

# Financial flows via offshore financial centres

## as part of the international financial system

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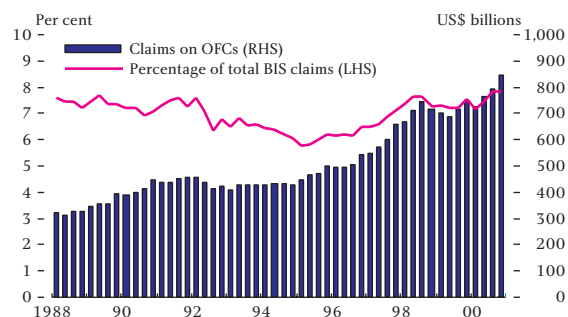
Offshore financial centres (OFCs) have become an important part of the international financial system. Cross-border bank lending to entities domiciled in OFCs is around US\$850 billion, double the amount ten years ago. The Bank of England has therefore been exploring whether financial flows through OFCs can provide insights into developments, and so potential risks, in the international financial system. It seems they may be able to do so, although there are issues about data availability. This article reports on some of the work to date.

**BANKS' ON- AND OFF-BALANCE SHEET** exposures to counterparties in other countries provide one linkage through which economic and financial shocks can be transmitted. For this reason, the Bank monitors aggregate cross-border banking exposures and uses this information to try to assess potential risks to stability<sup>1</sup>.

According to the Bank for International Settlements (BIS), approximately 8 per cent (US\$850 billion) of cross-border lending is to institutions located in so-called offshore financial centres. These claims have almost doubled since 1990 (Chart 1) mirroring the growth in global cross-border banking activity which, with an interruption following the collapse of Long Term Capital Management (LTCM), has been rapid since the mid-1990s. Some individual OFCs have, in the process, become large international financial centres (Table 1). A substantial proportion of internationally active banks' off-balance sheet business, which is not covered by internationally compiled data, may also be conducted via affiliates located in OFCs.

This article is *not* concerned with the money laundering, tax competition or supervisory and regulatory issues which have sometimes been associated with some offshore activity. Instead, it focuses on whether the ability of OFCs to respond rapidly to the changing needs of international

**Chart 1:**  
**External business of BIS-area banks with OFCs**



Source: BIS.

markets means that data on OFC-intermediated business might provide an early indication of interesting developments in global finance. Because financial intermediation undertaken by entities based in many OFCs is almost entirely *'entrepôt'*, the pattern of financial flows through them may occasionally give a clearer reading of developments than data on flows through other international financial centres, such as London and New York, where activity related to the domestic economy is greater. Interpreting the available data entails looking at the types of financial transaction that lie behind the aggregate statistics; and considering what other financial activities, not captured by banks' balance sheet data, might involve intermediation via entities located in (or at least legally domiciled in) OFCs.

<sup>1</sup>: For example, see Buckle, Cunningham and Davis, 'A possible international ranking for UK financial stability' in the June 2000 *Bank of England Financial Stability Review*.

## What is an offshore financial centre?

An OFC may be defined as a jurisdiction in which transactions with non-residents far outweigh transactions related to the domestic economy. They have developed by offering an attractive tax, legal and/or regulatory environment. In particular, the absence of inheritance, wealth, withholding or capital gains taxes can make the environment in OFCs very favourable to, for example, internationally mobile individuals. Zero or low direct taxes can make it attractive for companies conducting business with non-residents to incorporate in OFCs. In a similar vein, the corporate legal environment may facilitate speedy adoption of new financial products or allow greater flexibility in restructuring and refinancing options. Political and economic stability and the presence of high quality professional (eg legal and accounting) and supporting services are also important in attracting business from other major financial centres.

A number of important OFCs are small island states, with few domestically owned financial institutions, a large number of 'brass-plate' institutions and little non-financial economic activity. The Cayman Islands and the British Virgin Islands are obvious examples (Table 2). But the distinction between OFCs and other financial centres is not clear-cut. Some countries – such as Hong Kong and Singapore – have a significant volume of entrepôt business alongside

domestically orientated financial intermediation. The term 'OFC' is, furthermore, sometimes also used in connection with special tax and/or regulation zones

**Table 1:**  
International financial centres ranked by banks' external assets: end-2000

US\$ billions	External assets
United Kingdom	2,095
Japan	1,199
Germany	975
United States	951
<b>Cayman Islands</b>	<b>782</b>
Switzerland	740
France	640
Luxembourg	510
Hong Kong	450
Singapore	424
Netherlands	290
Belgium	285
<b>Bahamas</b>	<b>276</b>

Source: BIS.

**Table 2:**  
Scale of international banking activities in selected financial centres

	GDP (latest available)	BIS banks' locational claims (end-2000)	
	US\$ billions	US\$ billions	Multiple of GDP
Bahamas	5.6	172	31
Bermuda	2.4	32	13
British Virgin Islands	0.3	25 <sup>(a)</sup>	86
Cayman Islands	0.9	482	518
Crown Dependencies	4.6	234 <sup>(b)</sup>	51
Luxembourg	19.3	245	13
Hong Kong	159	193	1.2
Singapore	85	221	2.6
United Kingdom	1,442	1,508	1.0
United States	9,152	2,096	0.2

Sources: BIS, World Bank, CIA and Bank of England.

(a) Banking data include claims on other jurisdictions in the British West Indies.

(b) Jersey, Guernsey and the Isle of Man. Banking data are total liabilities of banks and building societies to non-residents converted from sterling at the end-2000 rate of US\$1.4950/£.

that are established within the borders of a country to attract non-resident business (for example Labuan in Malaysia, or the International Financial Services Centre in Dublin).

The focus here is on the activities of the small island centres whose financial activities are almost exclusively *entrepôt*. Unless otherwise stated, aggregate data for OFCs include countries defined by the BIS as OFCs *but not* Hong Kong and Singapore<sup>2</sup>.

### Data sources

The BIS international banking statistics give only a partial picture of financial flows through OFCs – based on the on-balance sheet exposures of banks operating in the BIS area ('BIS banks') – but they nevertheless provide the most comprehensive source of timely information. BIS banks report two separate sets of quarterly international banking statistics: *locational data* and *consolidated data*. The *locational data*, on which Chart 1 and Table 1 are based, provide quarterly information about all on-balance sheet financial claims and liabilities *vis-à-vis* non-residents, including positions with foreign affiliates (branches and subsidiaries) of the reporting firm. The *consolidated data* cover only the assets side of the balance sheet and are compiled net of intragroup positions of banks whose head office lies within the BIS reporting area. Both series split claims between the bank and non-bank sectors, and the consolidated data further split the non-bank data between claims on the public and private sectors. Additionally, the BIS publish information that enables the consolidated data to be adjusted for reallocations of risk arising from the use of cross-border guarantees. Box 1 explains the main conceptual differences between the two series.

Other important sources of data on cross-border capital flows are commercial databases such as Capital Data's Bondware and Loanware and the TASS hedge fund database. The Capital Data databases contain borrower and instrument details on bonds, international equities and syndicated loans. Bondware covers a wide range of bonds (including fixed and floating rate, collateralised and convertible obligations) and international equities. The database provides information on, *inter alia*, a borrower's nationality, sector and credit rating, and on the

maturity, coupon, collateral and pricing of the instrument. Loanware provides a similar range of information on syndicated loans, commercial paper and other related banking instruments.

The TASS hedge fund database has details of assets under management, and the performance and strategies of around 2600 hedge funds managing over US\$200 billion. TASS estimate that their database covers over half of global assets under hedge fund management (estimated to be between US\$350 billion and US\$400 billion).

The other main sources of data on OFCs are the Edwards report (1998) and the KPMG report (2000) which were the culmination of reviews of financial regulation in the UK Crown Dependencies, Overseas Territories and Bermuda. They provide a snapshot (rather than a time series) view of activity, and clearly cover only a limited set of jurisdictions.

### Financial intermediation via OFCs

The three main kinds of financial activity conducted by entities based in OFCs are banking, fund management and insurance. Table 3 presents some estimates of the scale of these activities in four major OFCs.

Large numbers of foreign banks – banks with little or no presence in an OFC's domestic banking sector – are licensed in OFCs. The Cayman Islands, with 450 licensed banks and external assets of around US\$780 billion, is one of the world's largest banking centres. More than 200 banks are licensed in the Crown Dependencies. Banks incorporated in onshore jurisdictions often establish affiliates in OFCs to act as booking centres (that is, to serve as a registry for transactions arranged and managed in another country) and to provide private banking, trust and fund administration services to high net worth individuals. And some multinational corporates set up in-house offshore banks to handle foreign exchange operations or to facilitate the raising of finance.

OFCs are also large centres for the establishment and administration of mutual funds, with around US\$400 billion of assets under management. Mutual fund assets are however estimated at around

<sup>2</sup>: Aruba, Bahamas, Bahrain, Barbados, Bermuda, Cayman Islands, Lebanon, Liberia, Netherlands Antilles, Panama, Vanuatu and West Indies UK (comprising Anguilla, Antigua and Barbuda, British Virgin Islands, St Kitts and Nevis, and Montserrat). Claims on the Crown Dependencies – Jersey, Guernsey and the Isle of Man – are not included because the BIS statistics treat the Crown Dependencies as part of the United Kingdom.

## Box 1: The BIS international banking statistics<sup>1</sup>

The key difference between the BIS locational and consolidated data turns on the concept of residence. The *locational* statistics are concerned with the financial claims and liabilities of bank offices – both domestic and foreign-owned – operating within the boundaries of BIS reporting countries. Positions are recorded on a gross (unconsolidated) basis, and therefore include positions *vis-à-vis* foreign affiliates, so are consistent with national accounts, balance of payments and external debt statistics.

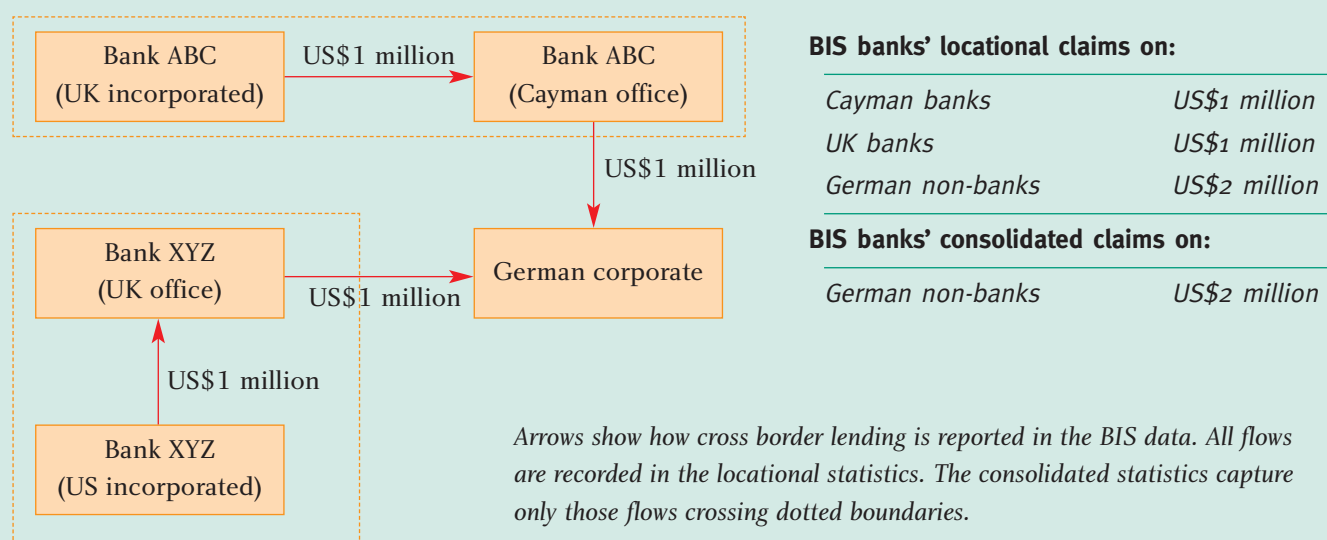
The *consolidated* data mainly comprise the cross-border financial claims of banks whose head offices are domiciled within the BIS reporting area, including the exposures of their foreign affiliates (subsidiaries as well as branches). These data are reported on a worldwide consolidated basis with inter-office positions netted out. The data also include international claims of BIS-area offices of non-BIS area banks reported on an unconsolidated basis, and the unconsolidated claims of foreign branches and subsidiaries of BIS-area banks on their home country.

Figure A illustrates how these differences are manifested in the published statistics. In this example, a UK-incorporated bank (Bank ABC) has routed a US\$1 million cross-border loan to a German corporate via its branch office in the Caymans. In the locational data, each leg of the loan is recorded. So UK-resident banks' claims on Cayman-resident banks and Cayman-resident banks' claims on German-resident non-banks both increase by US\$1 million.

In the consolidated data, the intrabank flow is consolidated out, so the data show only a UK bank claim on the ultimate recipient of the funds (the German corporate). Similarly, a loan from the London branch of a US bank (Bank XYZ) to a German corporate is recorded in the locational data as a UK bank claim on a German non-bank (plus an interbank claim from the US on the UK if the funds originated in the US), but as a US bank claim on Germany in the consolidated data.

Since 1999, a variant of the consolidated data (but not the locational data) has been published which reports information on the reallocation of claims via risk transfer instruments to the country of ultimate risk. The latter is defined as the country where the ultimate guarantor of a claim is legally resident. For example, if a UK bank loan to the German subsidiary of a US company is guaranteed by its parent in the US, the consolidated data will show a claim on Germany, whereas the *ultimate risk* data will take account of the guarantee and show the loan as a UK bank claim on the US. If the loan had been made by a US-resident bank, a cross-border exposure would be recorded in the consolidated series but not in the ultimate risk series. At present, some but not all types of risk transfer technique are covered in the BIS data; in particular transfers via credit derivatives (or via credit insurance) are not captured. This will have become a more significant gap in the data as the credit derivatives market has grown (Box 2).

**Figure A: Flows of funds and the BIS locational and consolidated data.**



<sup>1</sup> See BIS (2000) for further detail

**Table 3:**  
**Financial activities conducted in major OFCs**

US\$ billions (unless stated otherwise)	Bermuda	British Virgin Islands	Cayman Islands	Crown Dependencies
BIS locational claims <sup>(a)</sup>	32	25	482	21
BIS consolidated claims <sup>(a)</sup>	29	26	257	9
<b>Banking<sup>(b)</sup></b>				
Total assets	17	3	782	364
Number of licensed banks	3 banks	13 banks	450 banks	216 banks
<b>Fund management<sup>(b)</sup></b>				
Funds under management	37	55	196	103
Number of funds	1,301 funds	1,684 funds	2,298 funds	n/a
<b>Hedge fund activity<sup>(c)</sup></b>				
Assets under management	13	33	44	2
Number of funds	136 funds	204 funds	367 funds	31 funds
<b>Company incorporation and SPV activity</b>				
Number of special or no tax companies, '000s <sup>(b)</sup>	11	250	35	46
Collateral backed bonds	4	1	115	38
<b>Insurance<sup>(b)</sup></b>				
Insurance assets	132	n/a	10	33
Gross annual premia	30	0.25	n/a	9

Sources: BIS, Edwards (1998), KPMG (2000), TASS Research, Capital Data, Bank of England and Bermuda Insurance Institute.

(a) End-2000. Data for BVI include claims on other jurisdictions in the British West Indies. Data for Crown Dependencies are claims of UK-resident banks only.

(b) Data are for latest available period. Data taken from Edwards report are converted from sterling at the end-1997 rate of US\$1.6597/£.

(c) End-March 2001.

US\$12 trillion worldwide<sup>3</sup> so that OFCs account for only a small proportion of the total.

Hedge funds legally domiciled in OFCs hold around half of the hedge fund assets reported to TASS, with the British Virgin Islands and the Cayman Islands being the most popular locations. Management of hedge funds is often conducted in or near to major international financial centres (such as London or New York), but the funds themselves are frequently registered in OFCs.

Some OFCs – in particular, Bermuda – have extensive international insurance sectors comprising life assurance and reinsurance companies and also captive (in-house) insurance companies. Bermuda's insurance business originally developed in the 1960s

because of a favourable regulatory and legal environment. It is now a big centre with insurance assets totalling over US\$130 billion<sup>4</sup>, over 30 per cent of the world's captive insurance companies and some of the largest catastrophe reinsurers in the world.

In many OFCs, the low costs associated with setting up a company, coupled with a favourable tax environment, makes them attractive to company incorporation. For example, it has been estimated that 45 per cent of the world's international business corporations (which are used exclusively as offshore vehicles) are incorporated in the British Virgin Islands (KPMG (2000)). One of the most rapidly growing uses of such companies in recent years has been as special purpose vehicles (SPVs) which are used by non-financial corporations to lower the costs of

3: Investment Company Institute, [www.ici.org](http://www.ici.org).

4: Bermuda Insurance Institute, [www.bermuda-insurance.org](http://www.bermuda-insurance.org).

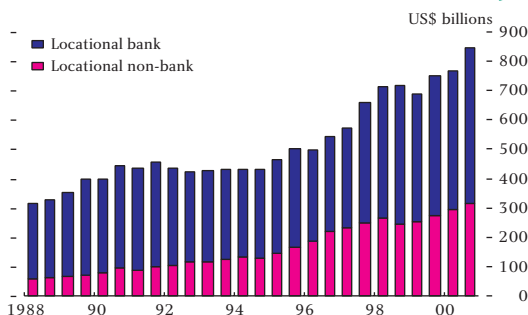
raising finance, and by financial institutions for securitisations. Around one quarter by number of international securitisations are conducted via OFCs (including the Crown Dependencies).

### Interpreting the data on financial flows through OFCs

How far can available data be used to track the significance of intermediation via OFCs? As already noted, BIS-bank cross-border (locational) lending to institutions located in OFCs almost doubled between end-1990 and end-2000 to around US\$850 billion. BIS-banks' gross consolidated claims on entities based in OFCs rose even more rapidly, increasing by 160 per cent over the decade to US\$424 billion. Locational and consolidated claims both grew particularly strongly between 1995 and 1998 but fell in early 1999 in the aftermath of the Russian and LTCM crises<sup>5</sup> (Charts 2 and 3).

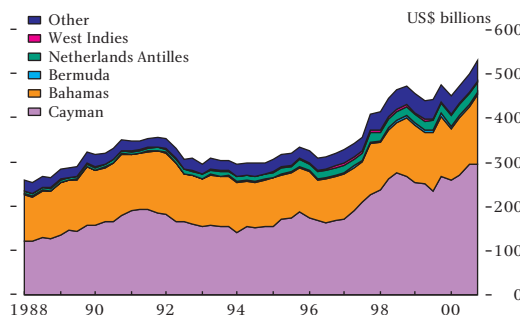
The BIS data can be analysed in several different ways: for example, by the OFC in which the borrower is domiciled, by the type of borrower and by the country of the lender<sup>6</sup>. As Charts 4 and 5 show, the rapid growth in the mid-1990s can largely be attributed to increased lending to non-banks and, in particular, to non-banks domiciled in the Cayman Islands. The Cayman Islands account for around 60 per cent of total consolidated and locational claims on OFCs. A further 20 per cent of locational claims on OFCs are claims on entities based in the Bahamas, but the islands' share of consolidated claims on OFCs is only 5 per cent. This suggests that financial intermediation conducted via the Bahamas is of a quite different nature to that conducted via the Caymans. As the following section shows, the data reflect the prevalence of intragroup booking activity in the Bahamas. The most rapid growth has been in claims on entities based in Bermuda and the

**Chart 2:**  
Locational claims on OFCs bank/non-bank split



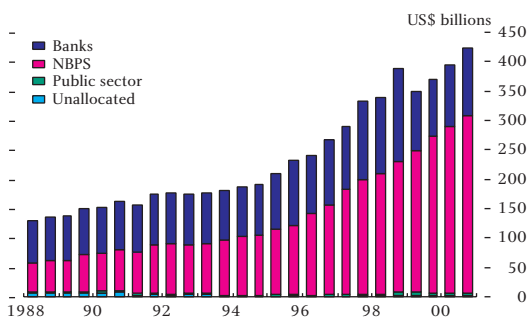
Source: BIS.

**Chart 4:**  
BIS banks' locational claims on OFC resident banks



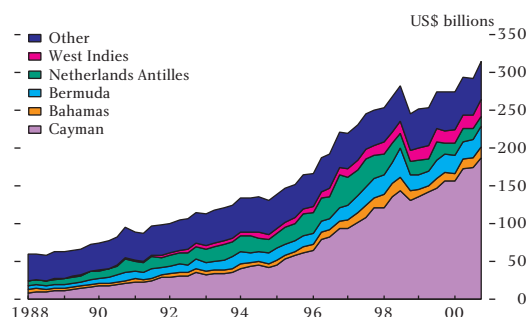
Source: BIS.

**Chart 3:**  
Consolidated claims on OFCs by sector



Source: BIS.

**Chart 5:**  
BIS banks' locational claims on OFC resident non-banks



Source: BIS.

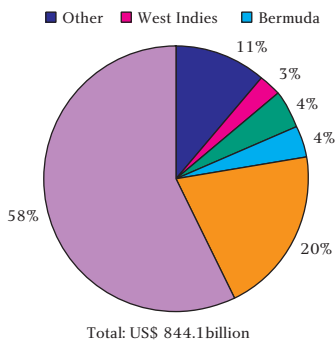
5: The consolidated claims data are distorted by a statistical break in early 1999. For this reason, the article focuses primarily on locational data.

6: The breakdown of the locational data by creditor country is not, at present, published by the BIS.

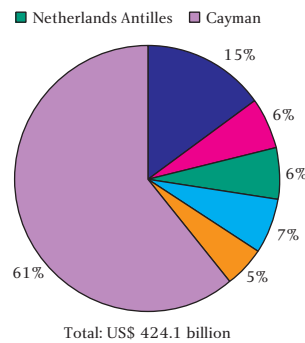
**Chart 6:**

**BIS banks' total claims on individual OFCs**

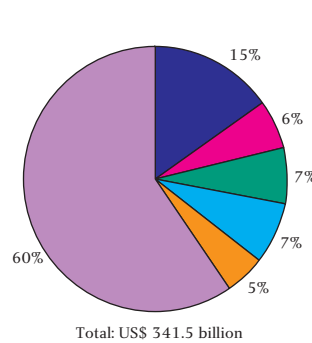
**Chart A: Locational**



**Chart B: Consolidated**



**Chart C: Ultimate risk**



Source: BIS.

West Indies (predominantly the British Virgin Islands), albeit from a lower base.

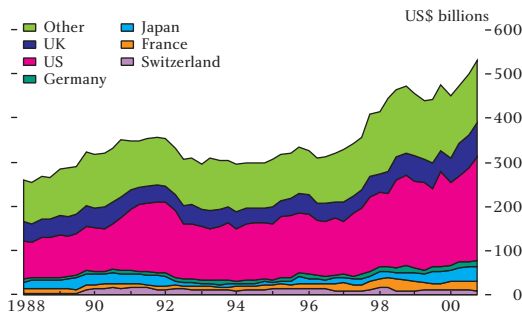
When monitoring the pattern of exposures in the international financial system generated by activity in onshore jurisdictions, consolidated claims provide an estimate of overall bank exposures to a country. The rationale for looking at exposures in this way is that the ultimate risk of a claim on a given country lies with an enterprise resident in that country and hence sensitive to the health of the domestic economy<sup>7</sup>. But this is not the case for OFCs. The small size of OFCs' domestic economies makes it highly unlikely that the ultimate risk of a claim on an OFC arises from domestic economy activity. The ultimate risk data support this hypothesis. Approximately one-quarter of consolidated claims on entities based in OFCs are guaranteed by an entity in another country. There is no clear pattern to the geographic distribution of these guarantees so the market shares of individual

OFCs in the ultimate risk series are broadly similar to those in the consolidated data (Charts 6a-6c).

Banks operating in the US account for around one-third of all locational claims on OFC based banks, but only 13 per cent of locational claims on non-banks and 7 per cent of total consolidated claims (Charts 7 and 8). Japanese and German banks, on the other hand, have a larger share of consolidated claims on OFC domiciled entities than of locational claims (Charts 9a-9b). Indeed, the stock of German banks' consolidated claims is markedly larger than their locational claims. Japanese banks account for much of the growth in, and over one quarter of the stock of, locational claims on the non-bank private sector: one possible explanation for this growth is Japanese banks' SPV activity. These differences may reflect an increased tendency on the part of US banks to route intrabank flows through OFCs for tax or other reasons. But they might also

**Chart 7:**

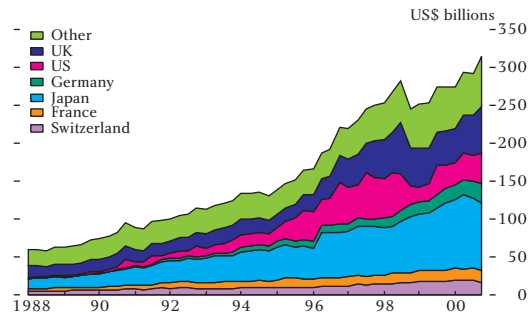
**BIS banks' locational claims on OFC banks by creditor country**



Source: BIS.

**Chart 8:**

**BIS banks' locational claims on OFC non-banks by creditor country**

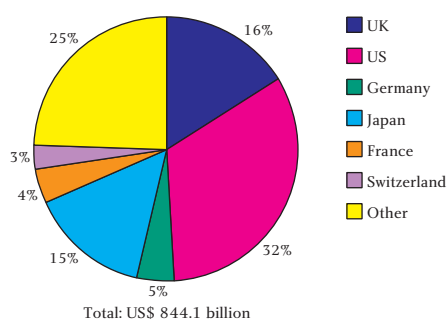


Source: BIS.

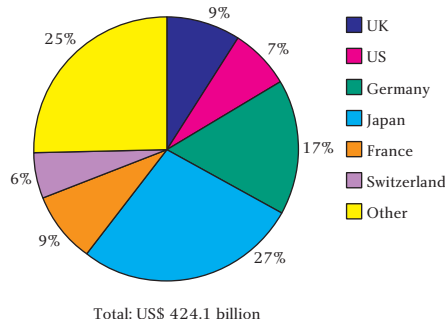
7: For example, see Buckle, Cunningham and Davis (2000).

**Chart 9:**  
**BIS banks' total claims on OFCs by nationality of creditor**

**Chart A: Locational**



**Chart B: Consolidated**



Source: BIS.

suggest that intermediation via OFCs of banks headquartered outside the US is conducted through their US affiliates.

Useful information can potentially be derived from analysis of changes in banks' balance sheet exposures, particularly if used in conjunction with other data sources and market intelligence. Some examples are considered in the following sections.

#### (i) Banking

Almost two-thirds (US\$500 billion) of BIS-banks' locational claims on OFCs are claims on the banking sector. Whereas claims on non-banks domiciled in OFCs rose by 275 per cent during the 1990s, claims on banks were broadly stable until the mid-1990s but then rose by around 50 per cent between 1997 and 2000 (with a pause in growth in late 1998 and early 1999).

The existence of private banking services means that some offshore banks have large balance sheets in their own right. For example, banks in the Crown Dependencies take deposits from non-bank non-residents and place them (probably immediately) in the interbank market, either in London or elsewhere (Table 4).

Many of the banks licensed in OFCs are, however, 'brass-plate' – that is, they have no physical presence in the OFC and conduct their operations out of New York, London or elsewhere. And a comparison of the consolidated and locational claims suggests that up to 80 per cent of the interbank flows via offshore banks may simply be activity between institutions within the same banking group (Chart 10)<sup>8</sup>. In the Bahamas, which is used as a booking centre by many banks, around 85 per cent of all cross-border intermediation is estimated to be intra-banking group activity. Banks route their cross-border lending via

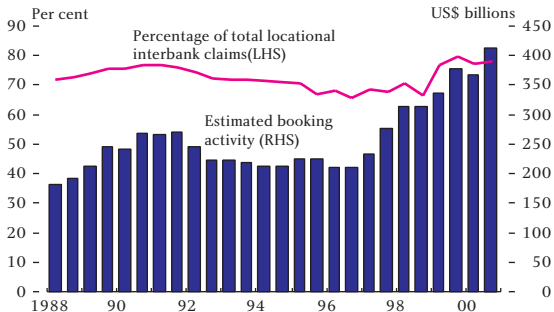
**Table 4:**  
**Aggregate balance sheet of banks<sup>(a)</sup> in the Crown Dependencies: end-2000**

Liabilities		Assets	
US\$ billions			
Deposits	315	Loans and advances	301
Domestic residents	81	Domestic residents	32
UK residents	51	UK residents	159
Other non-residents	182	Other non-residents	110
<i>o/w from banks</i>	<i>59</i>	<i>o/w to banks</i>	<i>273</i>
Other liabilities	49	Other assets	63
Total liabilities	364	Total assets	364

Source: Bank of England.  
 (a) Includes building societies.

<sup>8</sup>: Differences in reporting population and breaks in series mean that the two series are not directly comparable.

**Chart 10:**  
**Estimated intragroup bank booking activity via OFCs<sup>(a)</sup>**



Source: BIS.

(a) Booking activity defined as locational claims on banks less consolidated claims.

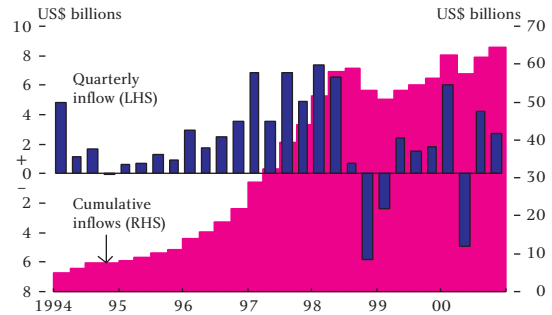
offshore centres partly because OFCs offer a tax-efficient way to co-ordinate activities conducted across many jurisdictions. Such activity should be relatively well insulated from the sovereign risk of the OFC because it could, if necessary, be rerouted through other financial centres at relatively little cost<sup>9</sup>.

## (ii) Hedge funds

The development of hedge funds provides an example of how monitoring financial flows through OFCs could occasionally signal a change in financial activity and prompt further investigation. At first glance the similarity between the cumulative inflows into hedge funds reporting to TASS and locational claims on OFC non-banks is striking. Around US\$60 billion (excluding asset revaluations) flowed into hedge funds between 1994 and the third quarter of 1998 (Chart 11). Investors withdrew over US\$8 billion in the immediate aftermath of the LTCM crisis. Inflows resumed within six months but at a somewhat moderated rate. Cumulative inflows since the LTCM episode have been around US\$25 billion. (The US\$5 billion outflow in the second quarter of 2000 probably reflected the closing down of the funds of Tiger Investment Management and the restructuring of Soros Fund Management.)

How might the growth in hedge fund activity be reflected in international banking system claims on OFCs? Hedge funds' investment strategies often involve leverage. If a fund resident in an OFC achieves its desired leverage ratio by borrowing from a lender (whether a bank or prime broker<sup>10</sup>) that reports data to the BIS, this will be reflected in an increase in

**Chart 11:**  
**Quarterly investor flows<sup>(a)</sup> into hedge funds**



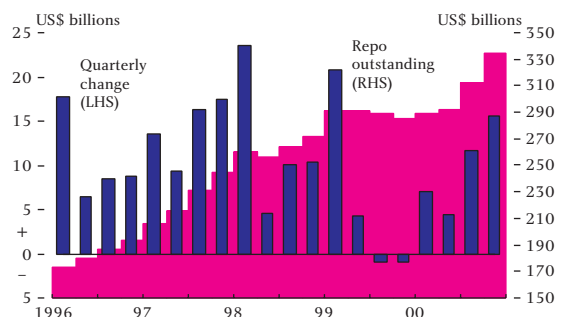
Source: TASS.

(a) Flows are money flowing into/out of the industry. Revaluation effects are not included.

claims on the OFC in which the hedge fund is domiciled. The amount of leverage individual hedge funds use depends on their investment strategies, and information about LTCM and anecdotal evidence suggests that hedge fund leverage rose sharply in the lead up to the LTCM episode, falling thereafter.

With the data available, it is hard to draw clear conclusions about the behaviour of particular groups of financial intermediaries, still less of individual firms. But the increase in aggregate BIS claims on OFCs, alongside anecdote and data showing rapid growth in hedge fund assets and the sharp rise in reverse repo lending by UK-resident banks to non-residents (Chart 12), are consistent with the kind of geared positions that were being built up during the mid to late-1990s. This is perhaps enough to suggest that, as part of official surveillance of potential financial stability risks, a macroprudential approach

**Chart 12:**  
**UK banks' claims under repo transactions with non-residents<sup>(a)</sup>**



Source: Bank of England.

(a) Gilt repo introduced in January 1996.

<sup>9</sup>: Reflecting this, Moody's assigns offshore banks a rating ceiling that is significantly higher than the country's sovereign ceiling (Moody's (1997)).

<sup>10</sup>: Some large prime brokers are securities dealers rather than banks and so are not covered by the BIS banking data.

to analysing banking system data can usefully complement – and inform – market intelligence work.

**(iii) Securitisations**

Hedge funds are not the only non-bank financial institutions located in OFCs to which BIS-area banks lend. The growth in the use of special purpose vehicles for securitised financing might also be reflected in flows of funds to OFCs.

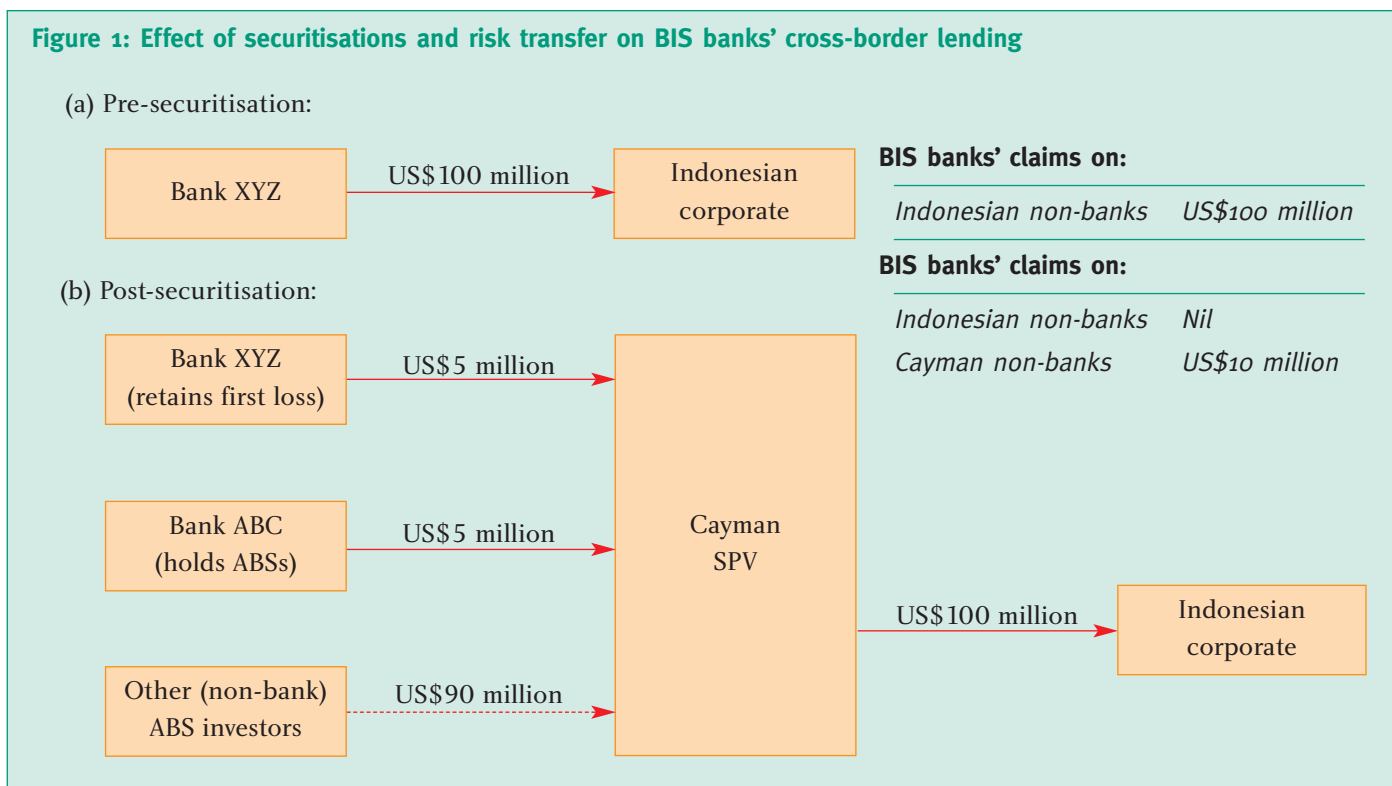
The use of SPVs for secured borrowing by non-financial corporations<sup>11</sup>, whether via loans or publicly issued bonds, will be directly reflected in the BIS data: banks extending finance to such vehicles will record their claim as an exposure to the non-bank private sector in the OFC where the SPV is incorporated.

Asset backed securities (ABSs) are typically issued to move loans *off* a bank’s balance sheet; but a securitisation through an SPV located in an OFC could nevertheless lead to an increase in banking system claims on OFCs. How? First, if the originating bank provides (funded) credit enhancement<sup>12</sup> to the SPV, it will have a claim on the SPV on its balance

sheet. This will be recorded as cross-border lending to the OFC where the SPV is registered, not as a claim on the (onshore) jurisdiction where the loans originated. Second, if other banks purchase some proportion of the ABSs issued, these purchases will also be recorded as a claim on the SPV, and hence lead to an increase in claims on OFCs.

The flows of funds arising from SPVs might be interesting from a financial stability perspective because they represent transfers of risk. Take, as an example, the case of a US bank that securitises a loan to an Indonesian corporate via an SPV located in the Cayman Islands (Figure 1). Prior to the securitisation, the ultimate risk of the loan is borne by the US bank; this would be reflected in the BIS statistics (both locational and consolidated series) as a US claim on the Indonesian non-bank sector. Post-securitisation, the loan becomes an asset of the Cayman SPV and the credit risk is transferred to the purchasers of the asset-backed securities. If the originating bank retains the most junior tranche of the securitisation and/or other BIS banks buy some of the ABSs, a proportion of the ‘loan’ will continue to be captured in the total cross-border lending figures. But it will now be

**Figure 1: Effect of securitisations and risk transfer on BIS banks’ cross-border lending**



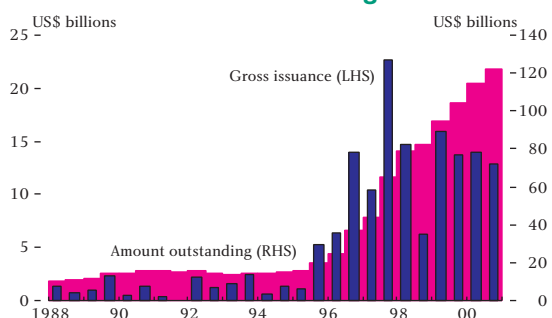
<sup>11</sup>: A typical example of a corporate financing SPV might be an entity created by a shipping company to raise finance for a ship. The company transfers ownership of the ship to the SPV to use as collateral against its borrowing – so the SPV’s balance sheet comprises only the ship and the loan used to finance it – then the SPV leases the ship back to its parent company using the rental income to service the loan. By ringfencing assets in this way, the company can benefit from cheaper financing.

<sup>12</sup>: If credit enhancement is provided via a credit derivative, it will not be reflected on-balance sheet.

recorded as an exposure to a Caymans-based non-bank, not as lending to Indonesia. The SPV's claim on the Indonesian corporate is not reflected in the BIS statistics because the SPV is not a bank. Moreover, holdings of ABSs by investors other than BIS banks will also not be captured in the BIS data. So the securitisation may give the impression that the indebtedness of the Indonesian corporate sector has fallen. The reality, however, is that the level of Indonesian corporate debt is unchanged<sup>13</sup>, but it is now more difficult to identify who bears the credit risk.

Whether or not this is significant to macroprudential surveillance clearly depends on the scale of such securitisation activity. In fact, anecdotal evidence and capital issues data suggest that it has increased rapidly in recent years. According to Capital Data, amounts outstanding of securities backed by some form of collateral issued by OFC-domiciled entities increased from around US\$10 billion in 1990 to around US\$115 billion at end-2000<sup>14</sup>. Gross half-yearly issuance peaked at US\$22 billion in the second half of 1997 (Chart 13) but has subsequently stabilised at a somewhat lower level. The concomitant increase in claims on OFCs is consistent with some of the credit risk associated with the underlying loans being retained on the originating bank's balance sheet and/or being transferred to other BIS banks via their purchases of ABSs. In particular, the increase in Japanese banks' claims on the Cayman Islands coincides with their efforts to restructure their balance sheets by securitising loans via SPVs

**Chart 13:**  
**Securities with collateral backing issued via OFCs<sup>(a)</sup>**



Source: Capital Data.

(a) Including, *inter alia*, receivable and mortgage backed securities, collateralised bond obligations (CBOs) and collateralised loan obligations (CLOs).

located there. Anecdotal evidence (BIS (2000a)) also suggests that Japanese investors, including other banks, purchased most of the securities issued by the SPVs.

Data on capital issues, when put alongside BIS international banking statistics, can therefore provide some insight into the pattern of global flows of funds. Even if the result is a puzzle, it may help to identify puzzles that are worth exploring in market intelligence work. But the increasing number of ways in which risk can be transferred – some of which do not involve flows of funds – make the task more complex (Box 2). This remains a challenge for further work and raises issues about what data should be collected by the international agencies.

## Conclusions

Data on financial intermediation via entities based in offshore financial centres may occasionally be able to provide some insight into developments in international finance because the information contained in them is not obscured by the 'noise' of the domestic economy. The rapid growth in cross-border bank lending between 1995 and 1998 – which may have been linked with the growth in macro hedge fund activity – is one possible example. Banks' balance sheet data can, however, give only a partial picture of the range of financial intermediation conducted via OFCs. Insurance companies, institutional investors and high net worth individuals all have substantial exposures to institutions located in OFCs, but there are no sources of timely data that will enable a complete risk assessment of their activities. Moreover, recent innovations in risk management techniques and increased use of off-balance sheet instruments – such as credit derivatives – mean that risk transfers are increasingly occurring without flows of funds. Nevertheless, a macroprudential approach to analysing banking system exposures to entities based in OFCs can be a useful complement to market intelligence work in analysing potential risks to the international financial system.

<sup>13</sup>: Information on the true level of corporate indebtedness is available from debtor-side statistics, such as the World Bank Global Development Finance statistics, but is subject to a long time lag.

<sup>14</sup>: This is likely to understate the total volume of such issuance owing to the scarcity of information on private placements.

## Box 2: Limitations of existing data sources

Increasingly, flows of risks are not reflected in balance sheet positions or indeed even accompanied by flows of funds. Often, the risks to institutions are off-balance sheet or contingent in nature.

Perhaps the clearest example is the use of derivatives, which are associated with substantial reallocations of risk but small flows of funds (option premiums or margin payments only). The BIS estimated the notional value of OTC derivative contracts outstanding at end-June 2000 to be US\$94 trillion. The market value of these contracts was estimated to be US\$2.6 trillion. About one-third of these contracts were with counterparties who did not themselves contribute to the survey (ie they were non-banks, or they were domiciled outside the BIS area, or both). No geographical breakdown of derivatives exposures is available at present but this residual is likely to include firms based in OFCs. Hedge funds, in particular, may be active participants in OTC derivatives markets. Onshore companies that are prohibited from derivatives trading may establish affiliates offshore to undertake trading for them. Given the size of these off-balance sheet positions and their growth in recent years, current efforts to assemble better information on these exposures are important from the viewpoint of assessing potential systemic risks.

Credit derivative activity, in particular, is weakening the relationship between flows of funds and risk transfers. The article *'The credit derivatives market: its development and possible implications for financial*

*stability'* in this Review explores some of the financial stability issues associated with this rapidly growing phenomenon. Anecdotal evidence suggests that reinsurance companies – including those in OFCs – are becoming established as active sellers of credit derivatives, as well as purchasers of credit-linked notes, building on their presence in the related credit insurance market. Such movements of credit risk from the banking system to the wider financial system cannot be detected by monitoring banks' balance sheet data or capital market issuance data.

Against this background, the Committee on the Global Financial System (CGFS), which has a close policy interest in the BIS international banking statistics, have proposed that the consolidated statistics be developed to make them more consistent with banks' own risk management systems (BIS (2001)). In particular, they have recommended that the statistics be restructured so that they more fully reflect contingent sources of borrowed funding – including off-balance sheet contracts – and hence credit risk. An additional area of data that could contribute to the efficacy of macroprudential surveillance would be information on financial intermediation via special purpose vehicles.

The insurance industry, more generally, is characterised by risk transfers and contingent financial liabilities. This is another area in which OFC-based entities are active. But at present there are no aggregate data on the financial positions of insurance companies, offshore or onshore.

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