

# Illicit Financial Flows: Making Sense of Confusion

Alex Erskine<sup>1</sup>, 27 July 2018

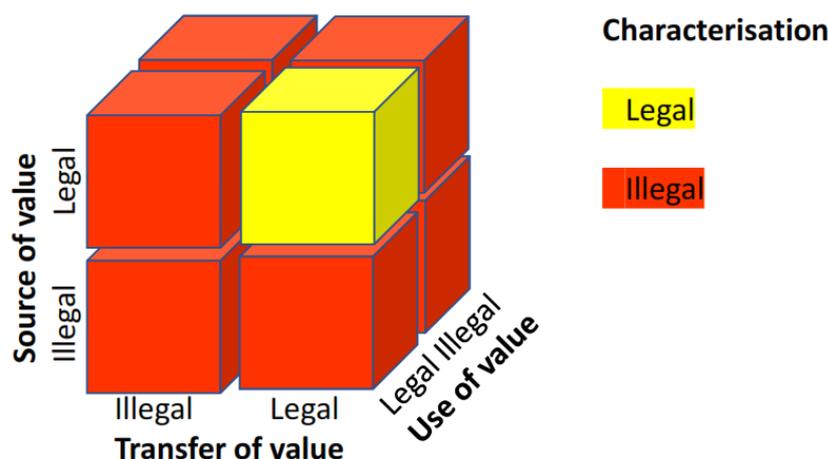
## Part II. Count the Devils<sup>2</sup>

This is the second of a [3-part set of notes on illicit financial flows](#). It focuses on how estimates of illicit financial flows must be made. [Part I, Search for Meaning](#), addressed the concept of illicit financial flows. **Part III, Tackle the Drivers**, will look at ways to reduce illicit financial flows and yet promote development.

UN countries have a goal of reducing illicit financial flows between 2015 and 2030. Because there is no accepted methodology, pilot exercises to test ways to estimate illicit financial flows are imminent.<sup>3</sup> Estimates are useful if broadly right; misleading or worse if wildly wrong (the **Annex** dissects the worst).

**Part I** observed that governments and most others have found it easier to focus on *illegal* activities: addressing *legal but illicit* activities has been a step too far. Thus Figure 1 on the first page of **Part I** has to be simplified into a more binary 3-D characterisation of cross-border transfers of value where a source, transfer and/or use is either legal or illegal – see Figure 1 below.

**Figure 1.** Illicit financial flows based on a simplified characterisation of sources, transfers or uses



N.B. Not drawn to scale. Be aware of the false clarity of the characterisations: the 3-D blocks and intervening divisions should be indeterminate and fuzzy. Source: the author, inspired by [Chowla and Falcao 2016](#).

**Part II** answers the calls [“What do we want? (*credible estimates of illicit financial flows*)” and “When do we want them? (*as soon as possible*)”] with a proposal: “this way ... but it will not be simple”.

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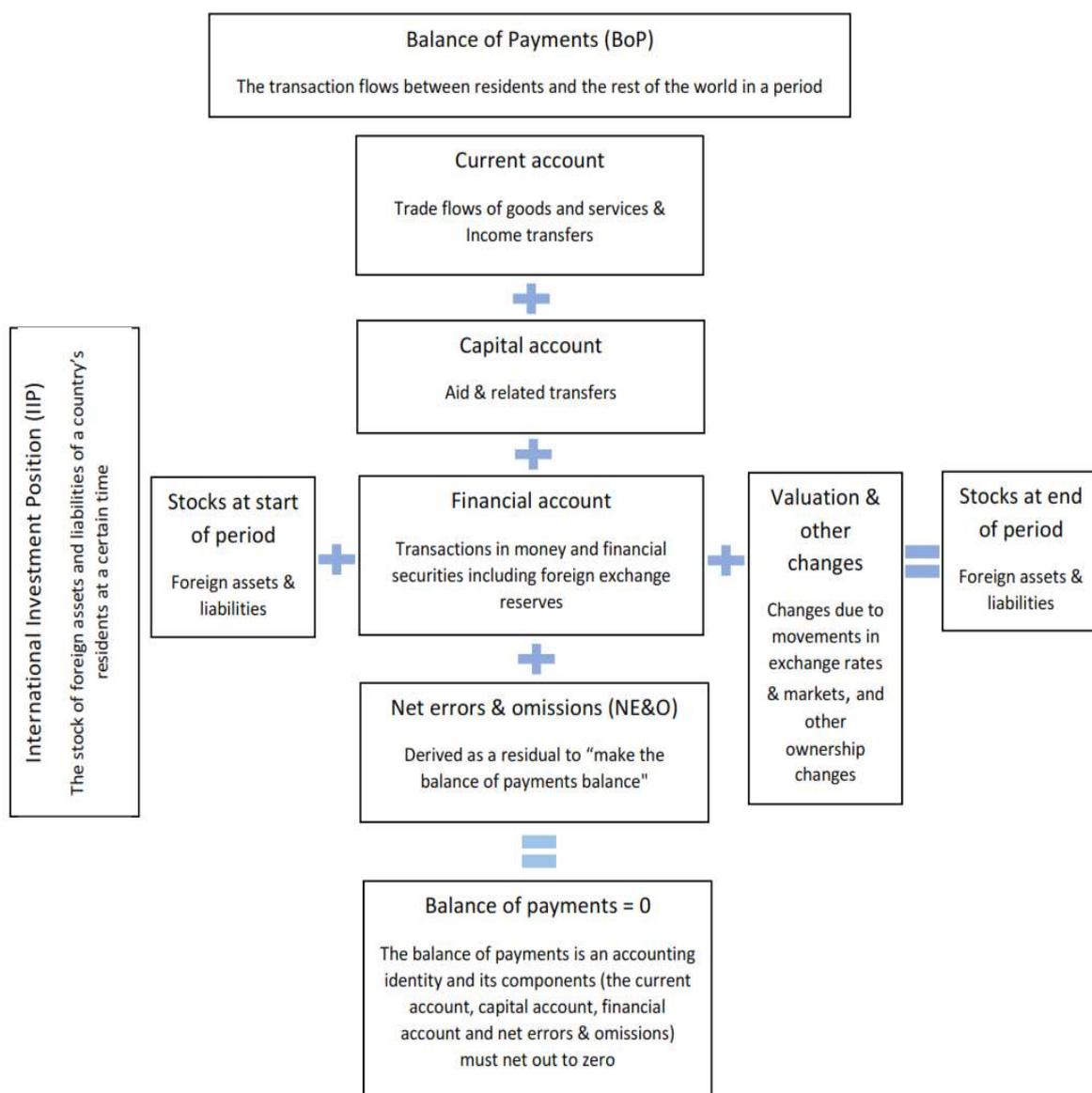
<sup>2</sup> The title, **Count the Devils**, draws on criticism of pedantic effort to solve an imponderable: “like counting the angels dancing on a pinhead”. This note is not about angels: it shows how to estimate cross-border flows of value involving an illegal source (tax evasion, corruption/theft, trafficking and other economic crimes), transfer or use.

<sup>3</sup> See [UN Statistics 2017](#).

It is the lack of data on the crime events that fuel illicit financial flows that is the problem. We need data on the value of flows that “ought not cross the border” (because one or more of their sources, transfers or uses are illegal), in a form that has integrity, is meaningful and can be aggregated. This must be done “from the bottom upwards”, wherever possible by crime event, to be credible and resonate in-country.

**The best framework for compiling the data is the Balance of Payments (BoP)**, the world’s original **BIG DATA** (along with the National Accounts). The BoP can help with aggregation, comparability and avoiding double-counting. But it is complicated and evolves: Winston Churchill might say “it is the worst approach to compiling data on illicit financial flows, except for all the others”. Understanding the BoP’s conceptual framework, as in Figure 2, helps explain what numbers go where, which in turn is vital in determining how estimates of illicit financial flows should be compiled.

**Figure 2.** Simplified framework for a country’s Balance of Payments (BoP) and its components.



Source: the author, drawing on IMF BPM5 and BPM6 and ABS 1998

A country's BoP is a summary of all flows – transaction-by-transaction, e.g. from the bottom up – between a country's residents and the residents of the Rest of the World in terms of the Current Account, the Capital Account and the Financial Account. It aligns the flows during a period, i.e. a year, in the **Balance of Payments (the BoP, the column)** and changes in that period in the ownership of foreign assets and liabilities to foreigners which is recorded in the **International Investment Position (the IIP, the horizontal)**.

To understand how a flow fits into a country's BoP, it is important to be familiar with some BoP accounting:

- It is a **dual entry accounting** framework for the country, which helps record and reconcile inputs – including illicit financial flows – systematically: for every credit there has to be a debit<sup>4</sup>;
- It is **exhaustive/comprehensive**, with all transactions – including and illicit flows – taken to their accounting-logic conclusion, if necessary in the **Net Errors and Omissions (NE&O) residual**;
- It is based on the most **relevant valuations**, usually market values, for that transaction/flow (so, e.g. for illegal drugs, this is not retail/high street prices but the international traded price);
- It is recorded on an **accrual basis**, e.g. when economic value is created, transformed, exchanged, transferred or extinguished; with timing recorded **when economic ownership changes** (e.g. from exporter to importer); and services are recorded when **provided**;
- It distinguishes between **"transactions"** (in the BoP) and **"other changes"** (in the IIP), which – as we will see – is the key to how estimates of illicit financial flows will be included in the overall BoP.

This means that illicit financial flows are – or should be – recorded in a country's BoP and/or IIP, either as transactions or other changes, or picked up in NE&Os in the BoP. Since the mid-1990s<sup>5</sup>, the internationally-agreed BoP framework has required recording flows from illegal economic activities (thus including all those giving rise to illicit financial flows). Unfortunately, though it varies by country, not every BoP flow from illegal economic activities is fully recorded: some are recorded in part and some missed entirely.<sup>6</sup>

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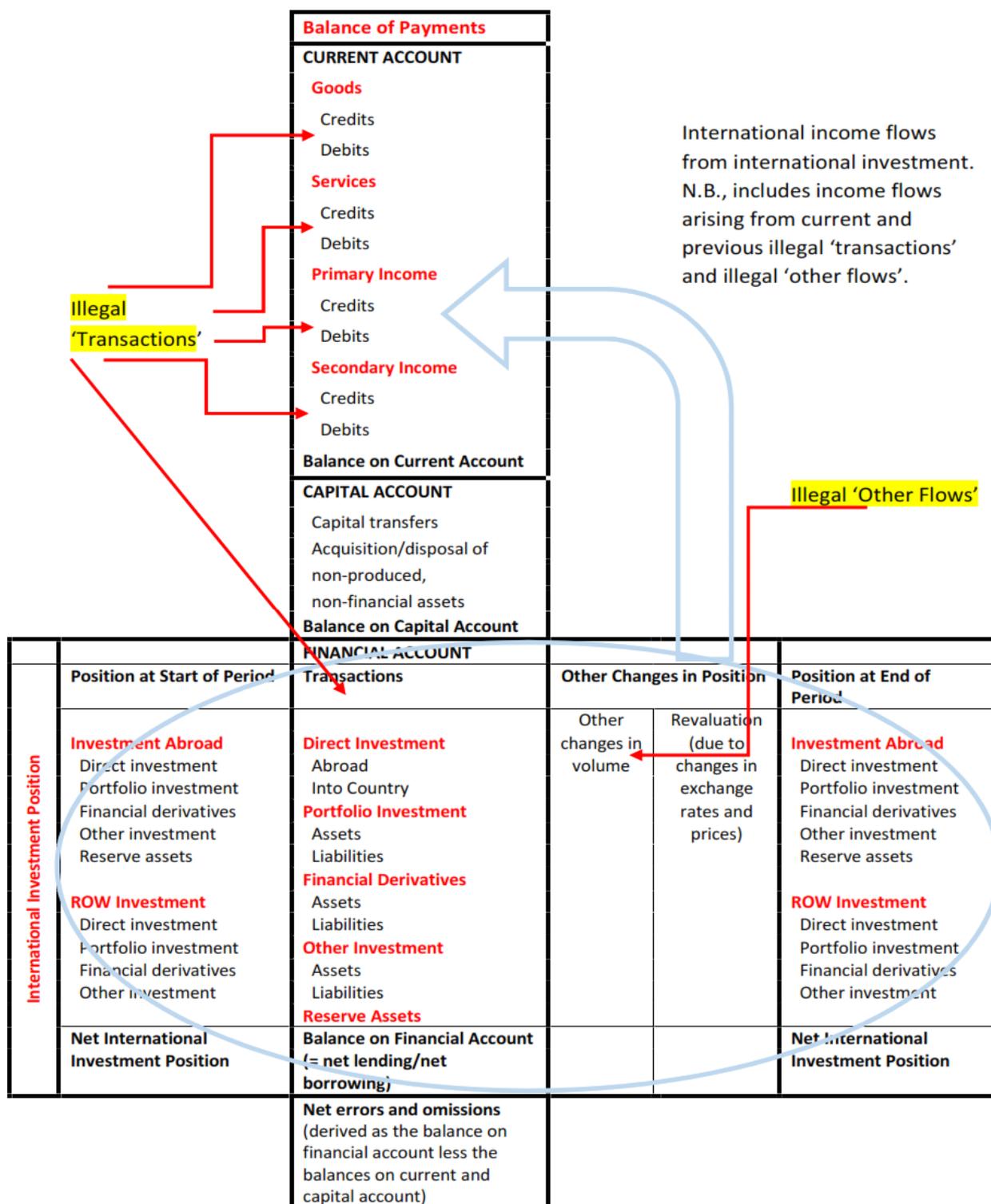
<sup>4</sup> The BoP is compiled with much more accounting rigour than the trade accounts (exports and imports) compiled by national authorities (and IMF DOTS or UN COMTRADE): the trade accounts are only "single entry" and so more prone to error and inconsistencies. The European Central Bank describes the BoP framework in the EU as a quadruple-entry system, with vertical and horizontal double-entry bookkeeping.

<sup>5</sup> [UN Statistical Commission 2008](#) and [Eurostat Handbook 2018](#).

<sup>6</sup> In addition, quality and coverage issues persist between countries despite countries using a common BoP framework: i. Data coverage can be patchy. Some BoP data is from surveys (e.g. of service suppliers such as banks and other money transferers) rather than from reports of exports or imports compiled as items cross the border; often the international trade activities of the informal sector have to be estimated; and illicit financial flows often are deliberately not reported; ii. Timing of recording is often in one period in the source country and in another period in the recipient country and valuations recorded can be in currencies converted at different times; and. iii. Despite being internationally agreed, the BoP framework does not involve dual entry accounting between countries except in exceptional circumstances, e.g. for exports and imports in a tight customs and statistics union such as the EU (and a common, or commonly-used, currency helps).

Figure 3 below shows where the illicit financial flows arising from illegal economic activities should be recorded in the BoP and the IIP, as either transactions or other changes.

**Figure 3.** Illegal economic activities and the Balance of Payments (BoP) and International Investment Position (IIP)



Source: the author, drawing on Australian Bureau of Statistics (ABS) Cat. No. 5331.0 1998 diagram 2.1 and IMF BPM5 and BPM6, UN SNA 2008 and Eurostat Handbook 2018.

As Figure 3 above shows, the distinction between “transactions” and “other changes” is important for recording illicit financial flows in the BoP and IIP. According to the guidance for the BoP framework:

- “Transactions”, legal or illegal, involve effective market demand, i.e. **mutual agreement** between buyer and seller. Such demand (less imports) adds to a country’s production frontier.
  - Illicit financial flow activities that appear to be “transactions” include trafficking across borders, such as illegal drugs, wildlife, forest, counterfeit products and willing migrants.
  - The flows relating to transactions should be recorded in the BoP: in the Current, Capital or Financial Account or, if not, in the Net Errors and Omissions (NE&O) residual.
  
- “Other changes”, including those due to illegal activities, are **not** a result of **effective market demand** (i.e. **do not involve mutual agreement**). Such changes do not add to potential production and instead may only add to holdings of international assets or liabilities in the IIP.
  - The illicit financial flows that are not “transactions” are those involving theft, such as tax crimes, corruption and fraud, other stealing and human trafficking against a person’s will.
  - The “other changes” help derive the International Investment Position (IIP), but do not feature in the BoP (and therefore are not included even in the NE&O residual).

Inevitably there are shades of grey requiring decisions. Illicit financial flows from some crimes (e.g. abusive transfer pricing, trade misinvoicing, counterfeit activities, some cybercrime scams) may appear to be transactions and are recorded as such in the BoP, but the underlying crime is theft. The flows that are theft-related should be recorded as “other flows” in the IIP. Table 1 below gives some examples.

**Table 1.** Allocating flows from illegal economic activities between “transactions” or “other flows”

<b>Illegal economic activity</b> <i>(the principal offense)</i>	<b>“Transactions” for the BoP &amp; IIP?</b> <i>(because there is mutual buyer-seller agreement)</i>	<b>“Other flows” only for IIP?</b> <i>(because there is no mutual buyer-seller agreement)</i>
Trade that involves abusive transfer pricing or misinvoicing	Likely that these flows will be recorded as “transactions”, at values as declared	But the flows that arise from misstatement (e.g. compared to fair value) should be recorded as “other flows”
Corruption flows/transfers across the border	Cross-border flows from petty corruption (bribes seen as ‘tips’ to expedite service) should be recorded as “transactions”	Cross-border flows from grand corruption (theft of public funds, abuse of procurement processes, fraud) should be recorded as “other flows”
Most trafficking and other similar cross-border crimes	Cross-border trafficking in illegal drugs, wildlife, forest and arms/weapons are “transactions”	Illegal foreign fishing, poaching and illegal foreign dumping of environmental waste are “other flows”
Human trafficking across the border	Smuggling of migrants (e.g. providing a transport service) would seem to be “transactions”	Trafficking in human beings (e.g. for sex services or slavery) would seem to be “other flows”
Smuggling across the border	If customs duties are low and tax/duty avoidance is incidental, smuggling (“informal trade”) may be “transactions”	If customs duties are high and avoidance of tax/duty is intentional, smuggling should be recorded as “other flows”
Counterfeit imports or exports	Likely that some trade flows in counterfeit items will be recorded as “transactions”	But the flows that arise from the IP theft and taxes evaded in international trade should be recorded as “other flows”

Source: the author

If a cross-border flow has a source, transfer or use that is illegal, it fits the definition for illicit financial flows that is being used for the purpose of making estimates. The flows are “of value”: these flows clearly include goods and services (e.g. exports or imports) and money and finance (e.g flows in the Financial Account). In these instances, the task is to ensure that “fair value” (from the perspective of the country) is reported or is attributed.

Where appropriate, it will be important to also consider including estimates of some of the *intangibles or externalities* consequent on the illegal activities, *if they cross the border*. The most obvious issues of intangibles or externalities to be included as illicit financial flows would seem to be raised by environmental crimes.<sup>7</sup>

It is high time for all countries to better record exports and imports of illegal goods and services and other illegal financial flows. The statistical quality (and thus the informational value) of the BoP demands it. In a previous life I was a market economist and the market worried about monthly trade data. In those days the least-forecastable major item in the next month’s trade data was the arrival (or not) of a new jumbo jet. Now the least-forecastable major item (if the trade data does include all illegal items) probably would be the next shipping container full of cocaine or some other illegal drug.

### **What’s wrong with the ways others have suggested for estimating illicit financial flows**

The core problem for estimating illicit financial flows has been the lack of data on the crimes (and their associated flows) that comprise illicit financial flows. Confronted by that, most researchers have opted for alternatives that might fill the gap.

The good news is that most of the main estimation efforts thus far have tried to take a BoP perspective. The bad news is that the approaches taken so far have not be very satisfactory and the best potential approach put forward by GITOC ([Hunter 2018](#)) is yet to be developed. Existing efforts have typically been “top down”, computed from differences between data collected in incompatible ways, and assertions that the differences reveal the extent of illicit financial flows. See Table 2 below and also the **Annex** for more on what is described as the [Global Financial Integrity](#) (GFI) main approach.<sup>8</sup>

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<sup>7</sup> Some intangibles associated with crimes, such as fear, pain, suffering and lost quality of life, do not “cross the border”, and so should not be included in BoP estimates. But others that do “cross the border” and thus could be incorporated in the BoP, include the environmental crime cases such as illegal export of an ivory tusk from an elephant killed by a poacher: the tusk should be valued at the appropriate international trade price but an intangible added for the value of the elephant killed illegally and thus stolen from the land-owner/country (the elephant’s value might be a live elephant’s price in the legal market).

More complex issues for estimating illicit financial flows are emerging as international legal frameworks develop for other environmental products. For instance, in time there may be an economic crime (i.e. a crime motivated by financial gain) of excessive CO<sub>2</sub> emissions and discharge of environmental waste and plastics, to be charged against the polluter or the country that is the source of the pollution which affects other countries (see Sébastien 2018). As the illicit financial flows agenda progresses, a process of valuing these types of externalities for inclusion in BoP estimates should be developed.

<sup>8</sup> It will be interesting to learn if the World Customs Organisation (WCO) is as concerned over trade misinvoicing. Mandated by a request from the G20, WCO has reported on illicit financial flows to a committee of the G20 in July 2018. Even the “Transnational Crime Brief Weekly News Update” prepared by GFI itself would appear to suggest its concern over trade misinvoicing has been exaggerated. The first 17 updates have 193 news items: most are related to trafficking in illegal drugs, wildlife, forestry and humans or on money laundering, and only one (a VAT rebate fraud) relates to trade misinvoicing as the leading crime (author’s table available on request).

**Table 2.** Existing and currently proposed ways to estimate illicit financial flows

Name and source	Measure and composition	Frequency and latest coverage	Relationship to illicit financial flows	Comment
<a href="#">Financial Secrecy Index (FSI)</a> Tax Justice Network (TJN)	Index based on 20 indicators weighted by jurisdiction share of offshore financial services exports	2009, 2011, 2013, 2015 and 2018  112 'secrecy' jurisdictions	Indirect: only indication of likelihood of being repository or conduit/ channel for illicit (plus licit) flows	'Bottom up': all 20 indicators and the share of offshore financial services exports are jurisdiction-specific
<a href="#">Illicit Financial Flows (IFF) – "GFI main approach"</a> Global Financial Integrity (GFI)	US dollar amount based on NE&O in BoP and total gross bilateral 'mirror' trade data mismatches	2002 onwards, annually, latest being for 2005-2014  149 developing countries	No relationship: three implausible assumptions (see Annex)	'Top down': while based on country NE&O and gross trade data mismatches, uses a single 10% c.i.f./f.o.b. ratio for all countries
<a href="#">Capital flight</a> Ndikumana and Boyce (N&B)	US dollar amount based on NE&O in BoP, adjustments and total net bilateral 'mirror' trade data mismatches	1970 to 2010  39 African countries	No relationship: less bad than GFI main approach (trade data mismatches are net, rather than gross) but adjustments to NE&O add confusion	'Top down': while based on country NE&O, adjustments and net trade data mismatches, uses a single 10% c.i.f./f.o.b. ratio for all countries
<a href="#">Transnational Crime &amp; Illicit Markets</a> – "GFI alternative approach" GFI	Compilation of reported estimated value of 11 crimes and illicit markets	2011 and 2017  "Developing countries", with some individual country analysis	Potential: unclear what 'revenues', 'value' or 'size' of markets means. Some related to illicit financial flows	Mix of 'top down' and 'bottom up'. Promising initial contribution, needs clarity on valuations and BoP focus
<a href="#">Misaligned Profit Indicator (MPI)</a> TJN	Misalignment of profit of multinational companies (MNEs) away from the locations of real economic activity	Untested: to be derived from OECD country-by-country reporting data on MNEs collected from BEPS processes	No relationship: fails to distinguish between MNEs' profit shifting that is lawful transfers or is illegal	The misalignment reflects an emerging sense of unfairness rather than an illicit (esp. illegal) financial flow as defined
<a href="#">Undeclared Offshore Assets Indicator (UOAI)</a> TJN	Value of citizens' assets declared under the OECD Common Reporting Standard (CRS), less the value declared for tax	Untested: focuses on individuals and their international investment position holdings	Potential if databases are comprehensive and compatible: indicated undeclared offshore assets may warrant investigation	'Bottom up' but may share weaknesses of other database mismatch exercises. Could add rigour to "Paradise Papers"-style of journalistic exercises
<a href="#">Crime-focused approach</a> Global Initiative (GITOC)	Approach to emphasise country-specific crime-based understanding of flows and harms	Not yet available: ambition is all countries. Advocates developing the "UNODC hybrid model"	Direct: crime-by-crime and could be compatible with the BoP requirements for estimates of illicit financial flows	'Bottom up' crime-by-crime ambition. The "UNODC hybrid model" needs development to ensure it is BoP-compliant

Source: the author, drawing on sources linked in first column.

The two approaches that have put forward numerical estimates (GFI's illicit financial flow estimates using its main approach and Ndikumana and Boyce's capital flight estimates) are based on deriving differences between databases at a very high level. Regrettably but for good reasons, these estimates have not been able to be related to the crime events actually seen in-country giving rise to known illicit financial flows.

Instead, what is needed is data on the value of flows that "ought not cross the border" (because one or more of their sources, transfers or uses are illegal), in a form that has integrity, is meaningful and can be aggregated. This must be done "from the bottom upwards", wherever possible itemised by crime event, to be credible and resonate in-country. The GITOC crime-based approach is the only real way forward.

However, the available crime statistics – like other statistics (yes, including many economic statistics) – are often flawed and unreliable.<sup>9</sup> The quality of economic crime statistics globally appears half a century behind the rigorous frameworks developed and practiced for compiling countries' BoP and GDP. Some economic crimes are almost a data-free zone: for instance, GITOC's recent report on drug smuggling through eastern Africa ([Haysom et al 2018](#)), with 54 pages, 4 countries, with plenty of cross-border crimes and seizures, is devoid of data, especially in terms of \$ amounts. And this is despite GITOC being the most active advocate of better data and information on crime-based illicit financial flows ([Hunter 2018](#)).

Perhaps worse, some of the associated concepts seem almost as weakly defined as illicit financial flows: consider the shifting sands on what is "transnational organised crime"<sup>10</sup> and the obfuscation in discussions of tax crimes (just what is or isn't "aggressive tax planning"?). In many ways the data on economic crimes seems worse than for other crimes: rarely are the crime types fully brought together, many victims do not report them and, being hard to solve, often they are not recorded even if they are reported.

This brings to mind the old joke: if you ask an Irishman the best way to Dublin, he'll say "Boyo, I wouldn't start from here". But to get credible estimates of illicit financial flows we have to start from where we are, and the UNODC and UNCTAD pilots are a great opportunity to make real progress. This is the challenge.

### **Two complementary tasks proposed here for the pilot exercises**

The pilot exercises to be deployed in a few developing countries should try to bring together all economic crime intelligence, financial flow expertise and the BoP statisticians<sup>11</sup> for two complementary tasks:

1. Disaggregate a country's existing balance of payments tables into **two sets of balance of payments tables, one for flows that are all legal** (i.e. have no illegal source, transfer or use) and **the other for flows that are illegal** (i.e. do have an illegal source, transfer or use) and incorporate any known-but-unreported illicit financial flows; and

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<sup>9</sup> [UNODC undated](#) and [Lind 2014](#). UNODC. Undated. [Compiling and comparing International Crime Statistics](#). Dara Lind. 2014. [Why you shouldn't take any crime stats seriously](#). Vox. 24 August.

<sup>10</sup> See particularly [Broadhurst et al 2018](#).

<sup>11</sup> The list of experts and practitioners needed is long, to have sufficient understanding of the three crime-types (tax, corruption/fraud/theft and trafficking), the Balance of Payments and how crime data is presently collected. In addition to the pilot's organisers and tutors, experts should be drawn from agencies responsible for intelligence, enforcement, prosecutions and the judiciary, as well as academia, central banks, tax departments and regulators, and crime and balance of payments statisticians.

2. Start to ***improve the data on illegal economic activities and inclusion of illicit financial flows in the balance of payments***, probably through initial “best estimates” and later through recommending how to task police and others responsible for recording economic crimes to record the \$ amount/value of each crime event and the amount/value of flows that crosses the border.

Given the timeframe, the pilots will have to be a balance between ambition and picking low-hanging fruit.

### **Pilot Task 1: Disaggregating the balance of payments (BoP and IIP)**

The experts should tag those flows in a country’s full BoP tables that are illicit financial flows – and divert them into an ***illegal*** balance of payments set of tables. Preferring to walk before running, the task may best be restricted to a limited number of illegal sources, transfers or uses. The list of crime-types can be extended later. Flows not tagged in the pilot will be treated as being in the ***legal*** balance of payments set.

The illegal sources and transfers are crimes motivated by economic gain. The illegal uses are crimes for that illegal purpose. For the pilot, the (huge) range of illegal sources could limited to four crime types:

- a tax evasion crime (say, evasion of corporate and individual income tax – an “indirect tax”);
- a corruption/theft/fraud crime (say, corruption);
- a trade crime (say, smuggling cigarettes/tobacco – which also evades a “direct tax”); and
- a trafficking crime (say, trafficking illegal drugs).

For the pilot, the illegal transfers could be confined to one crime type (say, evading exchange controls) and the illegal uses could be confined also to one crime type (say, financing terrorism).

These six economic crimes to be reported should be defined within the language, codes, and structure used in UNODC’s international classification for crime statistics (ICCS)<sup>12</sup>. This is necessary for international consistency and comparability, but it will not be easy as each country has its own idiosyncratic approach (e.g. see [Langton 2017](#)). The global roll-out of the ICCS is a vital contribution to compiling international indicators for many of the UN Sustainable Development Goals, not just illicit financial flows.

An ever-present complication is the likelihood of a daisy-chain of crimes leading to an illicit financial flow. There needs to be a “principal offense” rule, so that trafficking drugs, which may also involve bribing officials, evading tax and laundering money, is collated as drug trafficking and so forth. By deciding which crime was the principal, the associated crimes and its illicit financial flows are only counted once.<sup>13</sup>

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<sup>12</sup> See [UNODC undated ICCS](#) and UNODC 2015. The relevant codes may be: evasion of income tax, 08041; corruption, 0703 and most sub-categories; smuggling cigarettes/tobacco, 08044; trafficking illegal drugs 06012 and most sub-categories; evading exchange controls, 08042; and financing terrorism, 09062.

<sup>13</sup> This categorisation, though in line with the requirements of the ICCS, may be quite different to what is prosecuted in the courts: often the principal offense is hard to prosecute while an associated secondary crime

Piloting six discrete crime categories (crimes relating to tax, corruption, trade, drug trafficking, exchange controls and financing terrorism) is ambitious. Eurostat and some country statistical agencies did similar exercise to look at the importance of illegal economic activities in GDP and the BoP, but looked only at three illegal activities (prostitution, trafficking and production of illicit drugs and smuggling of alcohol and tobacco products). Choosing fewer than six would leave out important forms of illicit financial flows.

As **Pilot Task 1** proceeds, it will be important to test the disaggregation by investigating whether any well-known illicit financial flow events have been properly recorded in the BoP or in the IIP: for instance, a drugs shipment seizure, an outflow due to tax evasion transferred abroad, or a seizure of smuggled cigarettes or illegal wildlife products. The opportunity should be taken to illustrate the process of incorporation of crime data into the BoP by bringing in all known-but-unreported illicit financial flows.

There is of course no limit to the amount of information required to make estimates of illicit financial flows or to understand the crimes. As implied on page 1, if a cross-border flow has no source, transfer or use that is illegal, it does not fit the definition for illicit financial flows that is being used for the purpose of making estimates, legal tax planning being one. There are several items that other researchers suggest could be used for estimates of illicit financial flows that in fact **ought not to be included in the estimates of illicit financial flows**. What are ***not flows across the border*** and so ***are not illicit financial flows*** include:

- Purely domestic-domestic flows from economic crimes committed by residents in-country;
- Incomes or profits of the illegal actors;
- Production of illegal substances (such as illegal drugs); and/or
- Costs of prevention of illegal activities (either public or private).

Nevertheless, estimates of such flows, incomes, production and costs will help us understand the illegal behaviours and their impact on the economy, work out their drivers and facilitators and help set priorities and policies, so ***policymakers should consider them together with the estimates of illicit financial flows***.

### **Pilot Task 2: Improving the statistics on economic crimes associated with illicit financial flows**

The only real hope of getting more credible estimates of illicit financial flows will be commissioning the collection of ***more extensive data on economic crimes in a form useful to BoP statisticians***. What are needed are the building blocks for estimates of BoP flows, including – event-by-event and flow-by-flow – exports and imports, receipts, payments and transfers, sorted by economic crime, by date of occurrence, and ultimately in a common currency e.g. US dollars.

This is of course a big ask, but without the better data (administratively difficult – and doubtless expensive – as it may be, see [del Frate 2010](#)) there are greatly diminished prospects of achieving credible estimates of illicit financial flows. Because the starting point (weak data across all crimes, not

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may be easier, e.g. Al Capone, Chicago corrupt and violent gangster and bootlegger, was convicted for tax evasion.

just economic crimes) is so poor, it may not be such a bad thing to start the overall quest for better crime data with these pilots for estimates of illicit financial flows.

Tips for the pilots:

- Results are needed, but they must be credible: the perfect must not be the enemy of a good improvement;
- Pragmatism is needed in the pilots. The pilot teams should focus on including readily-recognised (i.e. big, notorious, reported in the media) economic crimes that most likely led to illicit financial flows (e.g. drug shipments, outflows from corruption and tax evasion, etc.);
- This is a statistical exercise, not legal. Avoid being over-legalistic about what sources, transfers and uses are illegal: apply the “duck test”<sup>14</sup> to identifying the crimes and the principal offense;
- The ‘bottom up’ crime-based approach is demanding. At times, especially initially, some estimates of crime types may have to be derived on a basis that is more ‘top down’ than ‘bottom up’, especially for tax evasion (due to tax authorities being constrained from sharing data); but
- Estimates that help provide perspective are key: pointing to the main types or sources, transfers and uses, rather than to indivisible totals such as Net Errors and Omissions (NE&Os).

The pilots will find there is a lot to learn. Fortunately there has been progress in ways to estimate illegal economic activities, tax evasion and cybercrime.

On **illegal economic activities**, (in addition to prostitution, drug trafficking and smuggling cigarettes and alcohol) the [Eurostat handbook](#) outlines some early thinking on the ways that some other crimes might be incorporated in the National Accounts and in the BoP, including illicit firearms trafficking, fencing, migrant smuggling, bribery, counterfeit goods and piracy, illegal gambling and the provision of money laundering services.<sup>15</sup>

However, the Eurostat-preferred approaches need to be reviewed in an illicit financial flows framework: Eurostat is more interested how the activities contribute to the production boundary for the National Accounts and is less interested in the extent of the theft or illegal unfairness that is the heart of an illicit financial flows/BoP perspective. For instance, with **counterfeiting**, the Handbook seems satisfied that the production of counterfeits and their export/import are (or should be) recorded but seems less interested in the extent of the IP theft and recording the cross-border transfer of the stolen IP value.

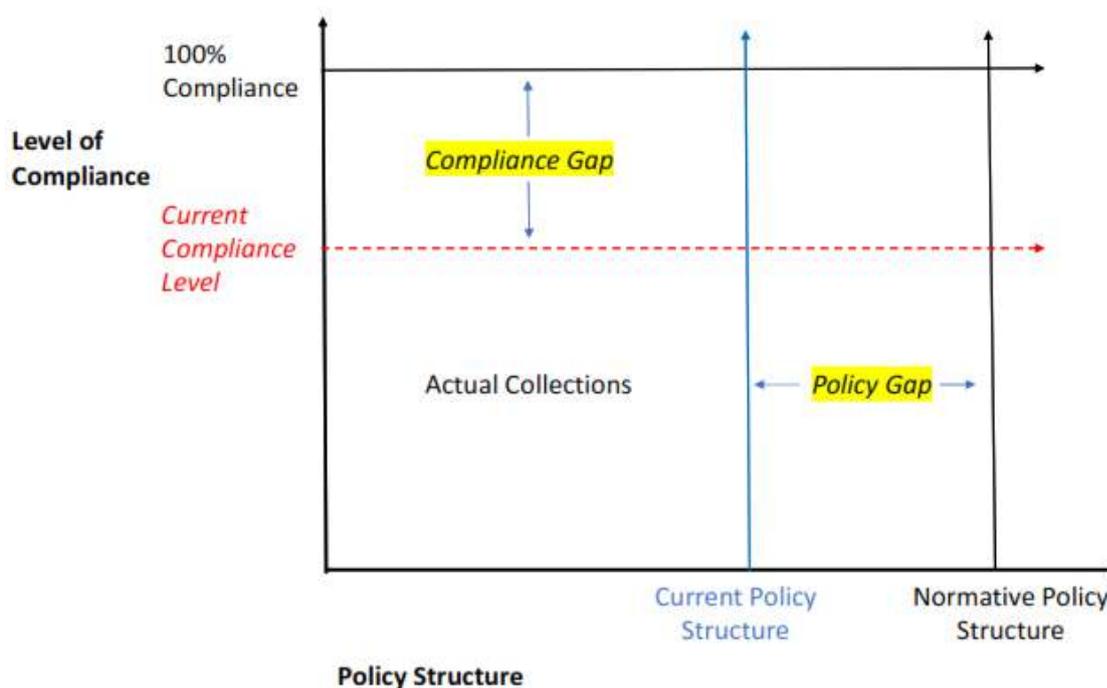
On **tax evasion**, there has been some advances in using “tax gap analysis”. Illicit financial flows due to tax evasion are cross-border transfers arising from tax revenues that were not collected due to non-compliance with the tax laws. In other words, they are part of the “tax gap”, a powerful concept for medium-term management of the revenue side of fiscal policy, see Figure 4 below and [Murphy 2017](#). Tax gap analysis is developing very rapidly, in advanced countries (e.g. [Australia](#), Denmark, [the UK](#), [the USA](#)) and in developing countries (e.g. ) and is promoted by [the IMF](#).

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<sup>14</sup> The duck test: “if it walks like a duck and talks like a duck, we assume it is a duck”.

<sup>15</sup> At this stage, Eurostat is not advocating they be counted, merely outlining possible theoretical approaches that might be deployed were they to be counted.

**Figure 4.** The Tax Gap: illustrating the Compliance Gap and the Policy Gap



Source: the author, simplified version of Appendix XI Box 2 Compliance and Policy Gaps, in [IMF 2015](#).

The great remaining challenge – beyond understanding the policy and compliance gaps that comprise the tax gap in any country – is estimating that part of the compliance gap that flows abroad.

On **cybercrime**, a major and rapidly-growing crime, has been found to comprise three main forms: business disruption, data breach and fraud. It appears mainly – but not only – to be a cross-border crime: amounts stolen and transferred abroad are illicit financial flows. It is also an increasingly organised and industrialised crime ([Gaidosch 2018](#) and [Bouveret 2018](#)).

While popular interest will remain on estimating the amount of money lost to romance scams ([Scamwatch 2018](#)), the really big money transferred abroad is from cyber-related frauds against the financial sector, e.g. from the Bangladesh central bank.

[Bouveret 2018](#) analyses a database of 341 cyber risk events that impacted financial institutions, reported over 2009-2017 in over 50 countries and in which cyber-related fraud accounted for 90% of reported losses (and business disruption and data breaches only 10%). He documents a methodology to estimate average losses due to cyber-attacks amounting in a base-case to USD 97 billion or 9 percent of those countries’ banks’ net income.

Events will help advance the estimation of some illicit financial flows. Consider how the **smuggling of counterfeit goods and services** can be estimated. Crime data may include some estimates of the value of counterfeits seized, but (as with the Eurostat example above) these rarely will focus on the IP theft. About the only (minor and unintended) benefit of the “trade war” being launched by the U.S. against China is its potential for stimulating a new look at IP theft between China and the U.S. companies. According to a 2017 report by the United States Trade Representative, Chinese theft of American IP “costs” between \$225 billion and \$600 billion annually (author’s emphasis). See [Goldstein 2018](#).

Many other issues and questions will arise for the pilots:

- Double counting is a very real danger: identification of a principal offense and grouping that with the associated crimes helps reduce the risk of double counting. [Haken 2011](#) and [May 2017](#) (both GFI) resolved some double counting problems by only estimating turnovers in illicit markets and not including estimates for tax crimes or for corruption/theft/fraud;
- Estimates of reporting and detection rates will probably have to be made (best efforts basis): see [Rollings 2008](#);
- Similar issues will arise with the illicit financial flows emanating as a result of economic crimes that are not intrinsically cross-border: estimates of the share of proceeds that are transferred abroad are likely to be needed, again on a best efforts basis;
- What to do about flows that have accumulated abroad, typically in international financial centres or secrecy/tax havens? Should earnings on that capital (including interest, dividends and earnings retained that add to asset price appreciation) be considered IFF?

### **Summary on ways to estimate illicit financial flows**

What must be clear is that the research required to produce credible estimates of illicit financial flows is a significant task, whether from a sector/industry, a country, a region or all developing or advanced countries. 'Black box' sets of estimates, unrelated to on-ground crime data, will be inadequate. Instead better economic crime data is needed, with the information collected in a form that can be plugged into the balance of payments (BoP) of the country in question.

This note has suggested a way forward, taking advantage of the pilot exercises being led by UNCTAD and UNODC soon. It will not be easy or simple but may be the most promising way to advance the illicit financial flows agenda.

## Annex. Errors and omissions in estimates of illicit financial flows and trade misinvoicing

Sound policy decisions can be made only if they can be backed up by evidence. As illicit financial flows are often hidden, many approaches to estimating the extent of such flows are needed. Estimates can then be compared and can inform analysis of drivers and policies.

Two key criteria for approaches to making estimates are: (i) they do seek to estimate illicit financial flows; and (ii) the estimates themselves have meaning. This Annex highlights the failure against these criteria of the most available approach and updated estimates, from [Global Financial Integrity](#) (GFI)<sup>i</sup>.

### Why GFI?

Counting back what most helped get illicit financial flows accepted as an urgent issue and their reduction set as a target in the UN Sustainable Development Goals (SDGs), it was the size and rising trend for estimates of illicit financial flows for all developing countries, set out country-by-country.

GFI's flagship publication of estimates of illicit financial flows from developing countries, first for 2002-2006 ([Kar and Cartwright-Smith 2008](#)), and updated annually to now cover 2005-2014 ([Spanjers and Salomon 2017](#)), created the "\$x trillion drained from developing countries" style of headlines. The target adopted in the [UN SDGs](#) ("substantially reduce illicit financial flows") and its suggested indicator (16.4.1: "Total value of inward and outward illicit financial flows (in current United States dollars)") seem in line with GFI's advocacy and approach<sup>ii</sup>.

### Overview of GFI's main approach and assumptions

The foundations of the GFI estimates of a country's illicit financial flows have been its three assumptions:

1. The **Net Errors and Omissions (NE&O)** in the balance of payments (BoP), see **Figure 1**, represents hidden illicit financial flows, excepting – as an addition – what GFI calls trade misinvoicing;
2. **Trade misinvoicing** is derived from mismatches between a country's exports (imports) and the 'mirror' imports (exports) of its trading partners, after adjusting imports for the difference between cost insurance and freight (c.i.f. – being shipping and insurance costs up to the border of the importing country) and free on board (f.o.b. – which exclude these costs); and
3. The (seemingly innocuous) adjustment to be made to imports for the **c.i.f./f.o.b. ratio** is 10% for every country.

There are antecedents for the GFI approach. In an even more data-starved era than today, the need to inform policy during the 1980s Latin debt crisis had led to using the NE&O as an indicator of possible capital flight or private sector foreign borrowings (e.g. [Cuddington 1986](#)) and [Bhagwati 1964 & 1974](#) had pioneered analysis of 'mirror' trade data mismatches to find illicit trade flows. Despite all the changes structurally and in data availability over the decades, these precursors set the GFI approach.

GFI and some others<sup>iii</sup> use a partner-country method (PCM) to estimating trade misinvoicing, which has become the biggest component of its estimate of total illicit financial flows. The data sources are also complex; differences between the various approaches are detailed: arguments between researchers have been described as "a narcissism of small differences".

GFI has amended its approach over the years. But two fundamental problems persist:

1. Adding **gross** figures (i.e. estimates of import over-invoicing and export under-misinvoicing) to a **net** figure (the NE&O) is adding apples and oranges, biasing the total towards misinvoicing; and
2. The three assumptions are not true, individually or collectively, implying that the approach is tautological: it is not estimating illicit financial flows; instead GFI asserts its estimates are illicit financial flows. The estimates are not only conceptually weak but also can be decisively wrong – in essence the estimates have no meaning.

Others share this view that GFI's estimates, especially those purporting to show the extent of trade misinvoicing, are fundamentally misleading, if not meaningless ([Nitsch 2016](#)), the wrong lamppost for research ([Forstater 2016](#)), and set back the search for good development policies.

### More detail on the defects in GFI's three main assumptions

**The NE&O** in a country's BoP is a balancing item, a summation of all errors and omissions (positive and negative) in BoP record keeping. Being a single net figure, it is a 'black box', uninformative for policy purposes. Instead, any sizable NE&O shows a need for improvements in the quality and coverage of BoP statistics. Regarding illicit financial flows, the NE&O is particularly uninformative:

- The NE&O will include illicit financial flows to the extent that they have not been fully recorded, but it also will include other legal/licit flows that have not been fully recorded; and
- If an illicit financial flow has been fully recorded (and some may be), it will be included in the appropriate places in the BoP accounts and not included in the NE&O term.

The IMF, whose [BOPCOM](#) is the guardian of the BoP accounting framework, has never endorsed (and advises against) using NE&O as an indicator of illicit flows. Furthermore, the quality and completeness of BoP data in developing countries is lower than in advanced countries, so the NE&O of developing countries are typically a larger % of trade or GDP and are less likely to only reflect deliberate omissions.

For similar data quality and completeness reasons, '**mirror' trade data mismatches** will be greater for developing countries than for advanced countries. The [IMF](#) and the [UN](#) statistical services that set the framework for the BoP and bilateral trade data advise that these derived data mismatches reflect many factors other than trade misinvoicing. The mis-recording can be unintentional: amounts, products and sources or destinations easily mis-stated or mis-classified. Timing and foreign exchange mismatches are inherent. Re-exports add complications. Though the quality and coverage of the data sets are being improved, these problems will remain<sup>iv</sup>.

**The c.i.f./f.o.b. ratio** for international trade varies widely between countries, depending mainly on products, volumes transported, distance, infrastructure and uncertainty over delays. But the country data on these differences, and on the underlying c.i.f./f.o.b. ratios, is weak:

- c.i.f. data is difficult to record properly and often excludes the true high cost of inefficient logistics and infrastructure ([Arvis et al 2007](#));
- Even for countries with good quality data, only half of all shipments had a c.i.f./f.o.b. ratio in a range of zero to 100% ([Hummels and Lugovskyy 2003](#));
- The problems persist. The data on transport costs and insurance confronts statisticians with considerable difficulties ([Hiemstra and de Haan 2017](#)); and

- Only for a few countries is (or was) the assumed 10% appropriate ([Marini et al 2018](#))<sup>v</sup>.

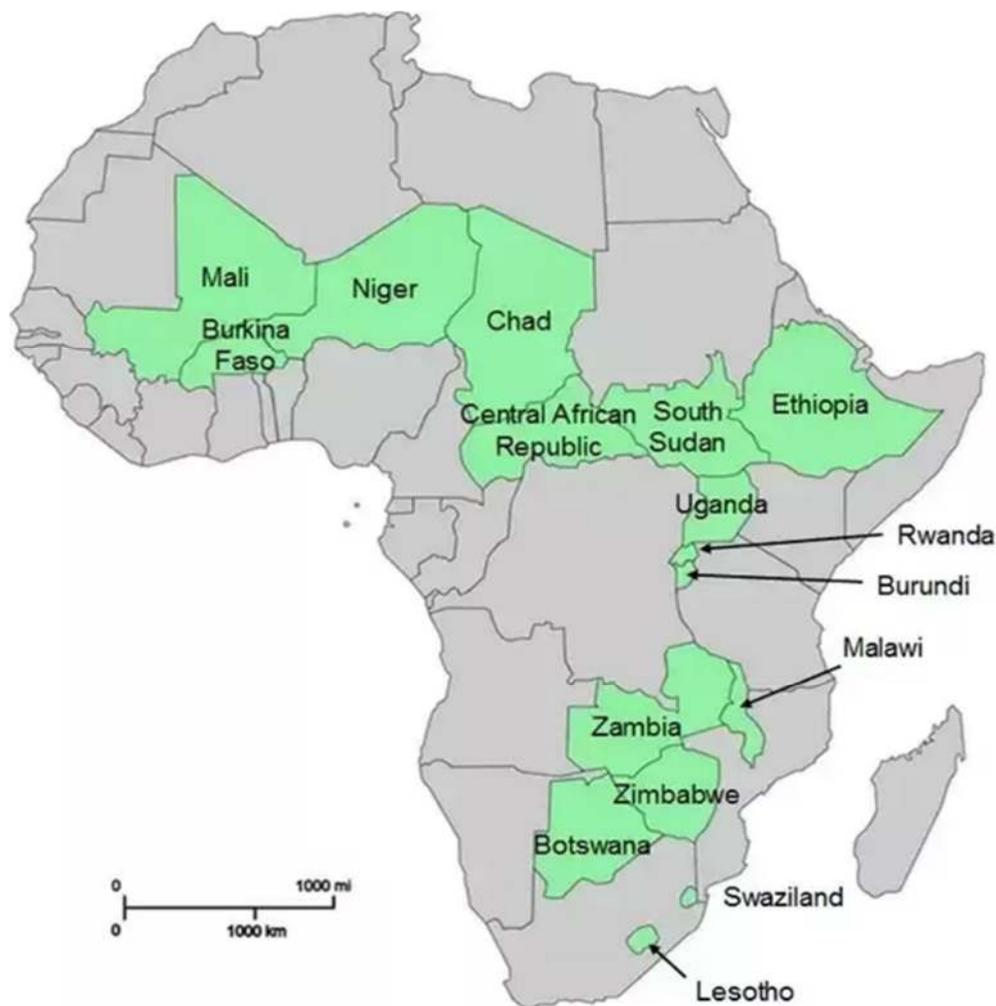
Plausible ranges at a national level may be from close to zero (e.g. efficient near-contiguous advanced countries) to much higher for inefficient isolated countries<sup>vi</sup>. A universal 10% ratio, commonly used in trade analysis for decades, is now redundant.

### An example of lack of meaning in GFI estimates of trade misinvoicing

Trade fraud (a tax crime – to avoid taxes or duties or to illegally access tax rebates – which also breaks trade and BoP reporting requirements) does occur and Customs and other gatekeepers must be vigilant to stop and penalise offenders. But the GFI estimates lack meaning, as this example explains.

One key country characteristic in Africa, especially for external trade, is whether a country is landlocked or coastal (see Figure A1 below). Analysis of trade data needs to take such geography into account.

**Figure A1.** Landlocked countries in Africa



Source of map: Mark Khoury 2017 [www.quora.com](http://www.quora.com)

Table A1 below compares GFI's estimates for African countries' trade misinvoicing for landlocked and coastal countries. It sets out trade-weighted averages of GFI's latest high-and-low estimates for the 10 years 2005-2014 for its 49 African countries, split between 15 landlocked countries and 34 coastal.

**Table A1.** Derived GFI estimates for trade misinvoicing 2005-2014 in Africa (landlocked & coastal)

African countries (% of total trade)	Assumed c.i.f./f.o.b. ratio	Estimated Import Misinvoicing		Estimated Export Misinvoicing	
		Import Over-invoicing (a)	Import Under-invoicing (b)	Export Over-invoicing (c)	Export Under-invoicing (d)
Illicit financial flow effect		Outflow	Inflow	Inflow	Outflow
Landlocked	10%	6.5%	0.4%	7.6%	1.7%
Coastal	10%	1.6%	7.5%	3.2%	4.6%
Difference (landlocked – coastal)	0%	+ 4.9%	- 7.1%	+ 4.4%	- 2.9%
<i>All African countries</i>	<i>10%</i>	<i>2.1%</i>	<i>6.9%</i>	<i>3.6%</i>	<i>4.4%</i>

Source: the author, derived from [Spanjers and salomon 2017](#), averages of high & low estimates, trade-weighted. Be aware of rounding.

Table A1 shows GFI estimates that landlocked countries experience **much more** import and export **over-invoicing** and **much less** import and export **under-invoicing**, whereas coastal countries experience **much less** import and export **over-invoicing** and **much more** import and (to lesser extent) export **under-invoicing**.

What is driving the very different estimates in Table A1? Are the difference in the estimates driven by conceivable **differences** between landlocked and coastal countries:

1. In tax and tariff policies?
2. In criminal behaviour amongst importers and exporters? Or
3. In incompetence (or corruption) in Customs departments?

And as a result of these very different estimates, should the governments change tax or tariff policies in different ways, charge traders with different crimes or sack customs officials for different failures?

Or just laugh?<sup>vii</sup> The obvious difference between the two groups **and** the driver of the different estimates for the two groups is transport costs. These are ignored by GFI:

- When deriving its 'mirror' data mismatches, GFI assumes every country's imports involve the same proportionate cost insurance and freight (c.i.f.), using a 10% ratio between the import price of traded goods (including c.i.f.) and the export price valued free on board (f.o.b.)<sup>viii</sup>.
- In reality, the c.i.f./f.o.b. ratio is different for every good and shipment, differing by volume, distance, infrastructure and logistics. Landlocked countries in Africa face much higher c.i.f. on imports than do coastal countries, maybe double or more a coastal country's costs. Such higher costs also impede their exports.

Table A2 below provides an example of the impact that recognising these higher c.i.f. would have on GFI-style estimates for mis-invoicing of imports into landlocked countries.

**Table A2.** Comparing c.i.f./f.o.b. ratios of 10% and 25% on estimates of import over-invoicing

Landlocked country data example		Trading partner data example	Estimate of 'mirror' mismatch implying import over-invoicing
Imports (c.i.f.)	Estimated imports (f.o.b.)	Exports to landlocked country (f.o.b.)	
(a)	(b)	(m)	(n) = (b – m)
	Assuming 10% c.i.f./f.o.b. ratio		Assuming 10% c.i.f./f.o.b. ratio
125.00	113.64	100.00	13.64
	Assuming 25% c.i.f./f.o.b. ratio		Assuming 25% c.i.f./f.o.b. ratio
125.00	100.00	100.00	0.00

Source: the author. Key elements highlighted.

The example in Table A2 shows how easily a headline of “massive import over-invoicing in landlocked country X” can become a much less newsworthy (and less policy-relevant) story of an estimate of zero import over-invoicing with use of a higher c.i.f./f.o.b. ratio. GFI’s policy prescriptions for Uganda are driven by its estimates of trade misinvoicing (GFI 2014), which were seriously distorted by using an inappropriate c.i.f./f.o.b. ratio. A plausible c.i.f./f.o.b. ratio for Uganda is 18%<sup>ix</sup>. Allowing for that would radically alter GFI’s estimates and policy prescriptions for Uganda.

Table A3 below shows what happens if the estimates of import and export misinvoicing in Table A1 are recomputed with c.i.f./f.o.b. ratios of 13% for landlocked countries and 9% for coastal countries (plausible guesstimates compared to an across-the-board assumption of 10% for every country).

**Table A3.** A hypothetical: revising GFI’s estimates of trade misinvoicing 2005-2014 in landlocked and coastal African countries using different c.i.f./f.o.b. ratios for the two groups

African countries (% of total trade)	Hypothetical assumed c.i.f./f.o.b. ratios	Estimated Import Misinvoicing		Estimated Export Misinvoicing	
		Import Over-invoicing (a)	Import Under-invoicing (b)	Export Over-invoicing (c)	Export Under-invoicing (d)
Illicit financial flow effect		Outflow	Inflow	Inflow	Outflow
Landlocked	13%	3.6%	3.4%	4.6%	4.7%
Coastal	9%	2.6%	6.5%	4.2%	3.6%
Difference (landlocked – coastal)		+ 0.9%	- 3.1%	+ 0.4%	+ 1.1%
All African countries		2.8%	6.2%	4.3%	3.7%

Source: the author, see Annex Table A1, using different assumed c.i.f./f.o.b. ratios. Be aware of rounding.

On these calculations, differences between the estimates for coastal countries versus landlocked countries and between under-invoicing and over-invoicing are markedly reduced, eliminating the wisdom of policy prescriptions based on GFI’s published estimates. Many of the remaining ‘mirror’ trade mismatches probably fall within an expected margin of error and uncertainty. Only the coastal countries’ gap between import over- and under-invoicing seems aberrant.

This would be funny if it was not so serious. Landlocked countries (and any others suffering high c.i.f.) would boost development if they improved the transport and logistics for their trade. This probably would be more effective for development and reducing trade crimes than GFI’s recommendation of more resources for customs departments and extra checking and tougher laws on trade pricing.

Even if one accepts for sake of argument the GFI assertions that the BoP NE&O and ‘mirror’ trade data mismatches reflect illicit financial flows (both assertions are wrong), the use of a common c.i.f./f.o.b. ratio is untenable and needs to be replaced with ratios that are appropriate for each individual country.

Furthermore, readers perusing Table A1 may also have noticed, far from its claim that trade misinvoicing has been **draining funds from** Africa through over-invoicing imports and under-invoicing exports (columns b and c), GFI’s own estimates show higher estimates of under-invoicing imports and

over-invoicing exports (columns a and d). According to GFI estimates, more illicit funds from trade misinvoicing have been flowing *into* Africa than *out of* Africa! Really.

Many challenges lie ahead for GFI-style analysis. Trade data is being improved and trade is changing structurally:

- **The IMF DOTS database** is being improved (along with others such trade databases), with an increase in the number of reporting countries and more use of consistent single-country sources.<sup>x</sup>
  - The increase in the number of reporting countries paradoxically is likely to increase the GFI formulaic estimates of trade misinvoicing; and
  - More use of consistent single-country sources is likely to reduce the GFI estimates). It will be interesting to gauge the net effect of the improvements in compiling the DOTS database.
- In addition, **the c.i.f./f.o.b. ratios** for the major countries involved in international trade have been found to have fallen (especially for those involved in multinational value chains).
  - 6% is now the predominant c.i.f./f.o.b. ratio, not 10%, and is being used by IMF DOTS for 'mirror' reconstructions for non-reporting countries; but
  - Whether these low ratios are common amongst developing countries is doubtful: especially in countries not involved in multinational supply chains, lacking efficient access to or exit from the border or without logistics and infrastructure reform.
- **International trade in services** is increasing (albeit from a low base, especially for developing countries) and becoming more important as a share of total trade. Trade in services does not suffer from c.i.f. but the data sets remain poor (even poorer than data on trade in goods) and those intent of circumventing exchange controls reportedly find opportunities in services misinvoicing.

### **Conclusion: making the most of challenges and opportunities ahead**

The challenges ahead provide GFI an opportunity at the least to use country-specific c.i.f./f.o.b. ratios, even if it is unwilling to discard its main approach. It could also rise to the greater challenges of:

- Extending its transnational crime & illicit markets analysis on a country-by-country basis; and
- Incorporating the rise of international trade in services into analysis of illicit financial flows.

It will be disappointing if the illicit financial flow discourse remains bogged down by unrealistic assumptions behind updated and popularised estimates. These frustrate analysts and advisers from getting on with the hard task of estimating illicit financial flows on a crime-by-crime basis – in order to assess the drivers of those flows and work out effective policy responses.

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## Annex End Notes

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<sup>i</sup> See GFI's main approach, [Spanjers and Salomon 2017](#). GFI's alternative approach, estimating transnational crime & illicit markets, is not as developed but, in this author's opinion, has greater potential – see [Haken 2011](#) & [May 2017](#).

<sup>ii</sup> The scale of GFI's estimates, amongst others, has also led the [G20 group of nations](#) to ask the World Customs Organisation (WCO) to report on the issue. WCO held a [conference](#) in May 2018 on the topic and in July [reported to the G20](#). Report not yet published.

<sup>iii</sup> Others making GFI-like estimates include [UNECA](#), [UNCTAD](#) and (at times) [Ndikumana and Boyce](#). Methodologies differ in detail, but all include mismatches between trade data published by a country and the 'mirror' data published by its trading partners. Many such recent studies have been [criticised](#) for mistakes in their execution. Nevertheless, the GFI-style of estimates remain popular and are the basis for much policy advocacy. Some other researchers (such as [Pak and Hong](#)) use a price-filter method (PFM), which seems also flawed as there is no scope for mismatches to diminish.

<sup>iv</sup> See IMF WP from [Marini et al 2018](#). "In addition to difference in insurance and freight costs, there are several complications that can cause inconsistency between exports to a partner and the partner's recorded imports FOB, or between imports FOB from a partner and the partner's recorded exports. The main reasons for inconsistent statistics on destination and origin for a given shipment are differences in classification, time of recording, exchange rates movements, shipment and reexport through intermediate points (e.g., Amsterdam, Hong Kong), coverage, and processing errors. These asymmetries are not reconciled in the DOTS dataset". See also [Markhonko 2014](#) and [Miao and Fortanier 2017](#).

<sup>v</sup> GFI is not alone in using a 10% ratio and recognises its assumption is arbitrary. For its Direction of Trade Statistics (DOTS) database, until recently the IMF used a 10% c.i.f./f.o.b. ratio to 'create' unsubmitted developing country data from 'mirror' advanced country trade data. However, [Marini et al 2018](#) explains the IMF has revised its approach to DOTS data, incorporating more developing countries as official reporters and reducing its assumed c.i.f./f.o.b. ratio for 'creating' the data for the remaining non-reporters to 6%, its new estimate for the prevailing c.i.f./f.o.b. ratio for advanced countries' trade.

<sup>vi</sup> "The representative landlocked economy has transport costs 50 percent higher and trade volumes 60 percent lower than the representative coastal economy" in Sub-Saharan Africa. See [Limão and Venables 2001](#).

<sup>vii</sup> Professor Ross Garnaut describes the laugh test: "can someone who knows the real world, that's meant to be described by the modelling exercise, look at the results and not laugh". ([ABC 2004](#)).

<sup>viii</sup> GFI is not alone and recognises its assumption is arbitrary. For its Direction of Trade Statistics (DOTS) database, until recently the IMF used a 10% c.i.f./f.o.b. ratio to 'create' unsubmitted developing country data from 'mirror' advanced country trade data.

<sup>ix</sup> Compute a c.i.f./f.o.b. ratio from [Bank of Uganda External Trade Statistics Composition of Imports](#).

<sup>x</sup> See papers and datasets from the IMF, World Bank and the OECD. [Marini et al 2018](#), [Markhonko 2014](#) and [Miao and Fortanier 2017](#), all *op. cit.*