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Cross-Border Investment in Small International Financial Centers

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Abstract

This note documents and assesses the role of small financial centers in the international financial system using a newly-assembled dataset. It presents estimates of the foreign asset and liability positions for a number of the most important small financial centers, and places these into context by calculating the importance of these locations in the global aggregate of cross-border investment positions. It also reports some information on bilateral cross-border investment patterns, highlighting which countries engage in financial trade with small financial centers.

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I. INTRODUCTION

Our goal in this note is to document and assess the role of small international financial centers in the global financial system, using a newly-assembled dataset. These centers play an important role as financial intermediaries for cross-border capital flows. For example, statistics of the Bank for International Settlements (BIS) indicate that banks resident in the Cayman Islands held over $1.7 trillion in assets at the end of 2008 (more than Italy, Portugal, and Spain combined), while the U.S. survey of portfolio liabilities for June 2008 finds that Caribbean financial centers were holding over $1 trillion in U.S. long-term securities.

However, full coverage of the cross-border financial intermediation role of small financial centers is elusive, since most of these countries do not report their international investment positions. In this paper, we build on the methods developed by Lane and Milesi-Ferretti (2001, 2007) in order to provide rough estimates of the foreign asset and liability positions of a number of the most important offshore financial centers.[1] Next, we place these into context by calculating the importance of these locations in the global aggregate of cross-border investment positions. Finally, we report some information on bilateral cross-border investment patterns, highlighting which countries engage in financial trade with this group of offshore financial centers. A data appendix provides a detailed description of the data sources and methods employed in our calculations.

Why is this work of interest? While small financial centers are in most cases "pure intermediaries" and not an ultimate source or final destination for cross-border investment, their financial interconnections with advanced economies in particular are very significant—as our data will show, a non-trivial fraction of global capital flows pass through entities resident in these countries en route to ultimate investment destinations. [2] A better understanding of the role of these centers in international financial flows can also help shed light on true underlying exposures for countries' external claims and liabilities. Two examples help underscore this point:

- Felettigh and Monti (2008) document that while a substantial fraction of Italian portfolio asset holdings are reported as equity claims on Ireland and Luxembourg in the form of mutual fund shares, their ultimate destination tends to be outside the euro area and the underlying instruments skewed towards debt rather than equity.

- According to the June 2007 and June 2008 surveys of U.S. portfolio liabilities, the Cayman Islands were the largest foreign holder of private-label U.S. mortgage-backed

[1] In 2004, the Fund initiated a data collection exercise with offshore financial centers to promote and disseminate data on the size and scope of their financial activity (http://www.imf.org/external/np/pp/eng/2008/050808a.pdf). In this note, we rely on these data as well as other sources.

[2] International statistics on the balance of payments and on cross-border financial claims and liabilities are based on the residence principle.

securities. More information on the ultimate holders of these securities could clearly provide valuable insights on the transmission of the "sub-prime shock" and the financial crisis more generally.

Before delving into the details of the data, it is important to highlight that our data sources are not only incomplete but often indirect (namely, claims and liabilities vis-à-vis these centers reported by other countries). Consequently, the estimates we provide can best be seen as providing a broad order of magnitude of the financial intermediation role of these countries rather than a precise assessment. In light of these factors, the guiding principle of our data construction work is the assumption that net external positions of these countries are negligible in absolute terms, even though they may be non-trivial in relation to the (small) GDP levels of these centers. Therefore the maximum between the estimated external assets and the estimated external liabilities is likely to provide the most reliable estimate of the scale of their cross-border holdings.

The academic literature on small financial centers is relatively small. Rose and Spiegel (2007) focus on the causes and consequences of offshore financial centers, and argue that these centers may increase activities such as tax evasion in neighboring countries, but also find that proximity to these centers leads to more competitive banking systems. Masciandaro (2006) also examines the driving forces that determine which countries become financial centers. There is also a closely-related literature that analyses the determinants of tax haven status and the role played by tax havens in the global economy (see Dharmapala, 2008 and Dharmapala and Hines, 2009). None of these papers, however, provides a quantitative assessment of the role of small financial centers in international capital markets.

The remainder of the paper is organized as follows. Section II provides a brief overview of financial activities in small international financial centers. Section III provides a brief description of the data construction process (with the Appendix elaborating on these issues in more detail). Section IV presents the aggregate data, Section V the available evidence on the geographical breakdown of these centers' external claims and liabilities, and Section VI sketches the initial impact of the financial crisis on the external balance sheets of these centers.

II. International financial activities of Small Financial Centers

Taken together, the group of small financial centers is important across several lines of production of financial services. These include international banking, insurance, collective investment schemes, asset management, trusts and structured finance (Table 1), with the mix of activities varying across the individual countries in line with scale and the level of specialization (see discussion below). In general, the small financial centers perform niche tasks that correspond to the production of intermediate financial services. In some cases, these are produced on an intra-firm basis by the local affiliates of global financial firms; in others, there is arm's length trade between international customers and local specialists. In addition to the oft-discussed tax advantages, small financial centers have several other sources of comparative advantage. These may include a legal system that is favorable to the incorporation of financial-sector entities, the existence of highly-specialized skilled workers in key areas and an accommodative regulatory environment.

International banking Many banks have also used small financial centers for “off balance sheet” activities. For instance, onshore banks established conduits and structured investment vehicles in offshore centers during the 2003-2007 securitization boom. These vehicles were typically funded in onshore financial markets and purchased onshore assets. In addition, as explained by Cantillon and Franske (2009), many U.S. banks sweep client funds on an overnight basis into offshore affiliates in order maximize short-term investment returns, with offshore instruments accounting for 32 percent of total sweep assets.[3]

Insurance Bermuda has emerged as a dominant location for captive insurance, whereby onshore firms establish Bermuda affiliates that offer insurance for group-wide activities. The legal, regulatory and tax systems in Bermuda have been designed to allow these captive insurance firms to operate in an efficient manner. Many other small financial centers also play a role in the insurance sector.

Collective Investment Schemes The Cayman Islands is a key chain in the industrial organization of the hedge fund industry. It is the home to many feeder funds that gather contributions from clients, which in turn are typically managed by onshore master funds. In addition, leveraged feeder funds may borrow from offshore and onshore banks.

Structured Finance Small financial centers are also often used in the structured finance sector. Special purpose vehicles and structured investment vehicles may be established in an offshore center to hold a specific asset or bundle of assets. In principle, such entities ring-fence financial risks and may not appear on the balance sheet of the sponsoring financial institution or corporation. For instance, the United States Government Accountability Office (2008) explains the role of the Cayman Islands in the aircraft leasing sector and in SIVs that held bundles of asset-backed securities. In turn, these entities may be funded via onshore debt markets and bank loans.

Headquarter Services It may be attractive to certain types of firms to incorporate in an offshore financial center in order to benefit from legal and tax advantages. According to the United States Government Accountability Office (2008), some 732 companies traded on U.S. stock exchanges reported to SEC that they are incorporated in the Cayman Islands. This could explain some of the portfolio equity holdings in "common stock" by US residents in the Cayman Islands ($158bn).

Foreign direct investment Small financial centers also play an important role in the internal organization of multinational firms. For instance, the financial management and treasury operations of multinational firms typically includes the establishment of offshore affiliates and special purpose vehicles that can be helpful in executing specific transactions, such as a new acquisition or merger. In some cases, firms have opted to locate the head office in an

[3] See also the exposition on sweep accounts in Board of Governors of the Federal Reserve System (2009).

offshore center with the onshore activities organized into affiliates of the offshore headquarters.

Through these activities, the group of small financial centers are significant counterparts in the international investment positions of many countries. These include cross-border assets and liabilities in a range of categories: portfolio equity, portfolio debt, other debt and FDI. In relation to portfolio equity, claims on small financial centers may either take the form of shares in corporations that are headquartered in these countries or shares in collective investment schemes (mutual funds, hedge funds) that are domiciled in these countries. For portfolio debt, entities resident in small financial centers are significant purchasers and issuers of international portfolio debt instruments. For instance, a structured investment vehicle in a small financial center may be funded through the issuance of commercial paper, while holding a range of portfolio debt assets.

The small financial centers are also important in relation to non-portfolio components of the international balance sheet. Banks in these countries are highly active in making loans and receiving deposits, with a significant proportion of this banking activity comprising inter-office transactions between affiliates of the major international banks. In relation to FDI, the small financial centers are home to many affiliates of global banks and corporations and intra-firm debt and equity positions are non-trivial. In addition, some major global corporations are headquartered in these countries with the parent entity in turn having significant financial links to its affiliates in the major advanced economies and elsewhere.

Moreover, the intermediation role played by offshore financial centers means that it is typically challenging to establish the ultimate destination of investments that are routed through these centers. This matters for financial stability analysis, since the pattern of ultimate risk exposures is required to establish the risks embedded in the international balance sheet. The two examples cited in the introduction (the holdings of U.S. mortgage-backed securities in the Cayman Islands and Italian portfolio holdings in Ireland and Luxembourg) vividly illustrate this point. More generally, the assets that are routed through small financial centers may be ultimately directed to some other foreign destination or, in some key cases, re-invested in the domestic financial system. The round tripping phenomenon is prevalent among the advanced economies, where financially-sophisticated entities seek to maximize the gains from regulatory arbitrage. In relation to emerging markets, the existence of capital controls and rules that differentiate between foreign and domestic investors can also induce significant round-tripping activity. For instance, Hong Kong plays a significant role in FDI and portfolio round-tripping for China, while Mauritius fulfills a similar function for India.

III. Data Construction

We consider a group of thirty-two small international financial centers, which we will label the SIFC group. We omit from this list several important international financial centers such as Cyprus, Hong Kong S.A.R. of China, Ireland, Luxembourg, and Singapore, for which we already report estimates of external assets and liabilities in Lane and Milesi-Ferretti (2007).

These countries are typically significantly larger than the countries included in the SIFC group.

Our main sources of data are the locational banking statistics published by the BIS, the IMF data initiative for offshore centers (Information Framework), the IMF-sponsored Coordinated Portfolio Investment Survey (CPIS), the IMF's International Financial Statistics and Balance of Payments Statistics databases, UNCTAD data on foreign direct investment, as well as a variety of national data sources for the main advanced economies that provide a geographical breakdown of these countries' external assets and/or liabilities. In what follows we provide a brief sketch of how the country data are constructed, referring the reader to the Appendix for a more detailed description.

Portfolio investment is one of the categories for which measurement problems are particularly severe. One reason is that several of the financial centers included in our sample have significant financial activity undertaken by collective investment schemes (such as mutual funds or hedge funds) and, in some cases, structured finance vehicles, but available data on the size of these activities is still rather scant. And when data on collective investment schemes are available (as is the case, for example, for the Cayman Islands for 2006 and 2007), these data are sometimes hard to reconcile with data on bilateral holdings reported by partner countries.[4] For our data construction we rely primarily on the CPIS as well as on BIS statistics on security issuance. For around 70 participating economies, the CPIS provides the level and geographical breakdown of portfolio investment holdings. A few of the countries in our sample (for example Bermuda) participate in the CPIS, and this allows us to use these data. For non-participating countries, we can use CPIS data to infer the level of portfolio liabilities of small financial centers, by adding up the claims on these centers that CPIS-participating countries report. BIS securities statistics report the total amount of international debt securities issued in various jurisdictions, including small financial centers. If we assume, as is reasonable, that these securities are held by nonresidents, these statistics provide the stock of portfolio debt liabilities of the various small financial centers.

For the other investment category, we make use of locational banking statistics from the BIS. For small financial centers that report their banking statistics to the BIS, we can make use of these figures directly. In addition, we can use BIS locational statistics from an "immediate borrower" perspective to infer the claims and liabilities that residents of these centers hold vis-à-vis BIS-reporting banks.

For foreign direct investment, we make use of the statistics compiled by UNCTAD as well as of the geographical breakdown of FDI statistics provided by some advanced economies, such as the United States.

[4] For example, the Net Asset Value reported by hedge funds registered in the Cayman Islands totaled over $2.2 trillion at end-2007. However, portfolio equity claims on the Cayman Islands reported by the main investor countries participating in the CPIS were only $768bn. See the discussion in Section IV below. The Cayman Islands participate as a reporter to the CPIS, but only report portfolio holdings held by banks, excluding the very large collective investment schemes industry.

Data on reserve assets for these centers (which are typically modest in absolute terms) can be obtained in some cases from the IMF's International Financial Statistics. Finally, data on financial derivatives are at the moment very difficult to track, as is the case for most other advanced economies as well.

IV. Country Characteristics and External Balance Sheet of the SIFC Group

As of 2007, the total population of the SIFC group was just over 12.7 million and average GDP per capita was around US$11,600 (Table 2). These countries therefore represent a tiny fraction of world population and world GDP. Table 2 shows that there is significant heterogeneity within the group, in terms of population size and output per capita. While the median population is 88,000, the range is large, with Montserrat the smallest at 6,000 people and Lebanon the largest at 4.1 million. In relation to GDP per capita, the median value is around $18,000, while the range spans the $2,200 level of Nauru to the $118,000 level of Liechtenstein.

While a majority of SIFCs are independent countries (Table 3), a number of those with high external assets and liabilities (such as Bermuda, the British Virgin Islands, the Cayman Islands, and the Channel Islands) are British territories or Crown dependencies. They either have fixed exchange rates or directly use a major currency (Table 4).

Given the measurement difficulties discussed earlier, it is not feasible to compile a comprehensive time series for external assets and liabilities of these centers for all asset categories. In our data presentation, we therefore focus primarily on SIFC's external assets and liabilities as of end-2007, but also report some time-series information concerning SIFC positions vis-à-vis BIS-reporting banks as well as their portfolio liabilities as derived from the IMF CPIS survey.

We estimate the size of their gross international balance sheet (the sum of their external assets and liabilities) to be over US$18 trillion—most likely an underestimate, in light of the severe data problems highlighted in the previous section. This estimate implies that SIFCs account for about 8 ½ percent of world cross-border holdings (Figure 1). SIFC external assets and liabilities are hence quite substantial. For example, they exceed those of major investing nations such as France, Germany, or Japan (Figure 2) and are a multiple of those of other large economies such as China (around $4 trillion).

Table 5 and Figure 3 provide a country-by-country breakdown of the estimated size of SIFCs' external balance sheets. The external balance sheet is not calculated by summing estimated external assets and liabilities, but by assuming that the net external position is zero and that either external assets or external liabilities are thus underestimated. In light of the severe limitations in data coverage, this is a reasonable assumption, all the more so if the objective is to provide broad orders of magnitude for the role of these countries in international financial intermediation. [5]

Overall, a small group of SIFC countries account for the vast bulk of the holdings, with external assets and liabilities that are very high (above $100bn) in absolute terms. These include the Bahamas, Bermuda, the Cayman Islands, the U.K Channel Islands (Guernsey, Jersey, and the Isle of Man), the British Virgin Islands, and the Netherlands Antilles. Among these, the very large size of the Cayman Islands' international balance sheet, which accounts for approximately half the aggregate international balance sheet of the SIFC group, is particularly striking. The Cayman Islands are especially important in terms of portfolio liabilities and banking assets and liabilities.

While these figures are large, they are very likely under-estimates. For example, a survey of hedge funds incorporated in the Cayman Islands conducted by the Cayman Islands Monetary Authority found that their net asset value was over US$2.2 trillion at end-2007. [6] To the extent that the hedge fund shares are held by nonresidents, these would be portfolio equity liabilities of the Cayman Islands. The survey includes both feeder funds and funds of funds, in addition to master funds, and therefore some double-counting is likely. This notwithstanding, the total is almost 3 times the portfolio assets reported to be held in the Cayman Islands by countries participating in the IMF Coordinated Portfolio Investment Survey, which form the base of the calculation of the Cayman Islands' portfolio equity liabilities included in Table 5.

We compare the importance of the SIFC group to other prominent international financial centers in Figure 3. The Figure shows the distribution of cross-border positions among all countries where the sum of external assets and liabilities is at least 8 times GDP. This group (which includes some larger countries such as the United Kingdom) accounts for some 10 percent of global GDP, less than 1 percent of world population, but over 40 percent of global cross-border investment positions. Within this group, SIFCs account for over 20 percent of total external assets and liabilities.

Figure 4 shows the composition of the international balance sheet for the SIFC group. The "other investment" component, which includes primarily bank assets and liabilities, accounts for more than half of the total external claims and liabilities of these countries, while the portfolio (debt and equity) component has a 36 percent share. While the share of FDI is relatively small, it is strikingly important for some countries. For example, Figure 5 depicts the geographical origin and destination of Hong Kong's foreign direct investment. At end-2007, investment to and from the British Virgin Islands was of the same order of magnitude as investment to and from Mainland China.

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[5] The assumption of a zero external position is less appropriate for the "larger" SIFCs, such as Bahrain (a net creditor) and Lebanon and Panama (net debtors). However, reasonable estimates of the net external position for these countries are small in absolute terms (less than $40bn) and hence have negligible implications on the total figures reported in Table 5.

[6] See Cayman Islands Monetary Authority (2009).

The importance of the SIFC group over time as a destination of global cross-border portfolio investment is highlighted in Figure 6A. Based on CPIS data (available since 2001), this figure shows the time-varying share of global portfolio equity and debt assets invested in SIFCs over 2001-2007. The portfolio equity share has climbed from just under 6 percent to nearly 9 percent over this time period, whereas the portfolio debt share has remained relatively stable in the 5-6 percent range. As discussed earlier, the portfolio equity category includes shares in collective investment schemes, such that the 'ultimate claims' represented by these equity assets may be debt or equity assets that most likely are located in other destinations.

Figure 6B shows the importance of the SIFC group in cross-border banking activity, by depicting the claims and liabilities of BIS-reporting banks vis-à-vis SIFCs, as a share of their total claims. Since the end of 2001, when claims and liabilities vis-à-vis the U.K. Channel Islands start to be reported separately from U.K. data, both shares have remained broadly stable (13-14 percent for SIFC assets, and 9-10 percent for SIFC liabilities). In dollar terms, however, these holdings have tripled between end-2001 and end-2007. Claims of BIS-reporting banks on SIFCs are of the same order of magnitude as their claims on emerging markets as a whole.

V. BILATERAL PATTERNS

In this section we focus on available information on the financial trading partners of SIFCs. The data we present, taken from Milesi-Ferretti, Strobbe, and Tamirisa (2010), rely on published sources.[7] Overall, these bilateral holdings account for around 90 percent of total estimated external assets and liabilities of SIFCs—a high figure, particularly taking into account that a full bilateral breakdown for external claims and liabilities of the main advanced economies is not available.

The lion share of bilateral claims and liabilities of SIFCs are vis-à-vis the major world financial trading partners—the United States, the euro area, the United Kingdom, Switzerland, and Japan, as well as Hong Kong (Figure 8a). For example, for the United States identified cross-border assets and liabilities vis-à-vis SIFCs at end-2007 were over US$6 trillion, some 16 percent of the total U.S. portfolio (Table 6). For the euro area and the United Kingdom, SIFCs account instead for just under 10 percent of cross-border holdings. For Hong Kong instead the ratio is much higher, even though bilateral bank holdings vis-à-vis SIFCs (except for Macao S.A.R.) are not included because of lack of data. Evidence reported in IMF (2008), based on BIS locational banking statistics, suggests a "geographical" bias in cross-border holdings vis-à-vis SIFCs, with Caribbean centers having closer financial

[7] Therefore the data exclude unpublished bilateral locational banking statistics (published in aggregate form by the BIS), but includes bilateral banking data published by the United States, United Kingdom, Switzerland, and Japan, as well as data on "other investment" assets and liabilities vis-à-vis "offshore centers" published by the euro area. Note that holdings by one SIFC in another are excluded from the bilateral holdings calculations.

ties with the United States and other financial centers in Europe with the euro area and the United Kingdom.

Figure 8b shows the composition of bilateral SIFC cross-border holdings by financial instrument, highlighting the importance of both portfolio and other investment instruments (which mostly comprise bank loans and deposits). The bilateral data also underscore some of the problems in estimating the cross-border position of SIFCs. For example, estimated bilateral FDI assets and liabilities of SIFCs greatly exceed the estimated total (compare the dark line with the various columns in Figure 8b). This is due primarily to significant bilateral FDI holdings reported by the euro area vis-à-vis 'offshore centers,' for which no further geographical breakdown is available. [8]

VI. The Effects of the Financial Crisis: A Preliminary Look

The financial crisis affected large international banking institutions particularly heavily—and those institutions make heavy use of financial intermediation through small financial centers. While there is still a lot of uncertainty on what the medium-term implications of the financial crisis and its policy response for financial intermediation in small financial centers, preliminary data on these centers' external holdings at the end of 2008 allows us to take a first look as to whether they have been affected more severely than holdings in other economies.

As shown in Table 8, total external assets and liabilities declined by more in SIFCs than in the world economy as a whole, with their world share falling below 8 percent. The Table also shows that this pattern is present in financial centers more generally. While the absolute decline in the value of cross-border positions reflects the end-2008 collapse in equity prices across the globe, the relative decline in the size of positions in financial centers is linked in particular to the sharp retrenchment in cross-border banking positions during 2008, particularly over the 4th quarter. These positions are particularly large in financial centers. Still, SIFCs also saw some decline in their share of outstanding portfolio liabilities as inferred from the IMF's Coordinated Portfolio Investment Survey (Figure 7a).

VII. Concluding Remarks

The role of small international financial centers in cross-border capital flows has been intensely discussed in policy circles, particularly since the global financial crisis. In this note we have provided a quantitative sense of the importance of these centers in international financial flows, using a novel dataset. While data shortcomings are daunting and coverage significantly incomplete, we show that external assets and liabilities of entities resident in

[8] The definition of 'offshore centers' in euro area statistics is very close to our SIFC definition, but also includes Hong Kong and Singapore. Estimated assets and liabilities of the euro area vis-à-vis these two economies were therefore netted out from the totals depicted in Chart 8.

these centers are substantial—particularly in cross-border banking activity and in portfolio investment. We also document the significant bilateral financial linkages between these small centers and the main advanced economies, including larger financial centers.

Small international financial centers are intermediaries, and therefore ultimate exposures for their financial trading partners typically lie elsewhere (indeed, the consolidated banking data published by the Bank for International Settlements show smaller exposures for these centers on an ultimate risk basis). But in light of these centers' quantitative importance, particularly in certain segments of international financial market activity, and in light of the fact that most available data on cross-border financial activity is on a residence basis, the analysis of cross-border financial linkages would be significantly enhanced if aggregate and bilateral data on cross-border asset trade involving financial centers became more readily available.

Appendix 1. List of countries and territories

Andorra, Anguilla, Antigua and Barbuda, Aruba, Bahamas, Bahrain, Barbados, Belize, Bermuda, Cayman Islands, Gibraltar, Grenada, Guernsey, Isle of Man, Jersey, Lebanon, Liechtenstein, Macao SAR of China, Mauritius, Monaco, Montserrat, Nauru, Netherlands Antilles, Palau, Panama, Samoa, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Turks and Caicos Islands, Vanuatu, British Virgin Islands.

Appendix II. Data Sources for IIP estimates

This appendix discusses how to put together estimates for the various external asset and liability categories for the most relevant "small" international financial centers (SIFCs). The most obvious data source—a full-fledged IIP (international investment position) is typically not available for these centers, with only a couple of exceptions. Consequently, estimates must be pieced together from a variety of alternative sources.

SIFCs in some cases intermediate a very significant amount of funds in absolute terms. At the same time, they are "pure" intermediaries—their net external position is extremely small in absolute terms (even if not necessarily as a share of their GDP). The considerable extent of imprecision in estimates of external assets and liabilities can however imply implausibly large net creditor or debtor positions. Consequently, these estimates are simply meant to provide a broad order of magnitude for the size of intermediated funds. In light of the incomplete coverage of financial institutions and investment vehicles, the maximum between estimated external assets and liabilities is likely to provide a more accurate—albeit imperfect—measure of total intermediated funds.

I. EXTERNAL ASSETS

A. Portfolio investment assets (equity and debt)

- CPIS asset survey (when available). However, coverage of the survey may be limited to certain sectors (for example, banking—but not mutual or hedge funds—for the Cayman Islands).

- Surveys of portfolio liabilities by country of holder. These surveys are available for the United States (as of June 30, rather than end of year) and from some CPIS-participating countries (such as Japan).

- BIS -- Bank assets other than loans reported to the BIS (for SIFCs whose banks report their assets to BIS). The non-loan assets comprise mainly portfolio holdings but could also include direct investment holdings or derivatives.

- BIS -- For SIFCs whose banks do not report assets to the BIS, an alternative source are BIS-reporting banks' non-deposit liabilities towards individual SIFCs.

- National data on total asset value of collective investment schemes. A (possibly significant) fraction of the total asset value (TAV) of collective investment schemes is likely held in portfolio instruments.

B. Direct investment abroad

- UNCTAD. For several SIFCs, the UNCTAD database report total foreign direct investment stocks and flows.

- Alternatively, FDI abroad can be estimated from other countries' FDI liability surveys (which include bilateral positions) reported by Eurostat, the OECD, UNCTAD, and individual countries such as the United States, which is particularly important for Caribbean SIFCs.

C. Other investment assets

- BIS -- Loans reported by SIFC banks (for BIS reporters).

- BIS – Liabilities of BIS-reporting banks vis-à-vis individual SIFCs. In particular, data on BIS-reporting banks' liabilities to nonbank entities in SIFCs can be used to complement the data on bank loans reported by the SIFC (which should in principle exceed the liabilities of BIS-reporting banks to the SIFC banks).

- IFS – foreign assets held by banks and nonbank financial institutions (including monetary authorities non-reserve assets).

D. Financial derivatives

These could theoretically be estimated from reported bilateral derivatives positions of other countries (such as the United States). In practice, very few countries report a counterparty breakdown for derivatives, and even in those cases the counterparty breakdown may not be detailed enough to identify individual SIFC counterparties.

E. Reserve assets

When relevant. Sources:

- IFS (when available)

- WEO

II. External liabilities

A. Portfolio investment liabilities

Equity

- CPIS – derived liabilities (from bilateral asset positions reported by participating countries). In these countries equity will include shares of mutual fund and hedge fund investments (as well as, on occasion, shares of US companies headquartered in the center—insurance companies in Bermuda etc).

- National data on Net Asset Value (NAV) of collective investment vehicles (CIV). To the extent that shares in CIVs are held by nonresidents (which is likely to be the case, although some double-counting is possible in the case of feeder funds or funds of funds) the NAV of CIVs would be portfolio liabilities of the reporting economy.

Debt

- BIS – international debt securities outstanding by residence of issuer. This should be a good proxy for external debt liabilities since holders of these securities would overwhelmingly be nonresidents.

- CPIS – derived liabilities (from bilateral asset positions reported by participating countries).

B. Direct Investment Liabilities

- UNCTAD. For several SIFCs, the UNCTAD database report total foreign direct investment stocks and flows.

- Alternatively, FDI in the SIFC can be estimated from other countries' surveys of FDI abroad (which include bilateral positions) reported by Eurostat, the OECD, UNCTAD, and individual countries such as the United States, which is particularly important for Caribbean SIFCs.

- Derived liabilities from bilateral asset survey of individual countries (UNCTAD, OECD, Eurostat)

C. Other Investment Liabilities

- BIS – Deposits reported by offshore country banks (for BIS reporters)

- BIS – Assets of BIS-reporting banks vis-à-vis offshore country entities. In particular, data on claims on nonbank offshore country entities could be used to complement the bank deposit liabilities reported by the SIFC (which should in principle exceed the claims of BIS-reporting banks on the SIFC banks).

- IFS – foreign liabilities held by banks and nonbank financial institutions (including monetary authorities non-reserve liabilities).

D. Financial derivatives

These can be estimated from reported bilateral derivatives positions of other countries (such as the United States). In practice, very few countries report a counterparty breakdown for derivatives, and even in those cases the counterparty breakdown may not be detailed enough to identify individual SIFC counterparties. One exception are the Cayman Islands, which are reported separately in U.S. bilateral data on derivatives.

III. Reference Data

A. BIS

1. Tables 2 and 3 locational bank statistics (reported assets and liabilities—for reporting SIFCs)

2. Tables 6 and 7 locational bank statistics (derived data from BIS-reporting banks—for all countries)

3. Table 11 international debt securities (all countries)

B. CPIS

1. Tables 8, 8.1, 8,2 (global tables, portfolio assets equity and debt, derived portfolio liabilities equity and debt)

2. Reported liability surveys, Table 4 (to calculate sum of reported liabilities by these countries to individual SIFCs) http://www.imf.org/external/np/sta/pi/topic.asp?table=4

C. IFS

1. Banks and other financial institutions' foreign assets and liabilities (lines 7a etc).

D. Other sources

1. UNCTAD: FDI stocks and flows.

2. US survey of portfolio liabilities, June 2008 (U.S. Treasury International Capital System website).

3. Bilateral FDI holdings. For the United States, see the links:

http://www.bea.gov/international/xls/longctry.xls and
http://www.bea.gov/international/xls/FDI16.xls

For Eurostat data on euro area and other advanced economies, see
http://nui.epp.eurostat.ec.europa.eu/nui/show.do?dataset=bop_fdi_pos&lang=en

For Japan, see http://www.boj.or.jp/en/type/stat/boj_stat/bop/rdip/rdip2007.zip

For the United Kingdom, see
http://www.statistics.gov.uk/downloads/theme_economy/web_2007ma4.xls

For Hong Kong S.A.R. of China, see
http://www.censtatd.gov.hk/hong_kong_statistics/statistics_by_subject/index.jsp?subjectID=3&charsetID=1&displayMode=T

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Table 1. Small Financial Centers: Main International Financial Activity

	International Banking	Insurance	Asset Management	Mutual funds	Structured Finance
Andorra	X	X	X	X	
Anguilla	X	X			
Antigua and Barbuda	X	X			
Aruba	X	X	X		
The Bahamas	X	X	X	X	
Bahrain	X	X	X	X	
Barbados	X	X	X	X	
Belize	X	X	X	X	
Bermuda	X	X	X	X	
British Virgin Islands	X	X		X	
Cayman Islands	X	X	X	X	X
Gibraltar	X	X	X	X	
Grenada	X	X			
Guernsey	X	X		X	
Isle of Man	X	X		X	
Jersey	X	X	X		
Lebanon	X			X	
Liechtenstein	X	X	X	X	
Macao SAR	X	X	X		
Mauritius	X	X	X	X	
Monaco	X		X	X	
Netherlands Antilles	X	X	X		
Panama	X	X			
Samoa	X	X			
Seychelles	X	X		X	
St. Kitts and Nevis	X	X	X	X	
St. Lucia	X	X			
St. Vincent & Grenadines	X	X		X	
Turks and Caicos	X	X	X	X	
Vanuatu	X	X			

Table 2. Basic Country Characteristics (2007)

	GDP (millions USD)	Population	GDP per capita (USD)
Andorra	3,245	74,601	43,504
Anguilla	227	12,625	18,007
Antigua and Barbuda	1,155	85,109	13,568
Aruba	2,623	103,889	25,253
Bahamas, The	7,498	331,277	22,633
Bahrain	18,443	752,647	24,504
Barbados	3,409	293,894	11,599
Belize	1,277	287,698	4,438
Bermuda	5,855	64,559	90,698
Cayman Islands	2,701	47,210	57,222
Gibraltar	1,210	28,875	41,898
Grenada	608	105,668	5,753
Guernsey	3,334	61,811	53,931
Isle of Man	3,437	76,774	44,773
Jersey	8,182	90,800	90,107
Lebanon	25,047	4,099,114	6,110
Liechtenstein	4,160	35,242	118,040
Macao, China	19,115	481,122	39,731
Mauritius	6,927	1,261,643	5,490
Monaco	1,311	32,711	40,090
Montserrat	48	5,875	8,149
Nauru	23	10,152	2,217
Netherlands Antilles	3,463	191,572	18,078
Palau	170	20,314	8,376
Panama	19,485	3,343,374	5,828
Samoa	476	187,026	2,544
St. Kitts	512	50,417	10,149
St. Lucia	960	164,923	5,820
St. Vincent and the Grenadines	546	120,398	4,538
Turks and Caicos	758	25,517	29,706
Vanuatu	507	226,179	2,243
Virgin Islands (British)	1,156	22,545	51,273
Median	1,967	87,955	18,042
Total	**147,869**	**12,695,561**	**11,647**

Sources: IMF; United Nations; World Bank, World Development Indicators; and national sources.

Table 3. Political Status of Small International Financial Centers

	Independent	British Overseas Territory	British Crown Dependency	French dependent territory	Region within Kingdom of Netherlands
Andorra	X				
Anguilla		X			
Antigua and Barbuda	X				
Aruba					X*
The Bahamas	X				
Bahrain	X				
Barbados	X				
Belize	X				
Bermuda		X			
British Virgin Islands		X			
Cayman Islands		X			
Gibraltar		X			
Grenada	X				
Guernsey			X		
Isle of Man			X**		
Jersey			X		
Lebanon	X				
Liechtenstein	X				
Mauritius	X				
Macao SAR					
Monaco	X				
Nauru	X				
Netherlands Antilles					X
Palau	X				
Panama	X				
Samoa	X				
Seychelles	X				
St. Kitts and Nevis	X				
St. Lucia	X				
St. Vincent and Grenadines	X				
Turks and Caicos		X			
Vanuatu	X				

*autonomous

**self governing

Table 4. Exchange Rate Regime

	US Dollar	Euro	Pound Sterling	Fixed Exchange Rate with US Dollar	Fixed Exchange Rate with Pound Sterling	Fixed Exchange Rate with Euro	Fixed Exchange Rate with Hong Kong Dollar	Other currency
Andorra		X						
Anguilla				X				
Antigua and Barbuda				X				
Aruba				X				
The Bahamas				X				
Bahrain				X				
Barbados				X				
Belize				X				
Bermuda				X				
British Virgin Islands	X							
Cayman Islands				X				
Gibraltar					X			
Grenada				X				
Guernsey					X			
Isle of Man			X					
Jersey			X					
Lebanon				X				
Liechtenstein								X*
Macao SAR							X	
Mauritius					X			
Monaco		X						
Netherlands Antilles				X				
Nauru								X**
Palau	X							
Panama	X			X				
Samoa								X***
Seychelles	X							
St. Kitts and Nevis				X				
St. Lucia				X				
St. Vincent and Grenadines				X				
Turks and Caicos	X							
Vanuatu								X***

* Uses the Swiss franc
** Uses the Australian dollar
*** Basket peg

Table 5. SIFC: Size of the External Balance Sheet
(billions of US$, end-2007)

	Estimated assets	Estimated liabilities	Size of balance sheet
Andorra	9.5	2.4	18.9
Anguilla	2.3	1.1	4.6
Antigua and Barbuda	1.0	2.9	5.7
Aruba	3.3	11.2	22.5
Bahamas, The	470.7	459.9	941.5
Bahrain	291.1	231.9	582.2
Barbados	60.2	21.6	120.4
Belize	8.1	3.3	16.2
Bermuda	735.2	788.2	1,576.4
Cayman Islands	3,132.9	4,200.3	8,400.6
Gibraltar	33.3	39.9	79.9
Grenada	0.5	1.8	3.5
Guernsey	509.0	297.1	1,017.9
Isle of Man	168.3	99.8	336.6
Jersey	1,012.1	852.2	2,024.3
Lebanon	55.3	68.8	137.5
Liechtenstein	40.4	10.7	80.8
Macao, China	65.3	24.8	130.5
Mauritius	181.9	71.1	363.8
Monaco	29.6	36.2	72.3
Montserrat	0.2	0.1	0.3
Nauru	0.04	0.01	0.07
Netherlands Antilles	219.8	271.7	543.3
Palau	0.1	0.2	0.3
Panama	147.4	130.5	294.8
Samoa	5.2	1.5	10.4
St. Kitts	0.5	1.9	3.9
St. Lucia	0.9	2.8	5.7
St. Vincent and the Grenadines	3.3	2.4	6.7
Turks and Caicos	1.9	0.8	3.9
Vanuatu	1.1	1.2	2.4
Virgin Islands (British)	822.9	793.7	1,645.8
Total	8,013	8,432	18,454

Note: Because of the severe limitations in data coverage, the difference between external assets and liabilities cannot be interpreted as an estimate of the country's net external position. The size of the balance sheet is estimated assuming that the net external position is equal to zero, so the total reported corresponds to 2 times the maximum between estimated external assets and estimated external liabilities.

Table 6. Relative Importance of Cross-Border Holdings with SIFCs (2007)

	Liabilities vis-à-vis SIFCs (in percent of total country liabilities)	Assets vis-à-vis SIFCs (in percent of total country assets)
United States	16.9%	15.4%
Euro Area	7.9%	9.8%
United Kingdom	9.0%	7.2%
Japan	3.9%	9.3%
Switzerland	16.3%	15.1%
Hong Kong	23.3%	28.0%

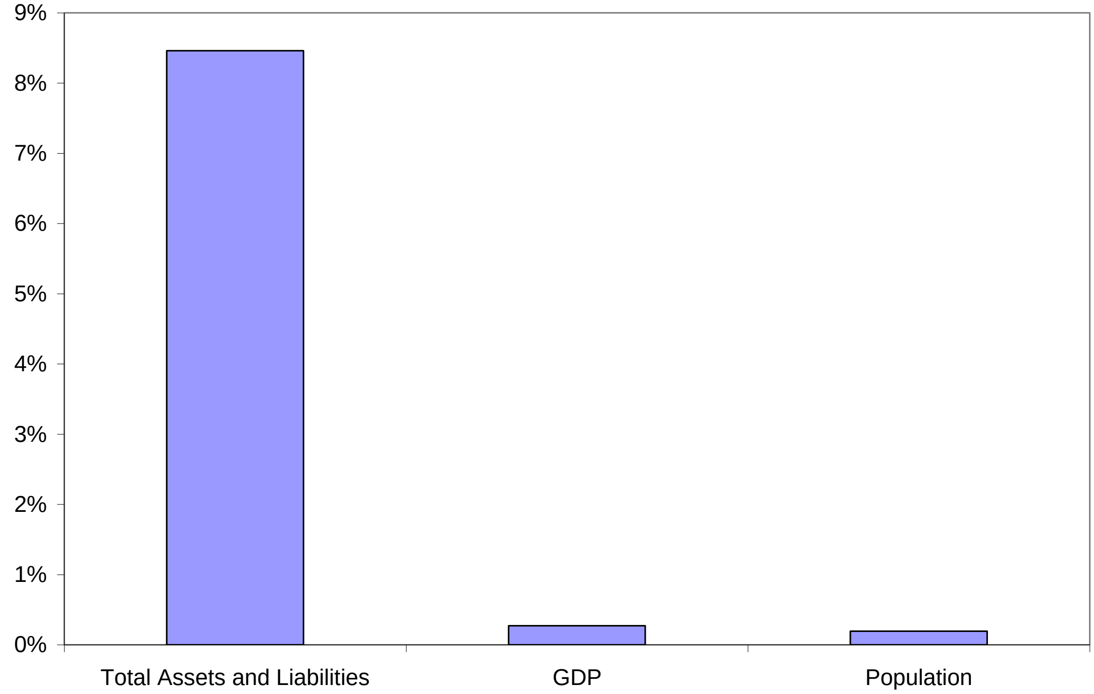
Note: each entry reports the liabilities (assets) of the country vis-à-vis SIFCs, as a ratio of the country's total external liabilities (assets). A bilateral data breakdown is not available for all external assets and liabilities of these countries—hence the ratios are likely to be under-estimates.

Table 7. Sum of external assets and liabilities of financial centers, 2007-2008
(billions of US$)

	2007	2008
Small international financial centers	18,454	15,934
Other financial centers 1/	70,213	59,856
World	214,458	202,103
Share SIFC	8.6%	7.9%
Share other financial centers	32.7%	29.6%

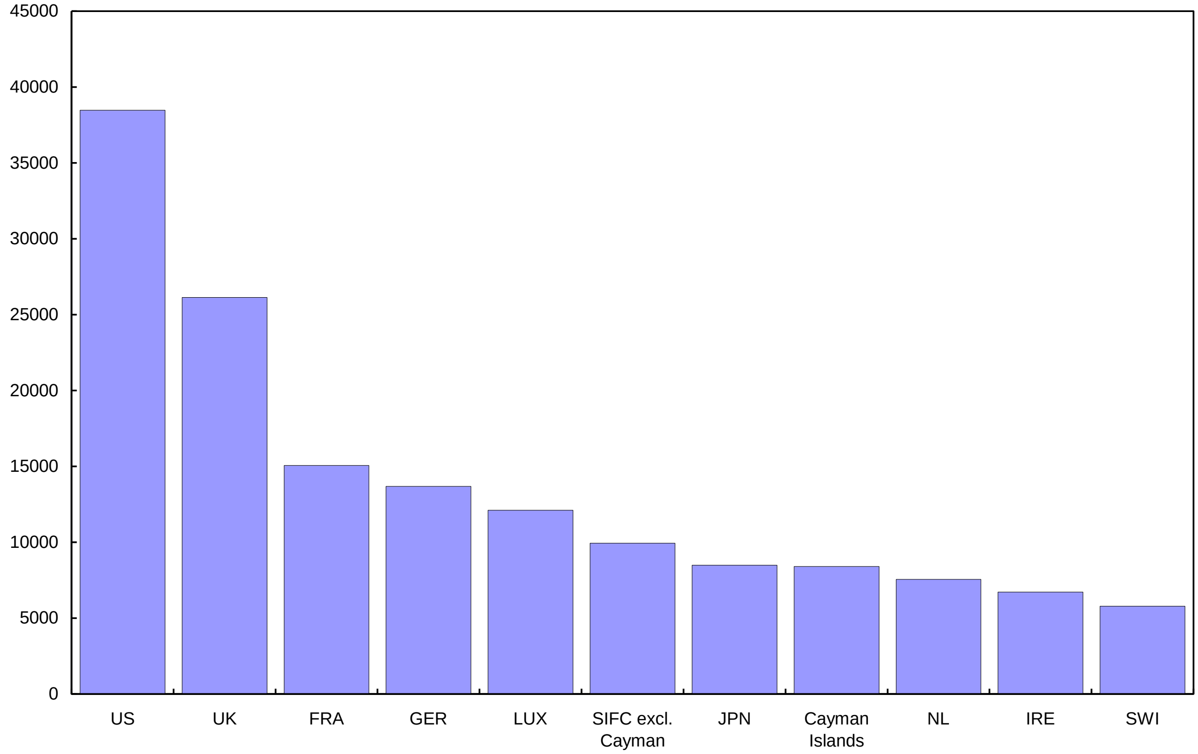
1/ Include Belgium, Cyprus, Hong Kong S.A.R., Iceland, Ireland, Liberia, Malta, Netherlands, Singapore, Switzerland, United Kingdom. Source: Lane and Milesi-Ferretti, External Wealth of Nations database.

Figure 1. Share of SIFC Group in Global Aggregates (2007)



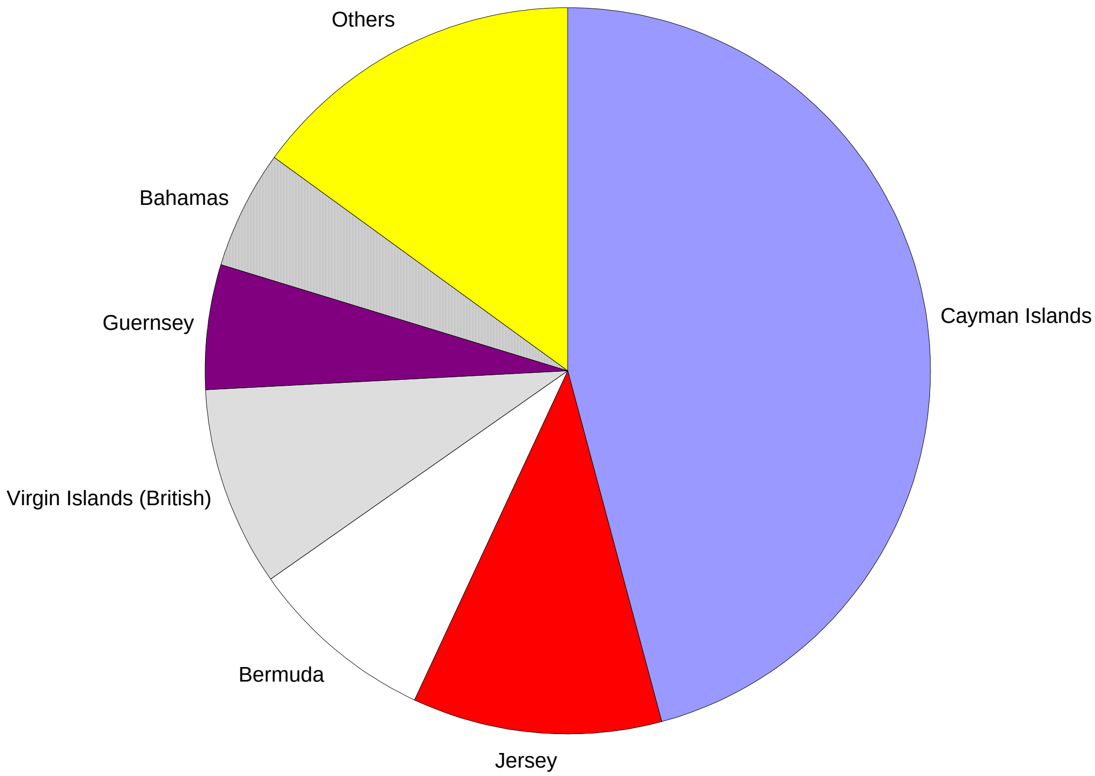
Note: Share of SIFC group in global cross-border investment positions; global GDP; and global population.
Source: authors' calculations, IMF; United Nations; World Bank, World Development Indicators; and national sources.

Figure 2. External Balance Sheets: A Global Comparison (2007)



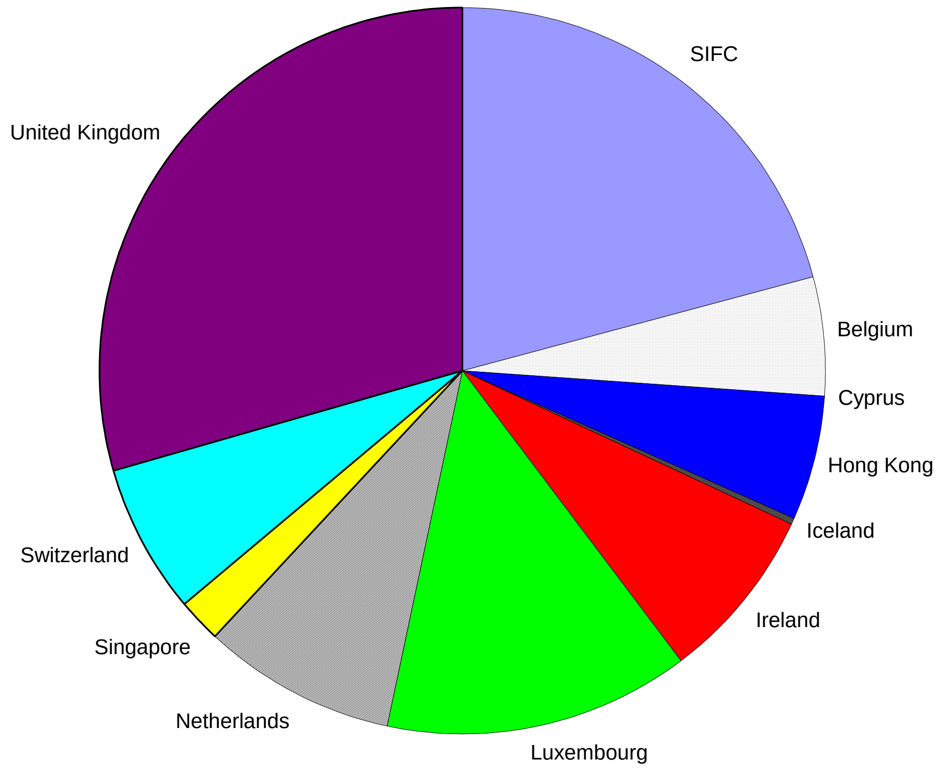
Note: the columns depict the sum of external assets and liabilities, in billions of US dollars.
Source: Lane and Milesi-Ferretti, External Wealth of Nations database.

Figure 3. Country Shares in SIFC Balance Sheet (2007)



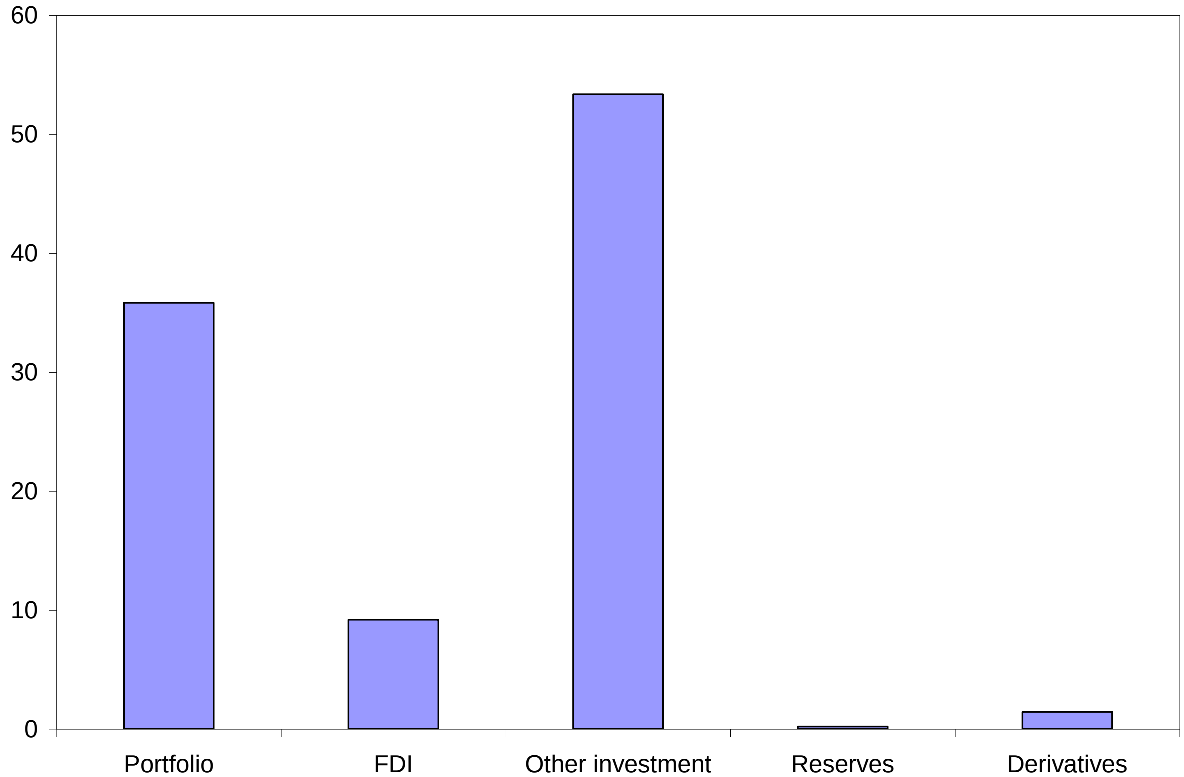
Note: the figure depicts the share of SIFC external assets and liabilities accounted for by individual countries. The "other" category includes Bahrain, Netherlands Antilles, Mauritius, Panama, Isle of Man, Lebanon, Macao, Barbados, Liechtenstein, Monaco, Gibraltar, Aruba, Andorra, Belize, Samoa, St. Vincent and the Grenadines, Antigua and Barbuda, St. Lucia, Anguilla, Turks and Caicos, Grenada, Vanuatu, St. Kitts, Palau, Montserrat, and Nauru.

Figure 4. SIFC Share of External Assets and Liabilities in Broad Group of Financial Centers, December 2007



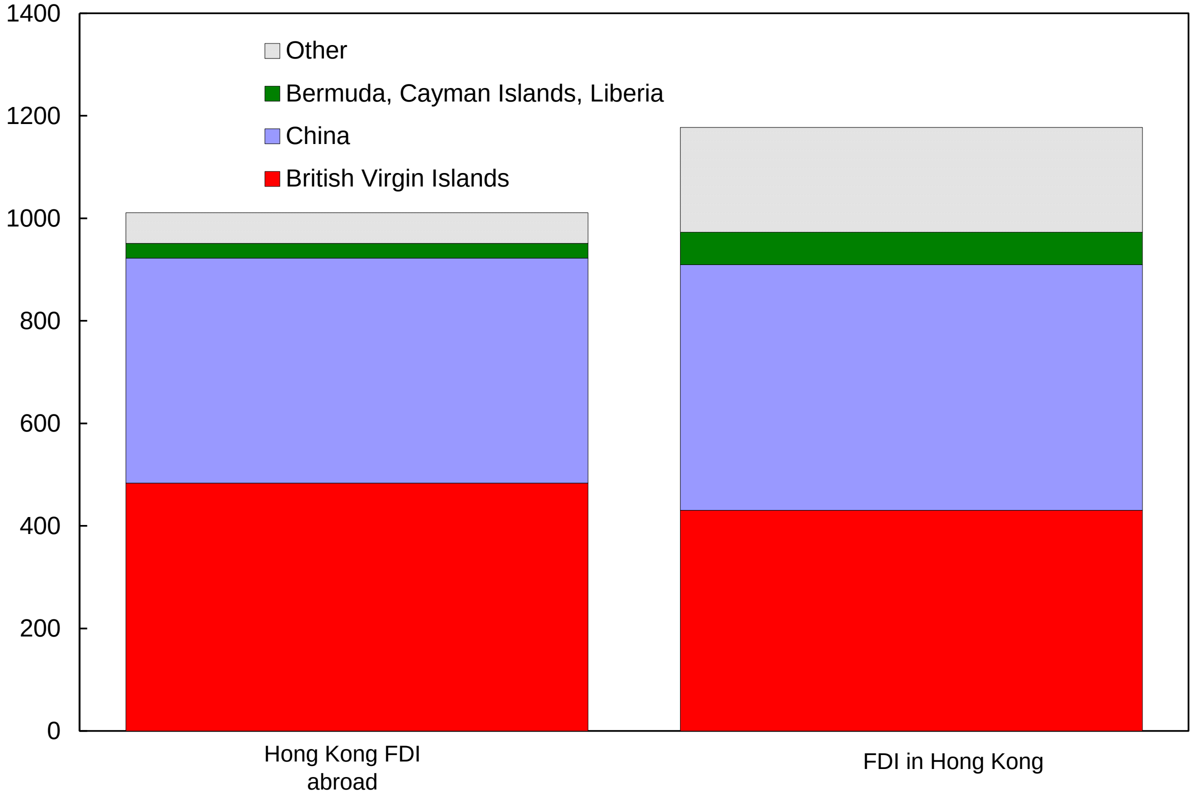
Sources: authors' calculations and Lane and Milesi-Ferretti, External Wealth of Nations Database.

Figure 5. Composition of International Balance Sheet for SIFC Group (2007)



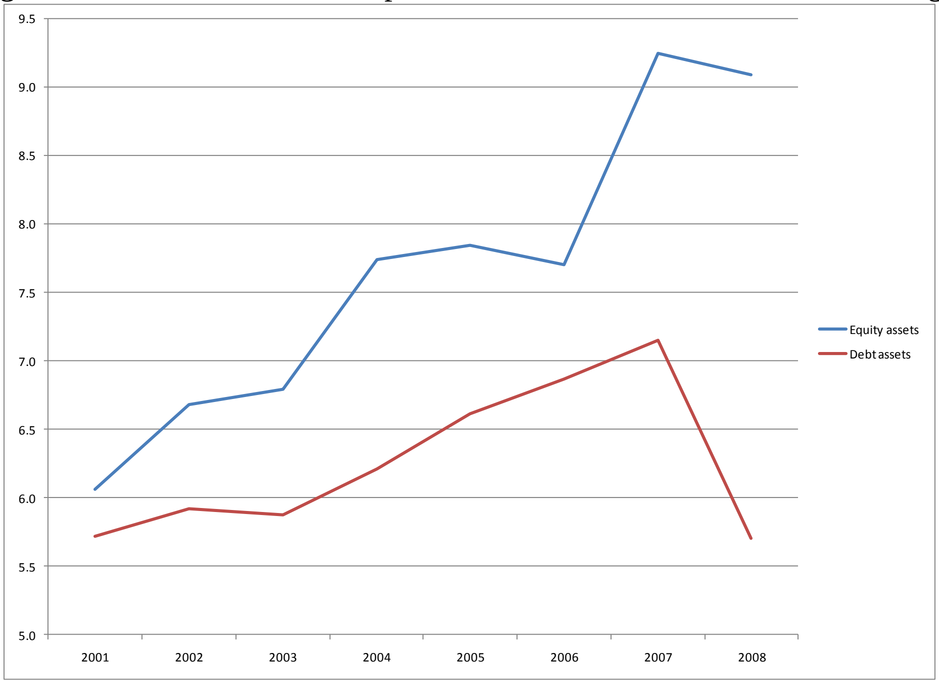
Note: The "other investment" category contains primarily bank assets and liabilities. Source: authors' calculations.

Figure 6. Hong Kong S.A.R. of China: FDI assets and liabilities, 2007 (billions US$)



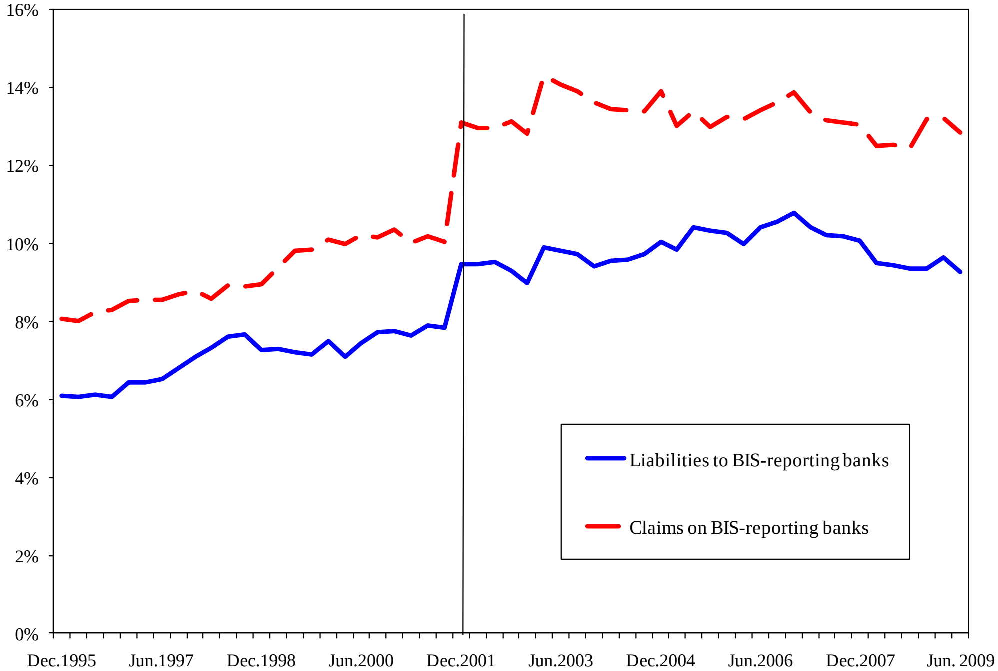
Source: Hong Kong Statistics.

Figure 7A. Share of SIFC Group in Global Cross-Border Portfolio Holdings



Note: Share of total portfolio assets vis-à-vis SIFCs reported by countries participating in the IMF's Coordinated Portfolio Investment Survey.

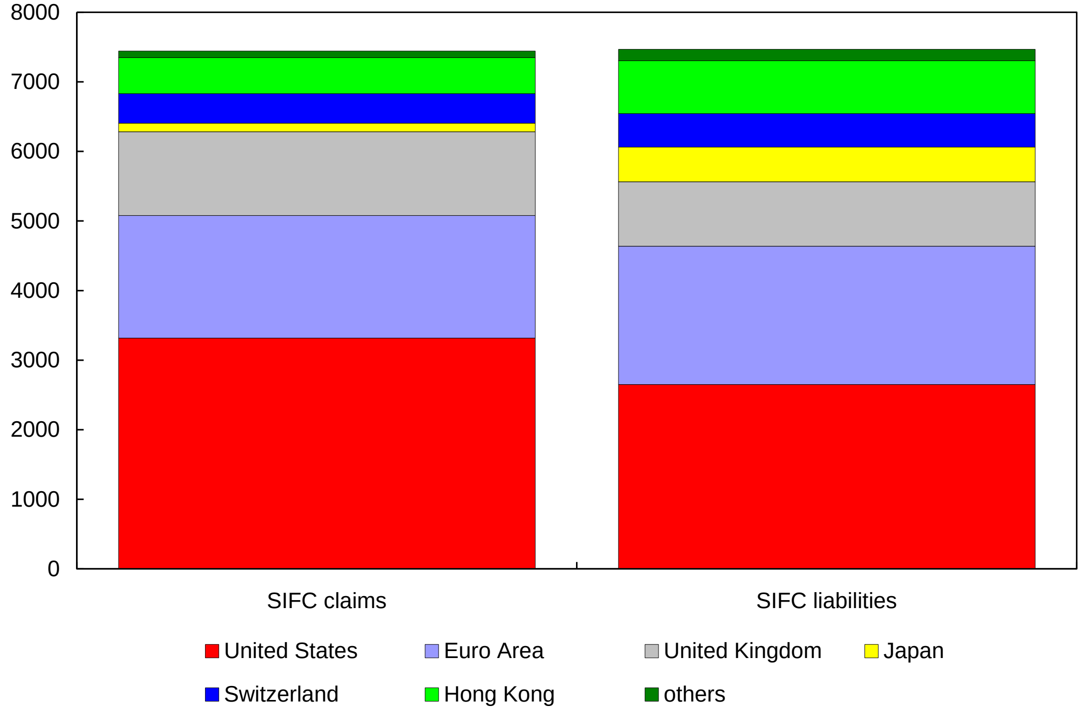
Figure 7B. SIFC Claims on and Liabilities vis-à-vis BIS-reporting banks



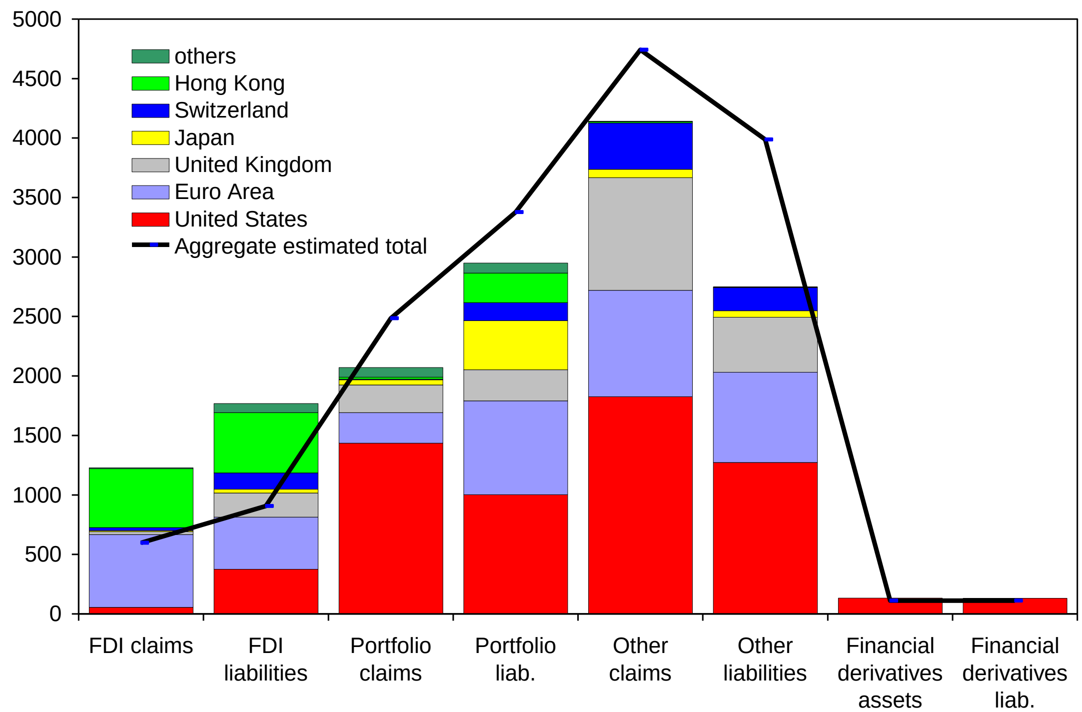
Note: the figures reports total claims on and liabilities vis-à-vis BIS-reporting banks, calculated from BIS locational banking statistics on an immediate borrower basis (Table 6). There is a break in the series in December 2001, when data for the U.K. Channel Islands (Isle of Man, Guernsey, and Jersey) starts to be reported separately from U.K. data. Source: BIS, locational banking statistics.

Figure 8. Claims and Liabilities of SIFC vis-à-vis Individual Partner Countries (2007)

A. Total



B. Composition



Source: Milesi-Ferretti, Strobbe, and Tamirisa (2010).