119 | 549 | 55 |
| Guyana | 60 | 80 | 127 | 209 | 143 | 291 | 298 | 314 | 388 | 298 | 2,206 | 221 |
| Haiti | 0 | 0 | 40 | 0 | 87 | 95 | 120 | 46 | 61 | 64 | 513 | 51 |
| Honduras | 2,679 | 2,722 | 2,920 | 3,175 | 3,355 | 3,388 | 3,294 | 2,980 | 3,479 | 3,560 | 31,552 | 3,155 |
| Hungary | 0 | 0 | 2,100 | 2,580 | 2,744 | 349 | 3,373 | 771 | 2,194 | 2,789 | 16,901 | 1,690 |
| India | 7,893 | 10,068 | 18,697 | 20,021 | 27,569 | 33,108 | 44,645 | 28,615 | 68,383 | 84,933 | 343,932 | 34,393 |
| Indonesia | 14,795 | 16,549 | 18,436 | 13,259 | 16,036 | 18,432 | 27,319 | 20,556 | 3,501 | 3,395 | 152,278 | 15,228 |
| Iran, Islamic Republic of | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Iraq | . | . | . | . | . | 3,660 | 19,668 | 18,139 | 22,282 | 15,029 | 78,778 | 15,756 |
| Jamaica | 360 | 430 | 435 | 686 | 322 | 0 | 894 | 470 | 162 | 222 | 3,981 | 398 |
| Jordan | 130 | 0 | 0 | 0 | 206 | 0 | 0 | 0 | 0 | 0 | 336 | 34 |
| Kazakhstan | 0 | 932 | 1,016 | 1,800 | 3,128 | 2,966 | 5,746 | 783 | 0 | 5,619 | 21,990 | 2,199 |
| Kenya | 0 | 277 | 67 | 245 | 0 | 258 | 0 | 0 | 0 | 0 | 847 | 85 |
| Kiribati | . | . | . | . | . | . | . | . | . | . | . | . |
| Kosovo, Republic of | . | . | . | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kuwait | 1,869 | 574 | 0 | 0 | 0 | 4,732 | 10,049 | 0 | 0 | 1,698 | 18,922 | 1,892 |
| Kyrgyz Republic | 22 | 0 | 19 | 0 | 0 | 356 | 0 | 82 | 46 | 304 | 830 | 83 |
| Lao PDR | 130 | 82 | 0 | 0 | 516 | 849 | 588 | 702 | 402 | 793 | 4,062 | 406 |
| Latvia | 1,061 | 1,210 | 1,943 | 2,263 | 2,474 | 3,160 | 3,286 | 2,093 | 1,614 | 4,063 | 23,167 | 2,317 |
| Lebanon | 528 | 0 | 734 | 1,678 | 3,191 | 7,006 | 3,049 | 4,021 | 529 | 2,038 | 22,774 | 2,277 |
| Lesotho | 309 | 71 | 128 | 0 | 206 | 0 | 217 | 383 | 0 | 0 | 1,314 | 131 |
| Liberia | 886 | 814 | 898 | 981 | 1,576 | 1,905 | 648 | 1,328 | 807 | 414 | 10,256 | 1,026 |
| Libya | 0 | 0 | 0 | 1,497 | 0 | 0 | 1,753 | 0 | 2,137 | 0 | 5,387 | 539 |
| Lithuania | 1,309 | 1,851 | 1,101 | 1,458 | 289 | 54 | 0 | 0 | 0 | 4,267 | 10,329 | 1,033 |
| Macedonia, FYR | 177 | 281 | 381 | 494 | 305 | 807 | 1,074 | 564 | 573 | 934 | 5,590 | 559 |
| Madagascar | 122 | 0 | 756 | 412 | 1,596 | 0 | 636 | 165 | 108 | 265 | 4,059 | 406 |
| Malawi | 112 | 212 | 160 | 494 | 458 | 456 | 1,010 | 752 | 687 | 977 | 5,319 | 532 |
| Malaysia | 19,737 | 20,763 | 26,733 | 35,294 | 36,720 | 36,809 | 41,123 | 34,507 | 64,511 | 54,184 | 370,381 | 37,038 |
| Maldives | 156 | 111 | 68 | 35 | 72 | 49 | 56 | 39 | 62 | 70 | 717 | 72 |

## Table 3.   Illicit Financial Flows (HMN+GER Normalized) (cont)
(in millions of US dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mali | 6 | 275 | 128 | 173 | 224 | 184 | 966 | 323 | 899 | 530 | 3,709 | 371 |
| Mauritania | . | . | . | . | . | . | . | . | . | . | . | . |
| Mauritius | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 306 | 443 | 0 | 749 | 75 |
| Mexico | 35,621 | 38,085 | 40,738 | 47,746 | 47,749 | 58,592 | 65,151 | 38,128 | 51,954 | 10,732 | 434,497 | 43,450 |
| Moldova | 132 | 228 | 343 | 244 | 188 | 440 | 493 | 226 | 0 | 0 | 2,294 | 229 |
| Mongolia | . | 6 | 0 | 75 | 14 | 212 | 775 | 0 | 0 | 76 | 1,158 | 129 |
| Montenegro | 0 | 0 | 980 | 925 | 436 | 743 | 456 | 278 | 259 | 222 | 4,299 | 430 |
| Morocco | 182 | 297 | 282 | 3,487 | 521 | 0 | 412 | 2,232 | 160 | 243 | 7,816 | 782 |
| Mozambique | 266 | 0 | 0 | 0 | 365 | 0 | 0 | 0 | 0 | 0 | 631 | 63 |
| Myanmar | 19 | 78 | 633 | 604 | 626 | 336 | 1,362 | 1,010 | 2,132 | 0 | 6,800 | 680 |
| Namibia | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 0 | 406 | 41 |
| Nepal | 540 | 364 | 414 | 503 | 678 | 574 | 884 | 1,552 | 1,885 | 651 | 8,045 | 805 |
| Nicaragua | 770 | 625 | 1,055 | 1,019 | 1,511 | 1,222 | 1,594 | 1,241 | 1,889 | 2,315 | 13,242 | 1,324 |
| Niger | 9 | 15 | 86 | 123 | 0 | 100 | 57 | 0 | 534 | 166 | 1,090 | 109 |
| Nigeria | 0 | 0 | 0 | 17,344 | 17,151 | 14,399 | 20,783 | 26,377 | 16,500 | 7,150 | 119,704 | 11,970 |
| Oman | 842 | 565 | 396 | 851 | 2,397 | 0 | 0 | 1,031 | 0 | 1,006 | 7,089 | 709 |
| Pakistan | 0 | 44 | 0 | 200 | 0 | 0 | 51 | 0 | 729 | 0 | 1,024 | 102 |
| Panama | 2,235 | 2,414 | 2,709 | 3,929 | 4,632 | 5,566 | 5,800 | 5,189 | 5,191 | 430 | 38,095 | 3,809 |
| Papua New Guinea | 0 | 0 | 0 | 0 | 15 | 0 | 73 | 479 | 91 | 896 | 1,554 | 155 |
| Paraguay | 1,072 | 1,830 | 2,183 | 2,756 | 3,268 | 3,851 | 5,461 | 4,769 | 6,941 | 7,993 | 40,125 | 4,012 |
| Peru | 0 | 0 | 0 | 0 | 407 | 138 | 123 | 596 | 0 | 1,020 | 2,284 | 228 |
| Philippines | 4,897 | 8,256 | 9,215 | 13,412 | 9,978 | 10,063 | 8,021 | 5,636 | 7,200 | 12,192 | 88,870 | 8,887 |
| Poland | 981 | 1,961 | 0 | 787 | 0 | 3,302 | 12,161 | 10,045 | 10,462 | 9,144 | 48,843 | 4,884 |
| Qatar | 1,031 | 1,260 | 0 | 5,568 | 4,703 | 0 | 2,310 | 21,173 | 11,384 | 3,738 | 51,167 | 5,117 |
| Romania | 856 | 289 | 0 | 0 | 0 | 1,320 | 2,065 | 1,729 | 145 | 0 | 6,404 | 640 |
| Russian Federation | 26,517 | 41,304 | 47,136 | 57,502 | 66,825 | 82,069 | 103,972 | 129,459 | 135,033 | 191,145 | 880,960 | 88,096 |
| Rwanda | 40 | 29 | 217 | 73 | 130 | 159 | 112 | 383 | 447 | 518 | 2,106 | 211 |
| Samoa | 59 | 84 | 82 | 331 | 116 | 144 | 176 | 103 | 115 | 142 | 1,352 | 135 |
| Sao Tome and Principe | 4 | 5 | 4 | 11 | 6 | 13 | 38 | 15 | 17 | 32 | 146 | 15 |
| Saudi Arabia | 0 | 0 | 0 | 34,459 | 20,560 | 15,629 | 30,026 | 60,754 | 34,380 | 48,178 | 243,986 | 24,399 |
| Senegal | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Serbia, Republic of | 5,469 | 7,409 | 9,776 | 6,433 | 5,278 | 4,070 | 212 | 5,603 | 2,655 | 2,462 | 49,367 | 4,937 |
| Seychelles | 222 | 154 | 82 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 533 | 53 |
| Sierra Leone | 69 | 95 | 94 | 90 | 28 | 63 | 32 | 7 | 4 | 213 | 695 | 70 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Solomon Islands | 22 | 34 | 75 | 88 | 93 | 135 | 171 | 90 | 170 | 186 | 1,063 | 106 |
| Somalia | . | . | . | . | . | . | . | . | . | . | . | . |
| South Africa | 485 | 0 | 0 | 0 | 9,893 | 18,730 | 19,787 | 17,515 | 0 | 23,732 | 90,141 | 9,014 |
| Sri Lanka | 0 | 114 | 189 | 73 | 106 | 165 | 0 | 0 | 881 | 707 | 2,234 | 223 |
| St. Kitts and Nevis | 48 | 15 | 34 | 41 | 39 | 54 | 30 | 65 | 95 | 45 | 466 | 47 |
| St. Lucia | 21 | 57 | 60 | 91 | 193 | 28 | 10 | 5 | 0 | 0 | 463 | 46 |
| St. Vincent and the Grenadines | 170 | 153 | 298 | 374 | 195 | 140 | 232 | 184 | 117 | 52 | 1,915 | 192 |
| Sudan | 288 | 14 | 0 | 0 | 1,833 | 4,005 | 2,724 | 4,701 | 4,421 | 6,826 | 24,812 | 2,481 |
| Suriname | 105 | 75 | 121 | 117 | 0 | 0 | 285 | 19 | 168 | 77 | 966 | 97 |
| Swaziland | 688 | 694 | 0 | 41 | 238 | 701 | 0 | 55 | 0 | 0 | 2,417 | 242 |
| Syrian Arab Republic | 160 | 0 | 13,337 | 137 | 1,488 | 746 | 1,226 | 747 | 0 | 5,660 | 23,501 | 2,350 |
| Tajikistan | 225 | 148 | 187 | 76 | 265 | 337 | 18 | 1,439 | 0 | 0 | 2,695 | 269 |
| Tanzania | 551 | 340 | 96 | 704 | 0 | 0 | 390 | 248 | 1,296 | 817 | 4,441 | 444 |
| Thailand | 0 | 0 | 710 | 11,987 | 0 | 0 | 20,550 | 0 | 24,238 | 29,114 | 86,599 | 8,660 |
| Timor-Leste, Dem. Rep. of | . | . | . | . | 3 | 9 | 7 | 0 | 5 | 42 | 67 | 11 |
| Togo | 228 | 214 | 251 | 952 | 1,692 | 2,884 | 4,471 | 4,250 | 2,385 | 1,140 | 18,467 | 1,847 |
| Tonga | 15 | 27 | 51 | 21 | 25 | 49 | 30 | 33 | 5 | 3 | 259 | 26 |
| Trinidad and Tobago | 1,422 | 1,576 | 2,117 | 2,215 | 344 | 2,447 | 0 | 2,923 | 4,263 | 7,643 | 24,951 | 2,495 |
| Tunisia | 34 | 47 | 128 | 28 | 37 | 37 | 0 | 0 | 0 | 0 | 312 | 31 |
| Turkey | 759 | 0 | 0 | 0 | 228 | 0 | 0 | 0 | 0 | 0 | 987 | 99 |
| Turkmenistan | 688 | 602 | . | . | . | . | . | . | . | 0 | 1,290 | 430 |
| Uganda | 124 | 324 | 525 | 823 | 484 | 726 | 1,182 | 1,599 | 1,280 | 307 | 7,373 | 737 |
| Ukraine | 889 | 834 | 0 | 0 | 0 | 458 | 0 | 0 | 0 | 0 | 2,182 | 218 |
| United Arab Emirates | 0 | 800 | 1,000 | 5,500 | 11,800 | 0 | 51,700 | 23,500 | 7,600 | 11,700 | 113,600 | 11,360 |
| Uruguay | 2,669 | 351 | 347 | 173 | 152 | 790 | 0 | 0 | 1,677 | 302 | 6,461 | 646 |
| Uzbekistan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vanuatu | 56 | 66 | 178 | 168 | 170 | 286 | 442 | 131 | 161 | 157 | 1,816 | 182 |
| Venezuela, Rep. Bolivariana de | 2,781 | 795 | 2,503 | 13,588 | 2,211 | 809 | 932 | 3,223 | 2,955 | 3,644 | 33,442 | 3,344 |
| Vietnam | 1,038 | 0 | 915 | 397 | 0 | 578 | 1,045 | 9,022 | 3,690 | 5,477 | 22,161 | 2,216 |
| Yemen, Republic of | 0 | 0 | 0 | 0 | 0 | 0 | 1,900 | 0 | 0 | 0 | 1,900 | 190 |
| Zambia | 520 | 1,005 | 1,837 | 2,074 | 2,474 | 3,110 | 2,535 | 1,875 | 2,611 | 1,302 | 19,344 | 1,934 |
| Zimbabwe | 662 | 0 | 306 | 357 | 1,790 | 0 | 0 | 0 | 0 | 0 | 3,115 | 312 |
| All Developing Countries | 257,037 | 287,065 | 363,867 | 481,988 | 378,652 | 429,640 | 651,629 | 631,869 | 671,099 | 712,310 | 4,865,157 | 486,516 |

## Table 4. Illicit Financial Flows (HMN+GER Non-Normalized)
### (in millions of US dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Afghanistan | 1,512 | 892 | 668 | 527 | 161 | 0 | 0 | 0 | 0 | 0 | 3,760 | 376 |
| Albania | 1 | 16 | 13 | 86 | 107 | 270 | 161 | 54 | 42 | 277 | 1,028 | 103 |
| Algeria | 482 | 490 | 751 | 189 | 2,259 | 500 | 3,358 | 3,737 | 1,265 | 2,184 | 15,215 | 1,522 |
| Angola | 68 | 822 | 0 | 574 | 0 | 1,641 | 1,236 | 0 | 1,692 | 17 | 6,050 | 605 |
| Antigua and Barbuda | 40 | 5 | 19 | 11 | 11 | 8 | 4 | 7 | 0 | 11 | 116 | 12 |
| Argentina | 2,472 | 1,428 | 954 | 598 | 0 | 906 | 4,345 | 0 | 606 | 3,603 | 14,912 | 1,491 |
| Armenia, Republic of | 86 | 217 | 219 | 352 | 386 | 806 | 1,124 | 832 | 1,045 | 1,163 | 6,229 | 623 |
| Aruba | 805 | 1,226 | 2,189 | 3,537 | 3,708 | 3,935 | 4,919 | 1,842 | 125 | 3,611 | 25,897 | 2,590 |
| Azerbaijan, Republic of | 87 | 112 | 50 | 126 | 2,462 | 8,539 | 845 | 3,854 | 990 | 0 | 17,063 | 1,706 |
| Bahamas, The | 772 | 1,001 | 1,062 | 1,842 | 1,330 | 1,622 | 2,086 | 1,670 | 2,219 | 2,030 | 15,634 | 1,563 |
| Bahrain, Kingdom of | 651 | 1,326 | 1,509 | 2,249 | 2,304 | 1,694 | 30 | 66 | 0 | 0 | 9,829 | 983 |
| Bangladesh | 636 | 830 | 840 | 1,055 | 2,648 | 2,583 | 1,086 | 1,406 | 2,191 | 2,805 | 16,077 | 1,608 |
| Barbados | 301 | 329 | 574 | 534 | 69 | 54 | 7 | 0 | 90 | 0 | 1,960 | 196 |
| Belarus | 2,546 | 3,154 | 3,917 | 4,144 | 5,608 | 9,080 | 14,976 | 9,207 | 8,365 | 14,088 | 75,085 | 7,508 |
| Belize | 73 | 119 | 90 | 99 | 84 | 173 | 152 | 104 | 72 | 120 | 1,086 | 109 |
| Benin | 0 | 61 | 117 | 34 | 0 | 0 | 0 | 6 | 195 | 0 | 413 | 41 |
| Bhutan | . | . | . | . | 0 | 137 | 0 | 0 | 0 | 11 | 148 | 25 |
| Bolivia | 854 | 174 | 625 | 374 | 105 | 112 | 0 | 454 | 802 | 0 | 3,500 | 350 |
| Bosnia and Herzegovina | 0 | 0 | 0 | 0 | 0 | 68 | 74 | 0 | 0 | 0 | 142 | 14 |
| Botswana | 66 | 161 | 465 | 228 | 553 | 1,093 | 1,079 | 2,799 | 579 | 1,428 | 8,451 | 845 |
| Brazil | 8,899 | 12,069 | 15,897 | 16,827 | 10,681 | 17,364 | 22,174 | 22,399 | 32,289 | 34,095 | 192,692 | 19,269 |
| Brunei Darussalam | 2,766 | 2,471 | 1,592 | 4,653 | 5,786 | 6,864 | 8,440 | 5,796 | 0 | 0 | 38,369 | 3,837 |
| Bulgaria | 1,828 | 2,591 | 2,306 | 3,019 | 2,441 | 4,617 | 5,367 | 888 | 731 | 1,797 | 25,585 | 2,559 |
| Burkina Faso | 128 | 107 | 287 | 194 | 198 | 328 | 396 | 409 | 381 | 535 | 2,963 | 296 |
| Burundi | 6 | 16 | 19 | 112 | 131 | 63 | 26 | 154 | 51 | 161 | 739 | 74 |
| Cambodia | 280 | 366 | 448 | 12 | 72 | 45 | 45 | 8 | 29 | 26 | 1,332 | 133 |
| Cameroon | 276 | 264 | 861 | 465 | 941 | 1,261 | 1,540 | 197 | 321 | 483 | 6,608 | 661 |
| Cape Verde | 19 | 33 | 5 | 8 | 27 | 11 | 123 | 40 | 89 | 30 | 387 | 39 |
| Central African Republic | 67 | 13 | 6 | 12 | 0 | 3 | 0 | 35 | 33 | 30 | 200 | 20 |
| Chad | 1,076 | 399 | 499 | 429 | 734 | 988 | 874 | 1,161 | 1,188 | 1,598 | 8,946 | 895 |
| Chile | 2,846 | 2,542 | 2,821 | 4,715 | 5,046 | 4,442 | 8,046 | 3,488 | 5,599 | 5,655 | 45,199 | 4,520 |
| China, Mainland | 67,498 | 69,284 | 87,757 | 90,315 | 94,555 | 112,056 | 102,972 | 133,921 | 165,860 | 151,348 | 1,075,566 | 107,557 |
| Colombia | 1,016 | 1,254 | 1,750 | 1,323 | 533 | 592 | 2,727 | 1,283 | 0 | 1,540 | 12,017 | 1,202 |
| Comoros | 9 | 6 | 15 | 16 | 24 | 20 | 21 | 28 | 27 | 106 | 272 | 27 |
| Congo, Democratic Republic of | 576 | 412 | 597 | 924 | 567 | 379 | 0 | 281 | 285 | 0 | 4,020 | 402 |
| Congo, Republic of | 220 | 1,039 | 3,054 | 665 | 2,151 | 1,722 | 2,630 | 616 | 1,758 | 826 | 14,682 | 1,468 |
| Costa Rica | 2,358 | 3,440 | 4,653 | 5,291 | 5,377 | 5,536 | 6,815 | 8,727 | 17,340 | 21,111 | 80,648 | 8,065 |
| Cote d'Ivoire | 1,251 | 3,032 | 2,587 | 3,819 | 2,645 | 3,309 | 2,423 | 1,215 | 1,809 | 1,048 | 23,138 | 2,314 |
| Croatia | 995 | 1,948 | 1,608 | 1,412 | 1,722 | 1,659 | 2,266 | 1,680 | 921 | 1,532 | 15,742 | 1,574 |
| Djibouti | 164 | 206 | 229 | 277 | 356 | 278 | 399 | 298 | 478 | 501 | 3,186 | 319 |
| Dominica | 13 | 18 | 26 | 41 | 46 | 76 | 150 | 128 | 124 | 182 | 806 | 81 |
| Dominican Republic | 635 | 1,887 | 981 | 456 | 889 | 347 | 1,093 | 4,040 | 5,201 | 3,842 | 19,370 | 1,937 |
| Ecuador | 618 | 24 | 861 | 1,318 | 648 | 671 | 4,805 | 510 | 703 | 1,348 | 11,507 | 1,151 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Egypt | 1,507 | 1,248 | 3,156 | 5,098 | 4,483 | 4,730 | 6,070 | 0 | 3,173 | 6,414 | 35,878 | 3,588 |
| El Salvador | 1,085 | 642 | 657 | 1,070 | 932 | 1,027 | 882 | 955 | 928 | 793 | 8,971 | 897 |
| Equatorial Guinea | 59 | 0 | 320 | 172 | 355 | 918 | 1,970 | 2,875 | 2,906 | 3,223 | 12,798 | 1,280 |
| Eritrea | . | . | . | . | . | . | . | . | . | . | . | . |
| Ethiopia | 1,231 | 495 | 405 | 785 | 1,152 | 1,510 | 1,865 | 3,045 | 5,643 | 4,107 | 20,237 | 2,024 |
| Fiji | 199 | 254 | 239 | 159 | 408 | 240 | 391 | 276 | 252 | 330 | 2,747 | 275 |
| Gabon | 503 | 497 | 615 | 415 | 0 | 0 | 0 | 177 | 327 | 146 | 2,681 | 268 |
| Gambia, The | 18 | 10 | 30 | 54 | 30 | 72 | 64 | 40 | 134 | 135 | 587 | 59 |
| Georgia | 243 | 382 | 444 | 403 | 706 | 427 | 884 | 515 | 312 | 219 | 4,534 | 453 |
| Ghana | 0 | 0 | 0 | 0 | 0 | 37 | 374 | 1,342 | 721 | 691 | 3,164 | 316 |
| Grenada | 33 | 42 | 24 | 51 | 44 | 58 | 58 | 48 | 60 | 69 | 485 | 49 |
| Guatemala | 1,433 | 1,385 | 1,400 | 1,562 | 920 | 1,019 | 969 | 3,356 | 2,402 | 3,095 | 17,542 | 1,754 |
| Guinea | 116 | 316 | 421 | 292 | 290 | 633 | 251 | 0 | 373 | 436 | 3,128 | 313 |
| Guinea-Bissau | 44 | 6 | 37 | 23 | 13 | 193 | 7 | 42 | 74 | 119 | 557 | 56 |
| Guyana | 60 | 80 | 127 | 209 | 143 | 291 | 298 | 314 | 388 | 298 | 2,206 | 221 |
| Haiti | 10 | 31 | 40 | 41 | 87 | 95 | 120 | 79 | 61 | 119 | 683 | 68 |
| Honduras | 2,679 | 2,722 | 2,920 | 3,175 | 3,355 | 3,388 | 3,294 | 2,980 | 3,479 | 3,560 | 31,552 | 3,155 |
| Hungary | 0 | 0 | 2,100 | 2,580 | 2,744 | 349 | 3,373 | 771 | 2,194 | 2,789 | 16,901 | 1,690 |
| India | 7,893 | 10,068 | 18,697 | 20,021 | 27,569 | 33,108 | 44,645 | 28,615 | 68,383 | 84,933 | 343,932 | 34,393 |
| Indonesia | 14,795 | 16,549 | 18,436 | 13,259 | 16,036 | 18,432 | 27,319 | 20,556 | 16,842 | 19,604 | 181,827 | 18,183 |
| Iran, Islamic Republic of | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Iraq | . | . | . | . | . | 3,660 | 19,668 | 18,139 | 22,282 | 15,029 | 78,778 | 15,756 |
| Jamaica | 360 | 430 | 435 | 686 | 322 | 28 | 894 | 470 | 162 | 222 | 4,009 | 401 |
| Jordan | 130 | 0 | 128 | 0 | 206 | 0 | 94 | 127 | 0 | 0 | 684 | 68 |
| Kazakhstan | 968 | 1,031 | 1,016 | 1,800 | 3,128 | 2,966 | 5,746 | 783 | 747 | 8,216 | 26,400 | 2,640 |
| Kenya | 0 | 277 | 80 | 245 | 0 | 258 | 0 | 0 | 0 | 0 | 860 | 86 |
| Kiribati | . | . | . | . | . | . | . | . | . | . | . | . |
| Kosovo, Republic of | . | . | . | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kuwait | 2,245 | 574 | 65 | 791 | 960 | 5,208 | 10,049 | 1,465 | 0 | 3,765 | 25,123 | 2,512 |
| Kyrgyz Republic | 22 | 0 | 19 | 0 | 0 | 356 | 0 | 82 | 46 | 304 | 830 | 83 |
| Lao PDR | 130 | 82 | 6 | 0 | 516 | 849 | 588 | 702 | 478 | 793 | 4,143 | 414 |
| Latvia | 1,061 | 1,210 | 1,943 | 2,263 | 2,474 | 3,160 | 3,286 | 2,093 | 1,614 | 4,063 | 23,167 | 2,317 |
| Lebanon | 528 | 0 | 952 | 1,678 | 3,191 | 7,006 | 3,049 | 4,021 | 529 | 2,311 | 23,266 | 2,327 |
| Lesotho | 195 | 71 | 55 | 61 | 159 | 297 | 434 | 587 | 66 | 410 | 2,335 | 233 |
| Liberia | 886 | 814 | 898 | 981 | 1,576 | 1,905 | 648 | 1,328 | 807 | 414 | 10,256 | 1,026 |
| Libya | 58 | 0 | 0 | 1,497 | 0 | 0 | 1,753 | 0 | 2,137 | 0 | 5,445 | 544 |
| Lithuania | 1,309 | 1,851 | 1,101 | 1,458 | 1,142 | 1,094 | 1,935 | 977 | 1,503 | 4,267 | 16,637 | 1,664 |
| Macedonia, FYR | 177 | 281 | 381 | 494 | 305 | 807 | 1,074 | 564 | 573 | 934 | 5,590 | 559 |
| Madagascar | 122 | 59 | 756 | 412 | 1,596 | 74 | 636 | 165 | 108 | 265 | 4,193 | 419 |
| Malawi | 112 | 212 | 160 | 494 | 458 | 456 | 1,010 | 752 | 687 | 977 | 5,319 | 532 |
| Malaysia | 19,737 | 20,763 | 26,733 | 35,294 | 36,720 | 36,809 | 41,123 | 34,507 | 64,511 | 54,184 | 370,381 | 37,038 |
| Maldives | 156 | 111 | 68 | 35 | 72 | 49 | 56 | 39 | 62 | 70 | 717 | 72 |

## Table 4. Illicit Financial Flows (HMN+GER Non-Normalized) (cont)
### (in millions of US dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mali | 51 | 275 | 128 | 173 | 224 | 184 | 966 | 323 | 899 | 530 | 3,754 | 375 |
| Mauritania | . | . | . | . | . | . | . | . | . | . | . | . |
| Mauritius | 0 | 107 | 32 | 0 | 2 | 0 | 180 | 306 | 443 | 0 | 1,070 | 107 |
| Mexico | 35,621 | 38,085 | 40,738 | 47,746 | 47,749 | 58,592 | 65,151 | 38,128 | 51,954 | 38,094 | 461,859 | 46,186 |
| Moldova | 132 | 228 | 343 | 244 | 188 | 440 | 493 | 226 | 0 | 172 | 2,466 | 247 |
| Mongolia | . | 6 | 0 | 75 | 14 | 212 | 775 | 0 | 0 | 76 | 1,158 | 129 |
| Montenegro | 0 | 0 | 980 | 925 | 436 | 743 | 456 | 278 | 259 | 222 | 4,299 | 430 |
| Morocco | 242 | 554 | 906 | 3,487 | 683 | 600 | 1,857 | 2,232 | 777 | 577 | 11,916 | 1,192 |
| Mozambique | 266 | 83 | 0 | 0 | 365 | 127 | 0 | 0 | 31 | 0 | 873 | 87 |
| Myanmar | 19 | 114 | 633 | 604 | 626 | 336 | 1,362 | 1,010 | 2,132 | 0 | 6,836 | 684 |
| Namibia | 35 | 89 | 107 | 138 | 402 | 762 | 792 | 1,018 | 524 | 1,169 | 5,037 | 504 |
| Nepal | 540 | 364 | 414 | 503 | 678 | 574 | 884 | 1,552 | 1,885 | 651 | 8,045 | 805 |
| Nicaragua | 770 | 625 | 1,055 | 1,019 | 1,511 | 1,222 | 1,594 | 1,241 | 1,889 | 2,315 | 13,242 | 1,324 |
| Niger | 9 | 15 | 86 | 123 | 0 | 100 | 96 | 0 | 534 | 166 | 1,129 | 113 |
| Nigeria | 0 | 0 | 1,681 | 17,867 | 19,164 | 19,321 | 24,188 | 26,377 | 20,787 | 12,889 | 142,274 | 14,227 |
| Oman | 1,034 | 929 | 512 | 851 | 2,397 | 0 | 0 | 1,031 | 0 | 1,006 | 7,761 | 776 |
| Pakistan | 0 | 44 | 0 | 200 | 0 | 0 | 51 | 0 | 729 | 0 | 1,024 | 102 |
| Panama | 2,235 | 2,414 | 2,709 | 3,929 | 4,632 | 5,566 | 5,800 | 5,189 | 5,191 | 430 | 38,095 | 3,809 |
| Papua New Guinea | 52 | 119 | 93 | 0 | 15 | 33 | 184 | 479 | 448 | 896 | 2,319 | 232 |
| Paraguay | 1,072 | 1,830 | 2,183 | 2,756 | 3,268 | 3,851 | 5,461 | 4,769 | 6,941 | 7,993 | 40,125 | 4,012 |
| Peru | 733 | 750 | 660 | 930 | 997 | 585 | 1,355 | 2,064 | 0 | 1,020 | 9,095 | 909 |
| Philippines | 4,897 | 8,256 | 9,215 | 13,412 | 9,978 | 10,063 | 8,021 | 5,636 | 7,200 | 12,192 | 88,870 | 8,887 |
| Poland | 1,110 | 1,961 | 421 | 787 | 0 | 3,302 | 12,161 | 10,045 | 10,462 | 9,144 | 49,393 | 4,939 |
| Qatar | 1,031 | 1,260 | 0 | 5,568 | 4,909 | 261 | 6,766 | 21,173 | 12,537 | 9,315 | 62,819 | 6,282 |
| Romania | 856 | 289 | 0 | 0 | 0 | 4,173 | 4,038 | 1,729 | 145 | 0 | 11,230 | 1,123 |
| Russian Federation | 26,517 | 41,304 | 47,136 | 57,502 | 66,825 | 82,069 | 103,972 | 129,459 | 135,033 | 191,145 | 880,960 | 88,096 |
| Rwanda | 40 | 29 | 217 | 73 | 130 | 159 | 112 | 383 | 447 | 518 | 2,106 | 211 |
| Samoa | 59 | 84 | 82 | 331 | 116 | 144 | 176 | 103 | 115 | 142 | 1,352 | 135 |
| Sao Tome and Principe | 4 | 5 | 4 | 11 | 6 | 13 | 38 | 15 | 17 | 32 | 146 | 15 |
| Saudi Arabia | 0 | 0 | 0 | 36,393 | 21,535 | 16,863 | 33,671 | 65,419 | 38,910 | 53,638 | 266,429 | 26,643 |
| Senegal | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1 |
| Serbia, Republic of | 5,469 | 7,409 | 9,776 | 6,433 | 5,278 | 4,070 | 212 | 5,603 | 2,655 | 2,462 | 49,367 | 4,937 |
| Seychelles | 222 | 154 | 82 | 75 | 4 | 0 | 0 | 0 | 0 | 0 | 537 | 54 |
| Sierra Leone | 69 | 95 | 94 | 90 | 28 | 63 | 50 | 7 | 4 | 213 | 714 | 71 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Solomon Islands | 22 | 34 | 75 | 88 | 93 | 135 | 171 | 90 | 170 | 186 | 1,063 | 106 |
| Somalia | . | . | . | . | . | . | . | . | . | . | . | . |
| South Africa | 1,290 | 0 | 2,542 | 3,387 | 9,893 | 18,730 | 19,787 | 17,515 | 3,858 | 23,732 | 100,732 | 10,073 |
| Sri Lanka | 0 | 114 | 189 | 73 | 106 | 165 | 0 | 0 | 881 | 707 | 2,234 | 223 |
| St. Kitts and Nevis | 48 | 15 | 34 | 41 | 39 | 54 | 30 | 65 | 95 | 45 | 466 | 47 |
| St. Lucia | 21 | 57 | 60 | 91 | 193 | 28 | 10 | 13 | 0 | 0 | 471 | 47 |
| St. Vincent and the Grenadines | 170 | 153 | 298 | 374 | 195 | 140 | 232 | 184 | 117 | 52 | 1,915 | 192 |
| Sudan | 288 | 14 | 0 | 96 | 1,889 | 4,005 | 3,127 | 4,701 | 5,154 | 6,826 | 26,099 | 2,610 |
| Suriname | 105 | 75 | 121 | 117 | 33 | 7 | 285 | 72 | 168 | 77 | 1,058 | 106 |
| Swaziland | 27 | 92 | 99 | 150 | 510 | 1,142 | 366 | 433 | 71 | 419 | 3,309 | 331 |
| Syrian Arab Republic | 160 | 0 | 13,337 | 444 | 1,488 | 838 | 1,226 | 747 | 154 | 5,660 | 24,054 | 2,405 |
| Tajikistan | 225 | 148 | 187 | 127 | 265 | 337 | 18 | 1,439 | 0 | 0 | 2,746 | 275 |
| Tanzania | 551 | 340 | 96 | 704 | 0 | 0 | 390 | 315 | 1,313 | 817 | 4,526 | 453 |
| Thailand | 4,954 | 6,080 | 7,246 | 11,987 | 11,513 | 10,427 | 20,550 | 14,769 | 24,238 | 29,114 | 140,877 | 14,088 |
| Timor-Leste, Dem. Rep. of | . | . | . | . | 3 | 9 | 7 | 0 | 5 | 42 | 67 | 11 |
| Togo | 228 | 214 | 251 | 952 | 1,692 | 2,884 | 4,471 | 4,250 | 2,385 | 1,140 | 18,467 | 1,847 |
| Tonga | 15 | 27 | 51 | 21 | 25 | 49 | 30 | 33 | 5 | 3 | 259 | 26 |
| Trinidad and Tobago | 1,422 | 1,576 | 2,117 | 2,215 | 966 | 2,447 | 889 | 2,923 | 4,263 | 7,643 | 26,462 | 2,646 |
| Tunisia | 34 | 47 | 128 | 28 | 37 | 37 | 0 | 0 | 0 | 0 | 312 | 31 |
| Turkey | 2,507 | 1,998 | 0 | 1,851 | 1,586 | 3,502 | 3,343 | 8,180 | 4,108 | 10,203 | 37,277 | 3,728 |
| Turkmenistan | 688 | 602 | . | . | . | . | . | . | . | 0 | 1,290 | 430 |
| Uganda | 143 | 324 | 525 | 823 | 484 | 726 | 1,182 | 1,599 | 1,280 | 307 | 7,393 | 739 |
| Ukraine | 889 | 834 | 0 | 0 | 0 | 458 | 137 | 741 | 1,008 | 2,149 | 6,216 | 622 |
| United Arab Emirates | 0 | 800 | 1,000 | 5,500 | 11,800 | 0 | 51,700 | 24,544 | 7,600 | 11,700 | 114,644 | 11,464 |
| Uruguay | 2,669 | 351 | 347 | 456 | 284 | 790 | 171 | 489 | 1,677 | 929 | 8,162 | 816 |
| Uzbekistan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vanuatu | 56 | 66 | 178 | 168 | 170 | 286 | 442 | 131 | 161 | 157 | 1,816 | 182 |
| Venezuela, Rep. Bolivariana de | 3,336 | 795 | 4,518 | 13,724 | 2,211 | 809 | 932 | 4,141 | 4,000 | 4,503 | 38,969 | 3,897 |
| Vietnam | 1,038 | 0 | 915 | 397 | 0 | 578 | 1,045 | 9,022 | 3,690 | 5,477 | 22,161 | 2,216 |
| Yemen, Republic of | 0 | 0 | 0 | 0 | 0 | 459 | 1,900 | 0 | 0 | 30 | 2,388 | 239 |
| Zambia | 520 | 1,005 | 1,837 | 2,074 | 2,474 | 3,110 | 2,535 | 1,875 | 2,611 | 1,302 | 19,344 | 1,934 |
| Zimbabwe | 662 | 0 | 306 | 357 | 1,790 | 97 | 4 | 106 | 25 | 0 | 3,347 | 335 |
| All Developing Countries | 270,252 | 301,512 | 384,528 | 498,921 | 511,355 | 594,036 | 789,530 | 770,298 | 832,438 | 946,677 | 5,899,548 | 589,955 |

## Table 5.  HMN (Balance of Payments)
### (in millions of US Dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Afghanistan | . | . | . | . | . | . | 0 | 0 | 0 | . | 0 | 0 |
| Albania | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Algeria | . | . | . | 189 | 1,962 | 500 | 3,358 | 2,673 | 1,265 | 2,184 | 12,131 | 1,733 |
| Angola | 68 | 822 | 0 | 574 | 0 | 1,641 | 1,236 | 0 | 0 | 17 | 4,358 | 436 |
| Antigua and Barbuda | 40 | 5 | 19 | 11 | 11 | 8 | 4 | 7 | 0 | 11 | 116 | 12 |
| Argentina | 1,890 | 1,428 | 0 | 0 | 0 | 0 | 0 | 0 | 606 | 3,603 | 7,527 | 753 |
| Armenia, Republic of | 4 | 2 | 6 | 0 | 16 | 2 | 0 | 0 | 0 | 0 | 29 | 3 |
| Aruba | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 9 | 0 | 3 | 20 | 2 |
| Azerbaijan, Republic of | 87 | 112 | 50 | 126 | 256 | 361 | 845 | 1,461 | 990 | 0 | 4,287 | 429 |
| Bahamas, The | 0 | 0 | 0 | 149 | 0 | 0 | 0 | 53 | 283 | 0 | 485 | 48 |
| Bahrain, Kingdom of | 0 | 700 | 0 | 0 | 0 | 0 | 30 | 66 | 0 | 0 | 796 | 80 |
| Bangladesh | 349 | 0 | 25 | 644 | 623 | 905 | 179 | 1,034 | 54 | 1,168 | 4,981 | 498 |
| Barbados | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 65 | . | 71 | 8 |
| Belarus | 289 | 13 | 0 | 0 | 286 | 0 | 194 | 0 | 0 | 0 | 783 | 78 |
| Belize | 9 | 35 | 4 | 8 | 8 | 39 | 12 | 5 | 0 | 7 | 126 | 13 |
| Benin | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 6 | 0 | . | 16 | 2 |
| Bhutan | . | . | . | . | 0 | 137 | 0 | 0 | 0 | 11 | 148 | 25 |
| Bolivia | 640 | 174 | 625 | 374 | 105 | 112 | 0 | 454 | 802 | 0 | 3,286 | 329 |
| Bosnia and Herzegovina | 0 | 0 | 0 | 0 | 0 | 68 | 74 | 0 | 0 | 0 | 142 | 14 |
| Botswana | 0 | 161 | 293 | 0 | 0 | 0 | 0 | 1,801 | 352 | 0 | 2,607 | 261 |
| Brazil | 154 | 933 | 2,145 | 225 | 0 | 3,152 | 0 | 347 | 3,538 | 1,272 | 11,765 | 1,177 |
| Brunei Darussalam | 2,329 | 1,838 | 1,190 | 4,006 | 5,786 | 5,860 | 8,232 | 5,420 | . | . | 34,661 | 4,333 |
| Bulgaria | 716 | 889 | 0 | 1,219 | 986 | 3,052 | 4,229 | 0 | 0 | 0 | 11,091 | 1,109 |
| Burkina Faso | 4 | 4 | 0 | 5 | 9 | 0 | 0 | 0 | 0 | . | 23 | 3 |
| Burundi | 0 | 14 | 19 | 84 | 0 | 37 | 0 | 109 | 0 | 0 | 264 | 26 |
| Cambodia | 0 | 40 | 46 | 12 | 72 | 45 | 45 | 8 | 29 | 26 | 324 | 32 |
| Cameroon | 177 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | . | 207 | 23 |
| Cape Verde | 8 | 12 | 0 | 0 | 9 | 0 | 108 | 36 | 85 | 30 | 289 | 29 |
| Central African Republic | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Chad | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Chile | 952 | 724 | 270 | 1,329 | 1,526 | 450 | 0 | 0 | 498 | 352 | 6,100 | 610 |
| China, Mainland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41,383 | 52,936 | 13,766 | 108,085 | 10,808 |
| Colombia | 0 | 0 | 0 | 0 | 0 | 0 | 123 | 0 | 0 | 0 | 123 | 12 |
| Comoros | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Congo, Democratic Republic of | 236 | 0 | 0 | 0 | 17 | 170 | 0 | 0 | 0 | 0 | 423 | 42 |
| Congo, Republic of | 220 | 116 | 93 | 0 | 0 | 199 | . | . | . | . | 627 | 105 |
| Costa Rica | 51 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | 144 | 221 | 464 | 46 |
| Cote d'Ivoire | 26 | 888 | 0 | 57 | 38 | 0 | 44 | 37 | 25 | . | 1,115 | 124 |
| Croatia | 638 | 1,355 | 1,305 | 1,288 | 1,722 | 1,659 | 2,266 | 1,680 | 921 | 1,532 | 14,366 | 1,437 |
| Djibouti | 0 | 0 | 16 | 45 | 54 | 0 | 55 | 0 | 117 | 63 | 350 | 35 |
| Dominica | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 14 | 20 | 2 |
| Dominican Republic | 139 | 1,568 | 981 | 456 | 164 | 0 | 32 | 216 | 1,140 | 0 | 4,697 | 470 |
| Ecuador | 317 | 0 | 0 | 0 | 0 | 0 | 1 | 131 | 0 | 0 | 449 | 45 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Egypt | 0 | 0 | 45 | 2,427 | 0 | 0 | 2,896 | 0 | 2,145 | 2,857 | 10,370 | 1,037 |
| El Salvador | 615 | 143 | 0 | 449 | 485 | 0 | 0 | 0 | 0 | 238 | 1,930 | 193 |
| Equatorial Guinea | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Eritrea | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Ethiopia | 915 | 390 | 354 | 0 | 0 | 158 | 0 | 501 | 3,075 | 1,803 | 7,197 | 720 |
| Fiji | 135 | 47 | 0 | 0 | 153 | 0 | 0 | 72 | 0 | . | 407 | 45 |
| Gabon | 125 | 260 | 357 | 415 | . | . | . | . | . | . | 1,157 | 289 |
| Gambia, The | . | 0 | 3 | 34 | 7 | 42 | 31 | 0 | 87 | 98 | 302 | 34 |
| Georgia | 0 | 6 | 0 | 0 | 62 | 33 | 44 | 0 | 23 | 0 | 169 | 17 |
| Ghana | 0 | 0 | 0 | 0 | 0 | 37 | 374 | 1,342 | 721 | 691 | 3,164 | 316 |
| Grenada | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Guatemala | 65 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 359 | 225 | 709 | 71 |
| Guinea | 0 | 157 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 28 | 187 | 19 |
| Guinea-Bissau | 3 | 0 | 4 | 5 | 1 | 0 | 5 | 9 | 4 | . | 31 | 3 |
| Guyana | 1 | 20 | 43 | 68 | 53 | 82 | 95 | 131 | 172 | 36 | 702 | 70 |
| Haiti | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 64 | 110 | 11 |
| Honduras | 0 | 0 | 0 | 190 | 324 | 347 | 0 | 111 | 22 | 0 | 994 | 99 |
| Hungary | 0 | 0 | 2,100 | 2,580 | 2,744 | 349 | 3,373 | 771 | 2,194 | 2,789 | 16,901 | 1,690 |
| India | 190 | 0 | 0 | 446 | 0 | 0 | 0 | 279 | 1,613 | 1,712 | 4,241 | 424 |
| Indonesia | 1,763 | 3,510 | 3,094 | 136 | 0 | 1,368 | 238 | 2,975 | 3,501 | 3,395 | 19,980 | 1,998 |
| Iran, Islamic Republic of | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Iraq | . | . | . | 0 | 0 | 3,660 | 9,245 | 6,116 | 7,951 | 3,269 | 30,240 | 4,320 |
| Jamaica | 61 | 0 | 22 | 0 | 0 | 0 | 350 | 0 | 0 | 0 | 433 | 43 |
| Jordan | 130 | 0 | 0 | 0 | 206 | 0 | 0 | 0 | 0 | 0 | 336 | 34 |
| Kazakhstan | 0 | 932 | 1,016 | 1,800 | 3,128 | 2,966 | 5,746 | 783 | 0 | 5,619 | 21,990 | 2,199 |
| Kenya | 0 | 277 | 67 | 245 | 0 | 258 | 0 | 0 | 0 | 0 | 847 | 85 |
| Kiribati | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Kosovo, Republic of | . | . | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kuwait | 1,869 | 574 | 0 | 0 | 0 | 4,732 | 10,049 | 0 | 0 | 1,698 | 18,922 | 1,892 |
| Kyrgyz Republic | 22 | 0 | 19 | 0 | 0 | 356 | 0 | 82 | 46 | 304 | 830 | 83 |
| Lao PDR | 130 | 82 | 0 | 0 | 403 | 735 | 409 | 523 | 402 | 322 | 3,005 | 301 |
| Latvia | 71 | 13 | 0 | 296 | 0 | 212 | 577 | 0 | 0 | 103 | 1,271 | 127 |
| Lebanon | 0 | 0 | 734 | 608 | 2,818 | 5,997 | 1,746 | 3,042 | 0 | 2,038 | 16,982 | 1,698 |
| Lesotho | 179 | 71 | 0 | 0 | 0 | 0 | 123 | 256 | 0 | 0 | 630 | 63 |
| Liberia | . | . | 47 | 35 | 98 | 76 | 43 | 288 | 106 | 27 | 720 | 90 |
| Libya | 0 | 0 | 0 | 1,497 | 0 | 0 | 1,753 | 0 | 2,137 | 0 | 5,387 | 539 |
| Lithuania | 0 | 0 | 0 | 49 | 289 | 54 | 0 | 0 | 0 | 0 | 392 | 39 |
| Macedonia, FYR | 10 | 33 | 0 | 6 | 0 | 52 | 31 | 0 | 0 | 6 | 137 | 14 |
| Madagascar | 0 | 0 | 35 | 0 | . | . | . | . | . | . | 35 | 9 |
| Malawi | 0 | 27 | 0 | 23 | 40 | 0 | 153 | 55 | 0 | 71 | 369 | 37 |
| Malaysia | 391 | 4 | 0 | 6,555 | 7,460 | 5,201 | 8,592 | 5,242 | 21,345 | 9,965 | 64,754 | 6,475 |
| Maldives | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## Table 5.  HMN (Balance of Payments) (cont)
### (in millions of US Dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mali | 6 | 0 | 26 | 29 | 37 | 0 | 0 | 74 | 0 | . | 173 | 19 |
| Mauritania | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Mauritius | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mexico | 1,903 | 4,411 | 4,816 | 4,077 | 86 | 0 | 5,126 | 4,395 | 19,774 | 10,732 | 55,322 | 5,532 |
| Moldova | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 2 |
| Mongolia | 0 | 6 | 0 | 75 | 14 | 212 | 775 | 0 | 0 | 76 | 1,158 | 116 |
| Montenegro | . | . | . | . | . | 231 | 0 | 0 | 0 | 0 | 231 | 46 |
| Morocco | 182 | 297 | 282 | 407 | 521 | 0 | 412 | 521 | 160 | 243 | 3,025 | 302 |
| Mozambique | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 6 |
| Myanmar | 19 | 78 | 141 | 604 | 626 | 336 | 1,362 | 1,010 | 2,132 | 0 | 6,308 | 631 |
| Namibia | 0 | 89 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 0 | 406 | 41 |
| Nepal | 67 | 0 | 0 | 0 | 0 | 0 | 107 | 0 | 181 | 0 | 355 | 36 |
| Nicaragua | 327 | 100 | 405 | 63 | 391 | 50 | 331 | 44 | 168 | 283 | 2,162 | 216 |
| Niger | 9 | 15 | 0 | 0 | 0 | 18 | 57 | 0 | 0 | . | 99 | 11 |
| Nigeria | 0 | 0 | 0 | 17,344 | 17,151 | 14,399 | 20,783 | 26,377 | 16,500 | 7,150 | 119,704 | 11,970 |
| Oman | 842 | 565 | 396 | 851 | 9 | 0 | 0 | 1,031 | 0 | 1,006 | 4,700 | 470 |
| Pakistan | 0 | 44 | 0 | 200 | 0 | 0 | 51 | 0 | 729 | 0 | 1,024 | 102 |
| Panama | 0 | 0 | 0 | 358 | 0 | 474 | 0 | 0 | 0 | 430 | 1,263 | 126 |
| Papua New Guinea | 0 | 0 | 0 | 0 | 15 | 0 | 73 | 0 | 91 | . | 179 | 20 |
| Paraguay | 263 | 41 | 0 | 211 | 0 | 505 | 46 | 0 | 0 | 0 | 1,066 | 107 |
| Peru | 0 | 0 | 0 | 0 | 407 | 138 | 123 | 596 | 0 | 1,020 | 2,284 | 228 |
| Philippines | 0 | 898 | 274 | 1,798 | 1,592 | 2,082 | 1,119 | 0 | 1,988 | 1,310 | 11,061 | 1,106 |
| Poland | 981 | 1,961 | 0 | 787 | 0 | 3,302 | 12,161 | 10,045 | 10,462 | 9,144 | 48,843 | 4,884 |
| Qatar | 1,031 | 1,260 | 0 | 5,568 | 4,703 | 0 | 2,310 | 2,206 | 11,384 | 3,738 | 32,200 | 3,220 |
| Romania | 856 | 289 | 0 | 0 | 0 | 1,320 | 2,065 | 1,729 | 145 | 0 | 6,404 | 640 |
| Russian Federation | 6,078 | 9,179 | 5,870 | 7,895 | 0 | 9,732 | 3,051 | 6,394 | 9,136 | 12,106 | 69,441 | 6,944 |
| Rwanda | 0 | 0 | 9 | 0 | 0 | 1 | 20 | 0 | 14 | 0 | 42 | 4 |
| Samoa | . | . | 3 | 7 | 0 | 2 | 39 | 0 | 0 | 27 | 78 | 10 |
| Sao Tome and Principe | 0 | 0 | 0 | 0 | 6 | 10 | 32 | 6 | 10 | 7 | 70 | 7 |
| Saudi Arabia | 0 | 0 | 0 | 34,459 | 20,560 | 15,629 | 30,026 | 60,754 | 34,380 | 48,178 | 243,986 | 24,399 |
| Senegal | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | . | 3 | 0 |
| Serbia, Republic of | . | . | . | . | . | 0 | 212 | 76 | 0 | 0 | 288 | 58 |
| Seychelles | 10 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 2 |
| Sierra Leone | 16 | 50 | 54 | 58 | 28 | 15 | 32 | 7 | 4 | 7 | 271 | 27 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Solomon Islands | 0 | 0 | 6 | 0 | 0 | 0 | 2 | 0 | 19 | 35 | 62 | 6 |
| Somalia | . | . | . | . | . | . | . | . | . | . | 0 | . |
| South Africa | 485 | 0 | 0 | 0 | 0 | 0 | 0 | 804 | 0 | 0 | 1,289 | 129 |
| Sri Lanka | 0 | 114 | 189 | 73 | 106 | 165 | 0 | 0 | 881 | 707 | 2,234 | 223 |
| St. Kitts and Nevis | 0 | 0 | 8 | 0 | 1 | 10 | 3 | 19 | 31 | 0 | 72 | 7 |
| St. Lucia | 2 | 0 | 0 | 15 | 0 | 1 | 10 | 5 | 0 | 0 | 33 | 3 |
| St. Vincent and the Grenadines | 0 | 0 | 17 | 23 | 16 | 0 | 0 | 0 | 0 | 0 | 56 | 6 |
| Sudan | 0 | 14 | 0 | 0 | 1,833 | 2,851 | 2,724 | 3,077 | 4,421 | 2,768 | 17,688 | 1,769 |
| Suriname | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 19 | 168 | 77 | 364 | 36 |
| Swaziland | 0 | 92 | 0 | 41 | 238 | 701 | 0 | 55 | 0 | . | 1,127 | 125 |
| Syrian Arab Republic | 160 | 0 | 256 | 137 | 1,488 | 746 | 1,226 | 747 | 0 | . | 4,761 | 529 |
| Tajikistan | 56 | 30 | 32 | 76 | 265 | 337 | 18 | 0 | 0 | 0 | 814 | 81 |
| Tanzania | 551 | 340 | 96 | 704 | 0 | 0 | 390 | 248 | 1,296 | 317 | 3,942 | 394 |
| Thailand | 0 | 0 | 710 | 0 | 0 | 0 | 0 | 0 | 3,837 | 0 | 4,547 | 455 |
| Timor-Leste, Dem. Rep. of | . | . | . | . | 3 | 9 | 7 | 0 | 5 | 42 | 67 | 11 |
| Togo | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | . | 10 | 1 |
| Tonga | 0 | 14 | 38 | 11 | 12 | 39 | 9 | 27 | . | . | 151 | 19 |
| Trinidad and Tobago | 425 | 0 | 269 | 553 | 344 | 345 | 0 | 0 | 0 | 1,069 | 3,005 | 301 |
| Tunisia | 34 | 47 | 128 | 28 | 37 | 37 | 0 | 0 | 0 | 0 | 312 | 31 |
| Turkey | 759 | 0 | 0 | 0 | 228 | 0 | 0 | 0 | 0 | 0 | 987 | 99 |
| Turkmenistan | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Uganda | 124 | 164 | 270 | 450 | 9 | 7 | 0 | 273 | 0 | 0 | 1,297 | 130 |
| Ukraine | 889 | 834 | 0 | 0 | 0 | 458 | 0 | 0 | 0 | 0 | 2,182 | 218 |
| United Arab Emirates | 0 | 800 | 1,000 | 5,500 | 11,800 | 0 | 51,700 | 23,500 | 7,600 | 11,700 | 113,600 | 11,360 |
| Uruguay | 2,394 | 0 | 0 | 173 | 152 | 279 | 0 | 0 | 693 | 302 | 3,994 | 399 |
| Uzbekistan | . | . | . | . | . | . | . | . | . | . | 0 | . |
| Vanuatu | 21 | 22 | 25 | 17 | 4 | 5 | 0 | 37 | 0 | 0 | 130 | 13 |
| Venezuela, Rep. Bolivariana de | 2,781 | 795 | 2,503 | 13,588 | 2,211 | 809 | 932 | 3,223 | 2,955 | 3,644 | 33,442 | 3,344 |
| Vietnam | 1,038 | 0 | 915 | 397 | 0 | 578 | 1,045 | 9,022 | 3,690 | 5,477 | 22,161 | 2,216 |
| Yemen, Republic of | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Zambia | 0 | 169 | 0 | 75 | 40 | 58 | 0 | 108 | 46 | 0 | 496 | 50 |
| Zimbabwe | . | . | . | . | . | . | . | . | . | . | 0 | . |
| All Developing Countries | 38,410 | 41,172 | 33,776 | 125,355 | 96,853 | 101,004 | 205,481 | 235,990 | 242,975 | 183,233 | 1,304,248 | 130,425 |

## Table 6.  GER Non-Normalized
### (in millions of US Dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Afghanistan | 1,512 | 892 | 668 | 527 | 161 | 0 | 0 | 0 | 0 | 0 | 3,760 | 376 |
| Albania | 1 | 16 | 13 | 86 | 107 | 270 | 161 | 54 | 42 | 277 | 1,028 | 103 |
| Algeria | 482 | 490 | 751 | 0 | 297 | 0 | 0 | 1,064 | 0 | 0 | 3,084 | 308 |
| Angola | . | . | . | . | . | . | . | . | 1,692 | 0 | 1,692 | 846 |
| Antigua and Barbuda | . | . | . | . | . | . | . | . | . | 0 | 0 | 0 |
| Argentina | 582 | 0 | 954 | 598 | 0 | 906 | 4,345 | 0 | 0 | 0 | 7,385 | 739 |
| Armenia, Republic of | 81 | 216 | 214 | 352 | 370 | 805 | 1,124 | 832 | 1,045 | 1,163 | 6,200 | 620 |
| Aruba | 805 | 1,226 | 2,189 | 3,537 | 3,708 | 3,935 | 4,911 | 1,832 | 125 | 3,607 | 25,876 | 2,588 |
| Azerbaijan, Republic of | . | . | . | . | 2,206 | 8,178 | 0 | 2,392 | 0 | 0 | 12,776 | 2,129 |
| Bahamas, The | 772 | 1,001 | 1,062 | 1,693 | 1,330 | 1,622 | 2,086 | 1,618 | 1,936 | 2,030 | 15,150 | 1,515 |
| Bahrain, Kingdom of | 651 | 627 | 1,509 | 2,249 | 2,304 | 1,694 | 0 | 0 | 0 | 0 | 9,033 | 903 |
| Bangladesh | 286 | 830 | 815 | 411 | 2,024 | 1,678 | 907 | 372 | 2,137 | 1,637 | 11,095 | 1,110 |
| Barbados | 301 | 329 | 574 | 534 | 69 | 54 | 0 | 0 | 26 | 0 | 1,888 | 189 |
| Belarus | 2,258 | 3,141 | 3,917 | 4,144 | 5,321 | 9,080 | 14,782 | 9,207 | 8,365 | 14,088 | 74,302 | 7,430 |
| Belize | 64 | 84 | 87 | 91 | 76 | 134 | 140 | 99 | 72 | 113 | 960 | 96 |
| Benin | 0 | 61 | 107 | 34 | 0 | 0 | 0 | 0 | 195 | 0 | 397 | 40 |
| Bhutan | . | . | . | . | . | . | . | . | . | . | . | . |
| Bolivia | 214 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 214 | 21 |
| Bosnia and Herzegovina | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Botswana | 66 | 0 | 172 | 228 | 553 | 1,093 | 1,079 | 998 | 227 | 1,428 | 5,844 | 584 |
| Brazil | 8,745 | 11,136 | 13,752 | 16,602 | 10,681 | 14,212 | 22,174 | 22,052 | 28,750 | 32,824 | 180,927 | 18,093 |
| Brunei Darussalam | 437 | 633 | 402 | 647 | 0 | 1,004 | 208 | 376 | 0 | 0 | 3,707 | 371 |
| Bulgaria | 1,112 | 1,702 | 2,306 | 1,800 | 1,455 | 1,565 | 1,139 | 888 | 731 | 1,797 | 14,494 | 1,449 |
| Burkina Faso | 124 | 103 | 287 | 189 | 189 | 328 | 396 | 409 | 381 | 535 | 2,940 | 294 |
| Burundi | 6 | 2 | 0 | 28 | 131 | 25 | 26 | 46 | 51 | 161 | 475 | 48 |
| Cambodia | 280 | 326 | 403 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,008 | 101 |
| Cameroon | 98 | 264 | 861 | 436 | 941 | 1,261 | 1,540 | 197 | 321 | 483 | 6,402 | 640 |
| Cape Verde | 12 | 21 | 5 | 8 | 18 | 11 | 15 | 4 | 5 | 0 | 99 | 10 |
| Central African Republic | 67 | 13 | 6 | 12 | 0 | 3 | 0 | 35 | 33 | 30 | 200 | 20 |
| Chad | 1,076 | 399 | 499 | 429 | 734 | 988 | 874 | 1,161 | 1,188 | 1,598 | 8,946 | 895 |
| Chile | 1,894 | 1,818 | 2,550 | 3,386 | 3,520 | 3,992 | 8,046 | 3,488 | 5,101 | 5,304 | 39,099 | 3,910 |
| China, Mainland | 67,498 | 69,284 | 87,757 | 90,315 | 94,555 | 112,056 | 102,972 | 92,538 | 112,924 | 137,582 | 967,481 | 96,748 |
| Colombia | 1,016 | 1,254 | 1,750 | 1,323 | 533 | 592 | 2,603 | 1,283 | 0 | 1,540 | 11,894 | 1,189 |
| Comoros | 9 | 6 | 15 | 16 | 24 | 20 | 21 | 28 | 27 | 106 | 272 | 27 |
| Congo, Democratic Republic of | 340 | 412 | 597 | 924 | 549 | 209 | 0 | 281 | 285 | 0 | 3,598 | 360 |
| Congo, Republic of | 0 | 923 | 2,962 | 665 | 2,151 | 1,523 | 2,630 | 616 | 1,758 | 826 | 14,054 | 1,405 |
| Costa Rica | 2,307 | 3,440 | 4,653 | 5,291 | 5,377 | 5,536 | 6,768 | 8,727 | 17,196 | 20,890 | 80,184 | 8,018 |
| Cote d'Ivoire | 1,224 | 2,144 | 2,587 | 3,761 | 2,607 | 3,309 | 2,379 | 1,178 | 1,784 | 1,048 | 22,023 | 2,202 |
| Croatia | 356 | 592 | 303 | 124 | 0 | 0 | 0 | 0 | 0 | 0 | 1,376 | 138 |
| Djibouti | 164 | 206 | 213 | 232 | 302 | 278 | 344 | 298 | 361 | 438 | 2,836 | 284 |
| Dominica | 13 | 18 | 26 | 41 | 46 | 76 | 150 | 128 | 118 | 169 | 786 | 79 |
| Dominican Republic | 496 | 318 | 0 | 0 | 725 | 347 | 1,060 | 3,824 | 4,061 | 3,842 | 14,673 | 1,467 |
| Ecuador | 300 | 24 | 861 | 1,318 | 648 | 671 | 4,804 | 380 | 703 | 1,348 | 11,058 | 1,106 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Egypt | 1,507 | 1,248 | 3,110 | 2,671 | 4,483 | 4,730 | 3,174 | 0 | 1,028 | 3,558 | 25,508 | 2,551 |
| El Salvador | 470 | 499 | 657 | 621 | 448 | 1,027 | 882 | 955 | 928 | 555 | 7,041 | 704 |
| Equatorial Guinea | 59 | 0 | 320 | 172 | 355 | 918 | 1,970 | 2,875 | 2,906 | 3,223 | 12,798 | 1,280 |
| Eritrea | . | . | . | . | . | . | . | . | . | . | . | . |
| Ethiopia | 316 | 104 | 51 | 785 | 1,152 | 1,352 | 1,865 | 2,544 | 2,568 | 2,303 | 13,040 | 1,304 |
| Fiji | 64 | 207 | 239 | 159 | 255 | 240 | 391 | 204 | 252 | 330 | 2,340 | 234 |
| Gabon | 377 | 238 | 258 | 0 | 0 | 0 | 0 | 177 | 327 | 146 | 1,524 | 152 |
| Gambia, The | 18 | 10 | 27 | 20 | 23 | 30 | 33 | 40 | 47 | 36 | 285 | 28 |
| Georgia | 243 | 376 | 444 | 403 | 644 | 394 | 839 | 515 | 288 | 219 | 4,366 | 437 |
| Ghana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grenada | 33 | 42 | 24 | 51 | 44 | 58 | 58 | 48 | 60 | 69 | 485 | 49 |
| Guatemala | 1,368 | 1,325 | 1,400 | 1,562 | 920 | 1,019 | 969 | 3,356 | 2,043 | 2,870 | 16,832 | 1,683 |
| Guinea | 116 | 159 | 421 | 292 | 289 | 633 | 251 | 0 | 373 | 408 | 2,942 | 294 |
| Guinea-Bissau | 41 | 6 | 33 | 18 | 12 | 193 | 2 | 32 | 69 | 119 | 526 | 53 |
| Guyana | 59 | 60 | 84 | 140 | 90 | 209 | 202 | 183 | 216 | 262 | 1,505 | 150 |
| Haiti | 10 | 31 | 40 | 41 | 87 | 95 | 120 | 33 | 61 | 55 | 573 | 57 |
| Honduras | 2,679 | 2,722 | 2,920 | 2,984 | 3,031 | 3,041 | 3,294 | 2,869 | 3,457 | 3,560 | 30,558 | 3,056 |
| Hungary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| India | 7,703 | 10,068 | 18,697 | 19,575 | 27,569 | 33,108 | 44,645 | 28,336 | 66,770 | 83,221 | 339,691 | 33,969 |
| Indonesia | 13,033 | 13,039 | 15,342 | 13,123 | 16,036 | 17,063 | 27,080 | 17,581 | 13,341 | 16,208 | 161,847 | 16,185 |
| Iran, Islamic Republic of | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Iraq | . | . | . | . | . | . | 10,423 | 12,023 | 14,331 | 11,760 | 48,538 | 12,134 |
| Jamaica | 299 | 430 | 413 | 686 | 322 | 28 | 544 | 470 | 162 | 222 | 3,577 | 358 |
| Jordan | 0 | 0 | 128 | 0 | 0 | 0 | 94 | 127 | 0 | 0 | 348 | 35 |
| Kazakhstan | 968 | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 747 | 2,597 | 4,411 | 441 |
| Kenya | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 1 |
| Kiribati | . | . | . | . | . | . | . | . | . | . | . | . |
| Kosovo, Republic of | . | . | . | . | . | . | . | . | . | . | . | . |
| Kuwait | 376 | 0 | 65 | 791 | 960 | 476 | 0 | 1,465 | 0 | 2,067 | 6,200 | 620 |
| Kyrgyz Republic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lao PDR | 0 | 0 | 6 | 0 | 113 | 114 | 178 | 179 | 76 | 472 | 1,138 | 114 |
| Latvia | 990 | 1,197 | 1,943 | 1,968 | 2,474 | 2,948 | 2,710 | 2,093 | 1,614 | 3,960 | 21,896 | 2,190 |
| Lebanon | 528 | 0 | 218 | 1,070 | 374 | 1,009 | 1,303 | 979 | 529 | 273 | 6,284 | 628 |
| Lesotho | 16 | 0 | 0 | 0 | 159 | 297 | 311 | 331 | 0 | 410 | 1,523 | 152 |
| Liberia | 886 | 814 | 851 | 946 | 1,478 | 1,829 | 605 | 1,040 | 701 | 387 | 9,536 | 954 |
| Libya | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 6 |
| Lithuania | 1,309 | 1,851 | 1,101 | 1,409 | 853 | 1,040 | 1,935 | 977 | 1,503 | 4,267 | 16,245 | 1,624 |
| Macedonia, FYR | 168 | 248 | 381 | 488 | 305 | 755 | 1,044 | 564 | 572 | 928 | 5,452 | 545 |
| Madagascar | 122 | 59 | 721 | 412 | 1,596 | 74 | 636 | 165 | 108 | 265 | 4,158 | 416 |
| Malawi | 112 | 184 | 160 | 471 | 418 | 456 | 857 | 698 | 687 | 907 | 4,950 | 495 |
| Malaysia | 19,346 | 20,758 | 26,733 | 28,740 | 29,260 | 31,608 | 32,531 | 29,266 | 43,166 | 44,218 | 305,626 | 30,563 |
| Maldives | 156 | 111 | 68 | 35 | 72 | 49 | 56 | 39 | 62 | 70 | 717 | 72 |

## Table 6. GER Non-Normalized (cont)
### (in millions of US Dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mali | 45 | 275 | 102 | 144 | 187 | 184 | 966 | 249 | 899 | 530 | 3,581 | 358 |
| Mauritania | . | . | . | . | . | . | . | . | . | . | . | . |
| Mauritius | 0 | 107 | 32 | 0 | 2 | 0 | 180 | 306 | 443 | 0 | 1,070 | 107 |
| Mexico | 33,718 | 33,674 | 35,921 | 43,669 | 47,663 | 58,592 | 60,025 | 33,733 | 32,180 | 27,362 | 406,537 | 40,654 |
| Moldova | 108 | 228 | 343 | 244 | 188 | 440 | 493 | 226 | 0 | 172 | 2,442 | 244 |
| Mongolia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Montenegro | . | . | 980 | 925 | 436 | 512 | 456 | 278 | 259 | 222 | 4,068 | 508 |
| Morocco | 61 | 256 | 624 | 3,080 | 162 | 600 | 1,445 | 1,711 | 618 | 334 | 8,891 | 889 |
| Mozambique | 206 | 83 | 0 | 0 | 365 | 127 | 0 | 0 | 31 | 0 | 813 | 81 |
| Myanmar | 0 | 36 | 492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 529 | 53 |
| Namibia | 35 | 0 | 107 | 138 | 402 | 762 | 792 | 1,018 | 207 | 1,169 | 4,630 | 463 |
| Nepal | 473 | 364 | 414 | 503 | 678 | 574 | 777 | 1,552 | 1,704 | 651 | 7,690 | 769 |
| Nicaragua | 443 | 525 | 649 | 957 | 1,120 | 1,172 | 1,264 | 1,197 | 1,721 | 2,032 | 11,080 | 1,108 |
| Niger | 0 | 0 | 86 | 123 | 0 | 82 | 39 | 0 | 534 | 166 | 1,031 | 103 |
| Nigeria | 0 | 0 | 1,681 | 522 | 2,013 | 4,922 | 3,406 | 0 | 4,287 | 5,739 | 22,570 | 2,257 |
| Oman | 192 | 364 | 116 | 0 | 2,389 | 0 | 0 | 0 | 0 | 0 | 3,061 | 306 |
| Pakistan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Panama | 2,235 | 2,414 | 2,709 | 3,571 | 4,632 | 5,092 | 5,800 | 5,189 | 5,191 | 0 | 36,832 | 3,683 |
| Papua New Guinea | 52 | 119 | 93 | 0 | 0 | 33 | 111 | 479 | 357 | 896 | 2,141 | 214 |
| Paraguay | 810 | 1,789 | 2,183 | 2,545 | 3,268 | 3,346 | 5,415 | 4,769 | 6,941 | 7,993 | 39,059 | 3,906 |
| Peru | 733 | 750 | 660 | 930 | 590 | 447 | 1,232 | 1,467 | 0 | 0 | 6,810 | 681 |
| Philippines | 4,897 | 7,358 | 8,942 | 11,614 | 8,386 | 7,981 | 6,902 | 5,636 | 5,212 | 10,882 | 77,809 | 7,781 |
| Poland | 130 | 0 | 421 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 551 | 55 |
| Qatar | 0 | 0 | 0 | 0 | 206 | 261 | 4,456 | 18,967 | 1,153 | 5,577 | 30,620 | 3,062 |
| Romania | 0 | 0 | 0 | 0 | 0 | 2,853 | 1,973 | 0 | 0 | 0 | 4,826 | 483 |
| Russian Federation | 20,439 | 32,125 | 41,266 | 49,606 | 66,825 | 72,337 | 100,921 | 123,065 | 125,897 | 179,039 | 811,519 | 81,152 |
| Rwanda | 40 | 29 | 208 | 73 | 130 | 158 | 92 | 383 | 433 | 518 | 2,063 | 206 |
| Samoa | 59 | 84 | 79 | 324 | 116 | 142 | 137 | 103 | 115 | 116 | 1,275 | 127 |
| Sao Tome and Principe | 4 | 5 | 4 | 11 | 1 | 2 | 6 | 9 | 7 | 25 | 75 | 8 |
| Saudi Arabia | 0 | 0 | 0 | 1,935 | 974 | 1,234 | 3,645 | 4,664 | 4,530 | 5,460 | 22,443 | 2,244 |
| Senegal | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 |
| Serbia, Republic of | 5,469 | 7,409 | 9,776 | 6,433 | 5,278 | 4,070 | 0 | 5,527 | 2,655 | 2,462 | 49,079 | 4,908 |
| Seychelles | 212 | 149 | 82 | 75 | 4 | 0 | 0 | 0 | 0 | 0 | 521 | 52 |
| Sierra Leone | 53 | 45 | 41 | 32 | 0 | 48 | 18 | 0 | 0 | 206 | 443 | 44 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Solomon Islands | 22 | 34 | 69 | 88 | 93 | 135 | 169 | 90 | 151 | 151 | 1,001 | 100 |
| Somalia | . | . | . | . | . | . | . | . | . | . | . | . |
| South Africa | 805 | 0 | 2,542 | 3,387 | 9,893 | 18,730 | 19,787 | 16,710 | 3,858 | 23,732 | 99,443 | 9,944 |
| Sri Lanka | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| St. Kitts and Nevis | 48 | 15 | 26 | 41 | 39 | 43 | 27 | 46 | 64 | 45 | 393 | 39 |
| St. Lucia | 19 | 57 | 60 | 75 | 193 | 26 | 0 | 8 | 0 | 0 | 438 | 44 |
| St. Vincent and the Grenadines | 170 | 153 | 281 | 351 | 179 | 139 | 232 | 184 | 117 | 52 | 1,859 | 186 |
| Sudan | 288 | 0 | 0 | 96 | 56 | 1,154 | 402 | 1,624 | 733 | 4,058 | 8,411 | 841 |
| Suriname | 105 | 75 | 121 | 117 | 33 | 7 | 185 | 53 | 0 | 0 | 694 | 69 |
| Swaziland | 27 | 92 | 99 | 150 | 510 | 1,142 | 366 | 433 | 71 | 419 | 3,309 | 331 |
| Syrian Arab Republic | 0 | 0 | 13,080 | 307 | 0 | 92 | 0 | 0 | 154 | 5,660 | 19,294 | 1,929 |
| Tajikistan | 169 | 118 | 154 | 51 | 0 | 0 | 0 | 1,439 | 0 | 0 | 1,931 | 193 |
| Tanzania | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 18 | 500 | 584 | 58 |
| Thailand | 4,954 | 6,080 | 6,535 | 11,987 | 11,513 | 10,427 | 20,550 | 14,769 | 20,402 | 29,114 | 136,330 | 13,633 |
| Timor-Leste, Dem. Rep. of | . | . | . | . | . | . | . | . | . | . | . | . |
| Togo | 228 | 204 | 251 | 952 | 1,692 | 2,884 | 4,471 | 4,250 | 2,385 | 1,140 | 18,457 | 1,846 |
| Tonga | 15 | 13 | 12 | 9 | 12 | 9 | 22 | 6 | 5 | 3 | 107 | 11 |
| Trinidad and Tobago | 997 | 1,576 | 1,848 | 1,662 | 622 | 2,102 | 889 | 2,923 | 4,263 | 6,574 | 23,457 | 2,346 |
| Tunisia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Turkey | 1,748 | 1,998 | 0 | 1,851 | 1,358 | 3,502 | 3,343 | 8,180 | 4,108 | 10,203 | 36,290 | 3,629 |
| Turkmenistan | 688 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,290 | 129 |
| Uganda | 19 | 160 | 255 | 374 | 475 | 719 | 1,182 | 1,325 | 1,280 | 307 | 6,096 | 610 |
| Ukraine | 0 | 0 | 0 | 0 | 0 | 0 | 137 | 741 | 1,008 | 2,149 | 4,034 | 403 |
| United Arab Emirates | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,044 | 0 | 0 | 1,044 | 104 |
| Uruguay | 274 | 351 | 347 | 282 | 133 | 511 | 171 | 489 | 984 | 626 | 4,167 | 417 |
| Uzbekistan | . | . | . | . | . | . | . | . | . | . | . | . |
| Vanuatu | 35 | 45 | 153 | 152 | 166 | 281 | 442 | 93 | 161 | 157 | 1,686 | 169 |
| Venezuela, Rep. Bolivariana de | 555 | 0 | 2,015 | 135 | 0 | 0 | 0 | 918 | 1,045 | 859 | 5,527 | 553 |
| Vietnam | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yemen, Republic of | 0 | 0 | 0 | 0 | 0 | 459 | 1,900 | 0 | 0 | 30 | 2,388 | 239 |
| Zambia | 520 | 835 | 1,837 | 1,999 | 2,435 | 3,052 | 2,535 | 1,767 | 2,565 | 1,302 | 18,847 | 1,885 |
| Zimbabwe | 662 | 0 | 306 | 357 | 1,790 | 97 | 4 | 106 | 25 | 0 | 3,347 | 335 |
| All Developing Countries | 231,842 | 260,432 | 350,698 | 373,546 | 414,740 | 493,733 | 584,049 | 534,363 | 589,397 | 763,444 | 4,596,244 | 459,624 |

## Table 7. GER Normalized
### (in millions of US Dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Afghanistan | 1,512 | 892 | 668 | 527 | 161 | 0 | 0 | 0 | 0 | 0 | 3,760 | 376 |
| Albania | 0 | 0 | 0 | 86 | 107 | 270 | 161 | 0 | 0 | 277 | 901 | 90 |
| Algeria | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Angola | . | . | . | . | . | . | . | . | 0 | 0 | 0 | 0 |
| Antigua and Barbuda | . | . | . | . | . | . | . | . | . | 0 | 0 | 0 |
| Argentina | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Armenia, Republic of | 81 | 216 | 214 | 352 | 370 | 805 | 1,124 | 832 | 1,045 | 1,163 | 6,200 | 620 |
| Aruba | 805 | 1,226 | 2,189 | 3,537 | 3,708 | 3,935 | 4,911 | 1,832 | 125 | 3,607 | 25,876 | 2,588 |
| Azerbaijan, Republic of | . | . | . | . | 2,206 | 8,178 | 0 | 2,392 | 0 | 0 | 12,776 | 2,129 |
| Bahamas, The | 772 | 1,001 | 1,062 | 1,693 | 1,330 | 1,622 | 2,086 | 1,618 | 1,936 | 2,030 | 15,150 | 1,515 |
| Bahrain, Kingdom of | 651 | 0 | 1,509 | 2,249 | 2,304 | 1,694 | 0 | 0 | 0 | 0 | 8,407 | 841 |
| Bangladesh | 0 | 830 | 815 | 0 | 2,024 | 1,678 | 0 | 0 | 2,137 | 0 | 7,483 | 748 |
| Barbados | 301 | 329 | 574 | 534 | 69 | 54 | 0 | 0 | 0 | 0 | 1,863 | 186 |
| Belarus | 2,258 | 3,141 | 3,917 | 4,144 | 5,321 | 9,080 | 14,782 | 9,207 | 8,365 | 14,088 | 74,302 | 7,430 |
| Belize | 64 | 84 | 87 | 91 | 76 | 134 | 140 | 99 | 72 | 113 | 960 | 96 |
| Benin | 0 | 61 | 107 | 0 | 0 | 0 | 0 | 0 | 195 | 0 | 363 | 36 |
| Bhutan | . | . | . | . | . | . | . | . | . | . | . | . |
| Bolivia | 214 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 214 | 21 |
| Bosnia and Herzegovina | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Botswana | 0 | 0 | 0 | 0 | 553 | 1,093 | 1,079 | 998 | 0 | 1,428 | 5,152 | 515 |
| Brazil | 8,745 | 11,136 | 13,752 | 16,602 | 0 | 0 | 22,174 | 22,052 | 28,750 | 32,824 | 156,035 | 15,603 |
| Brunei Darussalam | 437 | 633 | 402 | 647 | 0 | 1,004 | 208 | 376 | 0 | 0 | 3,707 | 371 |
| Bulgaria | 1,112 | 1,702 | 2,306 | 1,800 | 0 | 0 | 0 | 0 | 0 | 0 | 6,920 | 692 |
| Burkina Faso | 124 | 103 | 287 | 189 | 189 | 328 | 396 | 409 | 381 | 535 | 2,940 | 294 |
| Burundi | 6 | 0 | 0 | 28 | 131 | 25 | 26 | 46 | 51 | 161 | 473 | 47 |
| Cambodia | 280 | 326 | 403 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,008 | 101 |
| Cameroon | 0 | 264 | 861 | 436 | 941 | 1,261 | 1,540 | 0 | 0 | 483 | 5,785 | 579 |
| Cape Verde | 12 | 21 | 5 | 8 | 18 | 11 | 15 | 4 | 5 | 0 | 99 | 10 |
| Central African Republic | 67 | 13 | 0 | 0 | 0 | 0 | 0 | 35 | 33 | 30 | 179 | 18 |
| Chad | 1,076 | 399 | 499 | 429 | 734 | 988 | 874 | 1,161 | 1,188 | 1,598 | 8,946 | 895 |
| Chile | 1,894 | 0 | 0 | 0 | 0 | 0 | 8,046 | 0 | 0 | 0 | 9,940 | 994 |
| China, Mainland | 67,498 | 69,284 | 87,757 | 90,315 | 0 | 0 | 0 | 0 | 0 | 0 | 314,853 | 31,485 |
| Colombia | 0 | 0 | 1,750 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,750 | 175 |
| Comoros | 9 | 6 | 15 | 16 | 24 | 20 | 21 | 28 | 27 | 106 | 272 | 27 |
| Congo, Democratic Republic of | 340 | 412 | 597 | 924 | 549 | 0 | 0 | 0 | 0 | 0 | 2,823 | 282 |
| Congo, Republic of | 0 | 923 | 2,962 | 665 | 2,151 | 1,523 | 2,630 | 616 | 1,758 | 0 | 13,228 | 1,323 |
| Costa Rica | 2,307 | 3,440 | 4,653 | 5,291 | 5,377 | 5,536 | 6,768 | 8,727 | 17,196 | 20,890 | 80,184 | 8,018 |
| Cote d'Ivoire | 1,224 | 2,144 | 2,587 | 3,761 | 2,607 | 3,309 | 2,379 | 1,178 | 1,784 | 0 | 20,975 | 2,098 |
| Croatia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Djibouti | 164 | 206 | 213 | 232 | 302 | 278 | 344 | 298 | 361 | 438 | 2,836 | 284 |
| Dominica | 13 | 18 | 26 | 41 | 46 | 76 | 150 | 128 | 118 | 169 | 786 | 79 |
| Dominican Republic | 496 | 318 | 0 | 0 | 725 | 347 | 1,060 | 3,824 | 4,061 | 3,842 | 14,673 | 1,467 |
| Ecuador | 0 | 0 | 861 | 1,318 | 0 | 0 | 4,804 | 0 | 0 | 0 | 6,984 | 698 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Egypt | 1,507 | 1,248 | 3,110 | 2,671 | 4,483 | 4,730 | 3,174 | 0 | 0 | 3,558 | 24,480 | 2,448 |
| El Salvador | 470 | 499 | 657 | 621 | 448 | 1,027 | 882 | 955 | 928 | 555 | 7,041 | 704 |
| Equatorial Guinea | 0 | 0 | 0 | 0 | 0 | 0 | 1,970 | 2,875 | 2,906 | 3,223 | 10,974 | 1,097 |
| Eritrea | . | . | . | . | . | . | . | . | . | . | . | . |
| Ethiopia | 316 | 104 | 0 | 785 | 1,152 | 1,352 | 1,865 | 2,544 | 2,568 | 2,303 | 12,988 | 1,299 |
| Fiji | 64 | 207 | 239 | 159 | 255 | 240 | 391 | 204 | 252 | 330 | 2,340 | 234 |
| Gabon | 377 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 377 | 38 |
| Gambia, The | 18 | 10 | 27 | 20 | 23 | 30 | 33 | 40 | 47 | 36 | 285 | 28 |
| Georgia | 243 | 376 | 444 | 403 | 644 | 394 | 839 | 515 | 288 | 219 | 4,366 | 437 |
| Ghana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grenada | 33 | 42 | 24 | 51 | 44 | 58 | 58 | 48 | 60 | 69 | 485 | 49 |
| Guatemala | 1,368 | 1,325 | 1,400 | 1,562 | 920 | 1,019 | 969 | 3,356 | 2,043 | 2,870 | 16,832 | 1,683 |
| Guinea | 116 | 159 | 421 | 292 | 289 | 633 | 251 | 0 | 373 | 408 | 2,942 | 294 |
| Guinea-Bissau | 41 | 0 | 33 | 18 | 12 | 193 | 0 | 32 | 69 | 119 | 518 | 52 |
| Guyana | 59 | 60 | 84 | 140 | 90 | 209 | 202 | 183 | 216 | 262 | 1,505 | 150 |
| Haiti | 0 | 0 | 40 | 0 | 87 | 95 | 120 | 0 | 61 | 0 | 403 | 40 |
| Honduras | 2,679 | 2,722 | 2,920 | 2,984 | 3,031 | 3,041 | 3,294 | 2,869 | 3,457 | 3,560 | 30,558 | 3,056 |
| Hungary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| India | 7,703 | 10,068 | 18,697 | 19,575 | 27,569 | 33,108 | 44,645 | 28,336 | 66,770 | 83,221 | 339,691 | 33,969 |
| Indonesia | 13,033 | 13,039 | 15,342 | 13,123 | 16,036 | 17,063 | 27,080 | 17,581 | 0 | 0 | 132,298 | 13,230 |
| Iran, Islamic Republic of | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Iraq | . | . | . | . | . | . | 10,423 | 12,023 | 14,331 | 11,760 | 48,538 | 12,134 |
| Jamaica | 299 | 430 | 413 | 686 | 322 | 0 | 544 | 470 | 162 | 222 | 3,549 | 355 |
| Jordan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kazakhstan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kenya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kiribati | . | . | . | . | . | . | . | . | . | . | . | . |
| Kosovo, Republic of | . | . | . | . | . | . | . | . | . | . | . | . |
| Kuwait | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kyrgyz Republic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lao PDR | 0 | 0 | 0 | 0 | 113 | 114 | 178 | 179 | 0 | 472 | 1,057 | 106 |
| Latvia | 990 | 1,197 | 1,943 | 1,968 | 2,474 | 2,948 | 2,710 | 2,093 | 1,614 | 3,960 | 21,896 | 2,190 |
| Lebanon | 528 | 0 | 0 | 1,070 | 374 | 1,009 | 1,303 | 979 | 529 | 0 | 5,792 | 579 |
| Lesotho | 0 | 0 | 0 | 0 | 159 | 297 | 311 | 331 | 0 | 410 | 1,507 | 151 |
| Liberia | 886 | 814 | 851 | 946 | 1,478 | 1,829 | 605 | 1,040 | 701 | 387 | 9,536 | 954 |
| Libya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lithuania | 1,309 | 1,851 | 1,101 | 1,409 | 0 | 0 | 0 | 0 | 0 | 4,267 | 9,937 | 994 |
| Macedonia, FYR | 168 | 248 | 381 | 488 | 305 | 755 | 1,044 | 564 | 572 | 928 | 5,452 | 545 |
| Madagascar | 122 | 0 | 721 | 412 | 1,596 | 0 | 636 | 165 | 108 | 265 | 4,024 | 402 |
| Malawi | 112 | 184 | 160 | 471 | 418 | 456 | 857 | 698 | 687 | 907 | 4,950 | 495 |
| Malaysia | 19,346 | 20,758 | 26,733 | 28,740 | 29,260 | 31,608 | 32,531 | 29,266 | 43,166 | 44,218 | 305,626 | 30,563 |
| Maldives | 156 | 111 | 68 | 35 | 72 | 49 | 56 | 39 | 62 | 70 | 717 | 72 |

## Table 7.  **GER Normalized** (cont)
### (in millions of US Dollars)

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mali | 0 | 275 | 102 | 144 | 187 | 184 | 966 | 249 | 899 | 530 | 3,536 | 354 |
| Mauritania | . | . | . | . | . | . | . | . | . | . | . | . |
| Mauritius | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 306 | 443 | 0 | 749 | 75 |
| Mexico | 33,718 | 33,674 | 35,921 | 43,669 | 47,663 | 58,592 | 60,025 | 33,733 | 32,180 | 0 | 379,175 | 37,918 |
| Moldova | 108 | 228 | 343 | 244 | 188 | 440 | 493 | 226 | 0 | 0 | 2,270 | 227 |
| Mongolia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Montenegro | . | . | 980 | 925 | 436 | 512 | 456 | 278 | 259 | 222 | 4,068 | 508 |
| Morocco | 0 | 0 | 0 | 3,080 | 0 | 0 | 0 | 1,711 | 0 | 0 | 4,791 | 479 |
| Mozambique | 206 | 0 | 0 | 0 | 365 | 0 | 0 | 0 | 0 | 0 | 571 | 57 |
| Myanmar | 0 | 0 | 492 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 492 | 49 |
| Namibia | 0 | 0 | 0 | 0 | 402 | 762 | 792 | 1,018 | 0 | 1,169 | 4,143 | 414 |
| Nepal | 473 | 364 | 414 | 503 | 678 | 574 | 777 | 1,552 | 1,704 | 651 | 7,690 | 769 |
| Nicaragua | 443 | 525 | 649 | 957 | 1,120 | 1,172 | 1,264 | 1,197 | 1,721 | 2,032 | 11,080 | 1,108 |
| Niger | 0 | 0 | 86 | 123 | 0 | 82 | 0 | 0 | 534 | 166 | 992 | 99 |
| Nigeria | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oman | 0 | 0 | 0 | 0 | 2,389 | 0 | 0 | 0 | 0 | 0 | 2,389 | 239 |
| Pakistan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Panama | 2,235 | 2,414 | 2,709 | 3,571 | 4,632 | 5,092 | 5,800 | 5,189 | 5,191 | 0 | 36,832 | 3,683 |
| Papua New Guinea | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 479 | 0 | 896 | 1,375 | 138 |
| Paraguay | 810 | 1,789 | 2,183 | 2,545 | 3,268 | 3,346 | 5,415 | 4,769 | 6,941 | 7,993 | 39,059 | 3,906 |
| Peru | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Philippines | 4,897 | 7,358 | 8,942 | 11,614 | 8,386 | 7,981 | 6,902 | 5,636 | 5,212 | 10,882 | 77,809 | 7,781 |
| Poland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Qatar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,967 | 0 | 0 | 18,967 | 1,897 |
| Romania | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Russian Federation | 20,439 | 32,125 | 41,266 | 49,606 | 66,825 | 72,337 | 100,921 | 123,065 | 125,897 | 179,039 | 811,519 | 81,152 |
| Rwanda | 40 | 29 | 208 | 73 | 130 | 158 | 92 | 383 | 433 | 518 | 2,063 | 206 |
| Samoa | 59 | 84 | 79 | 324 | 116 | 142 | 137 | 103 | 115 | 116 | 1,275 | 127 |
| Sao Tome and Principe | 4 | 5 | 4 | 11 | 1 | 2 | 6 | 9 | 7 | 25 | 75 | 8 |
| Saudi Arabia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Senegal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Serbia, Republic of | 5,469 | 7,409 | 9,776 | 6,433 | 5,278 | 4,070 | 0 | 5,527 | 2,655 | 2,462 | 49,079 | 4,908 |
| Seychelles | 212 | 149 | 82 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 517 | 52 |
| Sierra Leone | 53 | 45 | 41 | 32 | 0 | 48 | 0 | 0 | 0 | 206 | 425 | 42 |

| Country | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Solomon Islands | 22 | 34 | 69 | 88 | 93 | 135 | 169 | 90 | 151 | 151 | 1,001 | 100 |
| Somalia | . | . | . | . | . | . | . | . | . | . | . | . |
| South Africa | 0 | 0 | 0 | 0 | 9,893 | 18,730 | 19,787 | 16,710 | 0 | 23,732 | 88,852 | 8,885 |
| Sri Lanka | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| St. Kitts and Nevis | 48 | 15 | 26 | 41 | 39 | 43 | 27 | 46 | 64 | 45 | 393 | 39 |
| St. Lucia | 19 | 57 | 60 | 75 | 193 | 26 | 0 | 0 | 0 | 0 | 430 | 43 |
| St. Vincent and the Grenadines | 170 | 153 | 281 | 351 | 179 | 139 | 232 | 184 | 117 | 52 | 1,859 | 186 |
| Sudan | 288 | 0 | 0 | 0 | 0 | 1,154 | 0 | 1,624 | 0 | 4,058 | 7,124 | 712 |
| Suriname | 105 | 75 | 121 | 117 | 0 | 0 | 185 | 0 | 0 | 0 | 602 | 60 |
| Swaziland | 0 | 0 | 0 | 0 | 510 | 1,142 | 366 | 433 | 0 | 419 | 2,870 | 287 |
| Syrian Arab Republic | 0 | 0 | 13,080 | 0 | 0 | 0 | 0 | 0 | 0 | 5,660 | 18,740 | 1,874 |
| Tajikistan | 169 | 118 | 154 | 0 | 0 | 0 | 0 | 1,439 | 0 | 0 | 1,880 | 188 |
| Tanzania | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 500 | 500 | 50 |
| Thailand | 0 | 0 | 0 | 11,987 | 0 | 0 | 20,550 | 0 | 20,402 | 29,114 | 82,052 | 8,205 |
| Timor-Leste, Dem. Rep. of | . | . | . | . | . | . | . | . | . | . | . | . |
| Togo | 228 | 204 | 251 | 952 | 1,692 | 2,884 | 4,471 | 4,250 | 2,385 | 1,140 | 18,457 | 1,846 |
| Tonga | 15 | 13 | 12 | 9 | 12 | 9 | 22 | 6 | 5 | 3 | 107 | 11 |
| Trinidad and Tobago | 997 | 1,576 | 1,848 | 1,662 | 0 | 2,102 | 0 | 2,923 | 4,263 | 6,574 | 21,945 | 2,195 |
| Tunisia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Turkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Turkmenistan | 688 | 602 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,290 | 129 |
| Uganda | 0 | 160 | 255 | 374 | 475 | 719 | 1,182 | 1,325 | 1,280 | 307 | 6,077 | 608 |
| Ukraine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| United Arab Emirates | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Uruguay | 274 | 351 | 347 | 0 | 0 | 511 | 0 | 0 | 984 | 0 | 2,466 | 247 |
| Uzbekistan | . | . | . | . | . | . | . | . | . | . | . | . |
| Vanuatu | 35 | 45 | 153 | 152 | 166 | 281 | 442 | 93 | 161 | 157 | 1,686 | 169 |
| Venezuela, Rep. Bolivariana de | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vietnam | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yemen, Republic of | 0 | 0 | 0 | 0 | 0 | 0 | 1,900 | 0 | 0 | 0 | 1,900 | 190 |
| Zambia | 520 | 835 | 1,837 | 1,999 | 2,435 | 3,052 | 2,535 | 1,767 | 2,565 | 1,302 | 18,847 | 1,885 |
| Zimbabwe | 662 | 0 | 306 | 357 | 1,790 | 0 | 0 | 0 | 0 | 0 | 3,115 | 312 |
| All Developing Countries | 217,808 | 245,291 | 329,963 | 356,633 | 283,217 | 331,929 | 448,603 | 398,533 | 428,124 | 532,504 | 3,572,605 | 357,260 |

# Appendix 2.  A Discussion on the Trade Discrepancies Arising through Re-Exporting via Hong Kong

1.  International trade typically involves an exchange of goods or services produced in a country against payment by users in a foreign country who consume those good or services. This bilateral exchange of goods and services against a financial settlement (rather than barter) is the basic transaction underlying all trade misinvoicing models. One way in which global trade has become more complex than the typical "country A to country B" bilateral trade is evident in the rise of trade entrepôts like Hong Kong, Singapore, and Dubai. Increasingly, these entrepôts have been intermediating trade between buyers and sellers in different markets. This intermediation is best illustrated by China's use of Hong Kong as a trade entrepôt. Failure to explicitly account for the role of trade entrepôts in international trade can distort estimates of trade misinvoicing.

2.  Hong Kong's long track record in international finance and trade relations makes it an excellent trade entrepôt to facilitate mainland China's trade with the rest of the world. It is often more cost-effective for a Chinese manufacturer of goods to outsource its marketing and distribution operations to Hong Kong rather than retain these functions in-house. Similarly, an interested buyer of Chinese goods who has no business connections in mainland China often finds it easier to conduct its buying operations through a firm in Hong Kong with an existing network of connections in mainland China. In this regard, Hong Kong has a comparative advantage in intermediating trade between China and the rest of the world.

3.  Through this relationship, a firm in Hong Kong will import goods from a country of origin (say China) and then *re-export* the same goods, with a marked-up price, to a buyer somewhere else in the world (say the US). A statistical discrepancy arises in this trading relationship when the country of origin (China) reports the exported goods as ultimately destined to Hong Kong, but the country of final destination (the US) reports the goods as originating in China.

4.  Since the re-exported goods, by definition, must not undergo a significant change in shape, form, or nature, the destination country records the imported good as originating in a country prior to the re-export (in this case mainland China). This is in accordance with the guidelines for compiling international trade statistics. However, due to the complex nature of entrepôt trade, the country of origin (mainland China) often does not know (or even care) where the good's ultimate destination will be and likely reports the good as destined for Hong Kong.

5.   The example in Figure 1 shows a hypothetical export of $100 of goods from China to the United States via Hong Kong. The red arrows denote where the exporting country reports its exports as going to and the blue arrows denote where the importing countries reports its imports as coming from. We assume that all traders have reported the actual amount of their imports and exports to their respective customs at each step in the process in order to highlight how re-exports create *artificial* trade misinvoicing. In accordance with Fenestra (2001), we assume that Hong Kong marks-up the price by approximately 15 percent before re-exporting the goods to the United States.

## Figure 1. Re-Exports Through Hong Kong: An Example



China's recorded exports to the United States = $0
United States recorded imports from China = *$115*
Trade Misinvoicing = $115
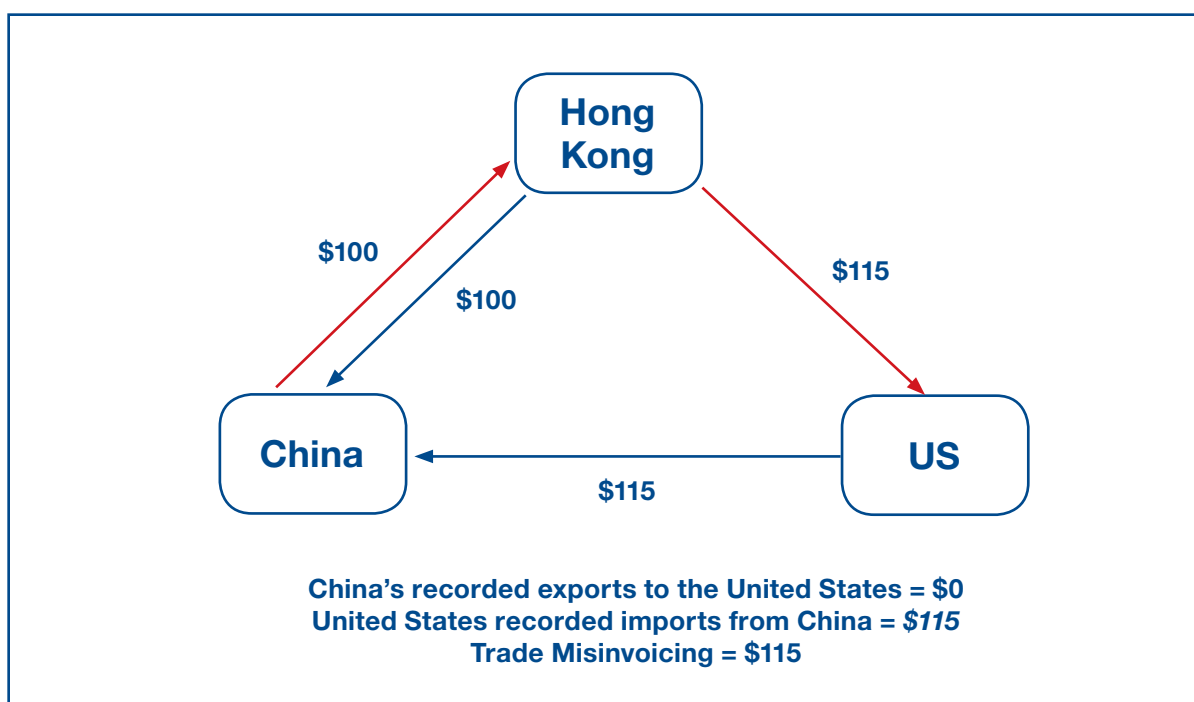
6.   In the above example, China does not report any exports going to the US, but the US reports $115 (equal to the amount re-exported from Hong Kong) of imports coming from China. Thus, a failure to correct for the re-exported goods through Hong Kong will imply that China under-invoiced its exports by $115 when the trader did not do so.

7.   Over the period of 2001 to 2012, approximately $3.61 trillion worth of merchandise goods was re-exported through Hong Kong, 62 percent of which originated in China. A few researchers attempted to correct for the re-exports of Chinese goods through Hong Kong in estimating trade misinvoicing but none of the existing methods can replicate the methodology for other countries that use Hong Kong as an entrepôt. To this extent, this is the first paper that uses actual data from the Hong Kong Census and Statistics Department to correct for any artificial trade misinvoicing resulting from the use of Hong Kong as an entrepôt by all developing

countries. India, the Philippines, and Thailand alone re-exported a total of $286 billion worth of goods through Hong Kong over the same period.

8. It is important to note, however, that our estimates only correct for re-exports through Hong Kong and not for re-exports through other entrepôts such as Singapore and Dubai. Hong Kong is currently the only entrepôt that publically disseminates a dataset detailed enough to correct for the bilateral trade discrepancies that re-exports create. Additionally, although re-exports are a growing global phenomenon in international trade, Hong Kong is by far the world's largest re-exporter. While Singapore re-exports an average of 43 percent of its total trade, Hong Kong's re-exports account for close to 97 percent of its total exports. Furthermore, only a fraction of the 43 percent of Singapore's exports that are re-exports involve developing countries. For this reason, the estimates of trade misinvoicing presented in this study are not likely to be significantly affected by re-exports through other trade entrepôts. However, we plan to incorporate re-export data from other entrepôts as they become available.

# References

Albalkin, A., & J., W. (1999). "The Problem of Capital Flight from Russia". *The World Economy*, 22 (3), 412-444.

Almounsor, A. "A Development Comparative Approach to Capital Flight: The Case of the Middle East and North Africa, 1970-2002". In G. A. Epstein (ed.), *Capital Flight and Capital Controls in Developling Countries* (pp. 234-261). Cheltenham, UK: Edward Elgar.

Baker, R. (2005). *Capitalism's Achilles Heel: Dirty Money and How to Renew the Free Market System*. Hoboken, NJ: John Wiley & Sons.

Beja, E. (2006). "Capital Flight and the Hollowing Out of the Philippine Economy in the Neoliberal Regime". *Philippine Journal of Third World Studies*, 21 (1), 55-74.

Cerra, V., Rishis, M., & Saxena, S. (2005, October). "Robbing the Riches: Capital Flight, Institutions and Instability". *IMF Working Paper* 199.

Dooley, M. P., & Kletzer, K. M. (1994). "Capital Flight, External Debt and Domestic Policies". *NBER Working Paper* (4793).

Dornbusch, R. (1990). "Capital Flight: Theory, Measurement and Policy Issues". *IADB Working Paper* (2).

Ferrantino, M., Liu, X., & Wang, Z. (2008). "Avoidance Behaviors of Exporters and Importers: Evidence from the U.S.-China Trade Data Discrepancy" *U.S. International Trade Commission Working Paper.*

Gunter, F. R. (2004). "Capital Flight from China". *China Economic Review*, 15, 63-85.

International Monetary Fund. (2010). *Annual Report on Exchange Arrangements and Exchange Restrictions*. Washington DC: IMF.

Kant, C. (1996). "Foreign Direct Investment and Capital Flight". *Princeton Studies in International Finance, 80.*

Kar, D., & Cartwrigh-Smith, D. (2010). *Illicit Financial Flows from Africa: Hidden Resource for Development.* Washington DC: Global Financial Integrity.

Kar, D., & Cartwright-Smith, D. (2008). *Illicit Financial Flows from Developing Countries: 2002-2006.* Washington DC: Global Financial Integrity.

Kar, D., Cartwright-Smith, D., & Hollingshead, A. (2010). *The Absorption of Illicit Financial Flows from Developing Countries: 2002-2006,* Global Financial Integrity.

Khan, M. S., & Ul Haque, N. (1985). "Foreign Borrowing and Capital Flight: A Formal Analysis". *IMF Staff Papers*, 32.

Le, Q. V., & Zak, P. J. (2006). "Political Risk and Capital Flight". *Journal of International Money and Finance, 20* (4), 308-329.

Le, Q., & Meenakshi, R. (2006). "Corruption and Capital Flight: An Empirical Assessment". *International Economic Journal, 20* (4), 534-540.

Loungani, P., & Mauro, P. (2000). "Capital Flight from Russia". *Conference on Post-Election Strategy*. Moscow.

Mauro, Paolo, (1995, August). "Corruption and Growth". *The Quarterly Journal of Economics*, pp. 681-712.

Moghadam, M. R., Samavati, H., & Dilts, D. A. "An Examination of Capital Flight from East Asian Emerging Economies: Paradise Lost". *Journal of Asia-Pacific Business, 45* (1), 33-49.

Ndikumana, L., & Boyce, J. K. (2008, April). "New Estimates of Capital Flight from sub-Saharan African Countries: Linkages with External Borrowing and Policy Options". *Working Paper*.

Ndung'u, N. (2007, October). Keynote Address By Governor, Central Bank of Kenya. *Senior Policy Seminar on Implications of Capital Flight for Macroeconomic Management and Growth in sub-Saharan Africa*. Pretoria, South Africa.

NGO Documents for the Earth Summit. (1992). Treaty 15: Capital Flight and Corruption. *Non-governmental Organization Alternative Treaties at the Global Forum.*

Reuter, Peter, Editor (2012). "Draining Development? Controlling Flows of Illicit Funds from Developing Countries". The World Bank, Washington DC.

Schneider, B. (1997). "Measuring Capital Flight: Estimates and Interpretations". *Overseas Development Institute Working Paper* (194).

Zhu, A., Li, C., & Epstein, G. "Capital Flight from China, 1982-2001". In G. A. Epstein, *Capital Flight and Capital Controls in Developing Countries* (pp. 262-285). Cheltenham, UK: Edward Elgar.