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Global Booking: Implications for Financial Derivatives Statistics

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GLOBAL BOOKING: IMPLICATIONS FOR FINANCIAL DERIVATIVES STATISTICS

Introduction

1. This paper describes the effect of global booking on locational financial derivatives statistics contained within the Balance of Payments and National Accounts. Global booking refers to the practice, by some financial intermediaries, of recording the balance sheet positions arising from trades undertaken in one location to a centralised 'book' located in a part of the organisation with a different residency status. The paper has been prepared by the Bank of England at the request of the BoP Statistics Committee. BOPCOM 98/1/14¹ last year presented an update on the collection of financial derivative statistics in UK. Discussion centred around the issue of global booking, and the extent to which it might cause over- or under-recording of contracts. We were asked to prepare a paper on the outcome of further investigation.

Summary

2. Global booking can be linked to the more general question of banks' derivatives data quality and in particular the issue of counterparty identification. This is problematic for banks and when linked to the issue of global booking could present problems with the aggregate data. However, based on our own research with banks and other financial institutions we can draw the following conclusions:

- we have found that **most institutions are using their aggregate gross positions data and constraining their counterparty data to them.**
- while **the effect of a classification error** on net positions could be significant, **the impact on gross positions** (the basis on which banks provide the information) **is likely to be small.**
- **the Bank of England has been broadly encouraged by its investigation into the issue of global booking:** we feel that institutions are unlikely, solely based on global booking, to misreport data in such a way as to question the validity of the overall statistics for the UK.

Background

3. The Bank of England collects information on banks' positions in financial derivatives through a quarterly survey (described in BOPCOM 98/1/14). This covers 90% of reported positions and is grossed to account for the rest of the population. In July 1999 the Bank published a table

¹ See the IMF paper (reference BOPCOM 98/1/14) "Collecting Financial Derivative statistics in the United Kingdom." This is available on the IMF website (www.imf.org/external/bopage/agenda.htm).

based on these data - UK banks gross assets and liabilities in financial derivatives, by product, risk and counterparty.² The table is given in the Annex.

4. Banks can organise their financial derivatives business in a variety of ways, partly encouraged by the increasing globalisation of markets and partly by the advantages of pooling and netting positions. Some banks record the majority of their group financial derivatives business in one location while other banks record certain types of contracts in one location and others in different locations. In addition trades could be carried out in one centre on behalf of another part of the organisation (often located abroad).

How does *global booking* occur?

5. As defined in the introduction global booking refers to how banks choose to structure their worldwide derivatives activities. Global booking can occur either by a series of offsetting trades between a counterparty, a branch and its non-resident parent, or by a direct contractual relationship between the counterparty and the non-resident parent arranged through the branch. The nature of derivative instruments whereby risk can be bought or sold by entering into a *new* contract with a counterparty allows both proprietary trading and/or rationalisation of financial derivatives business into one centre to occur. Conventional financial instruments, such as equities or bonds, can only transfer risk³ by the issuance, purchase or sale, of the instrument. An important issue, not considered in this paper, is whether global booking occurs for other kinds of financial instruments.

6. Global booking is further complicated by a number of banks which have centralised their back office and settlement functions. In such circumstances all business for the branch is *administered* through the non-resident parent **although this business remains on the balance sheet of the branch concerned** - the shared global back office is purely administrative.

Global Booking - an example of different structures

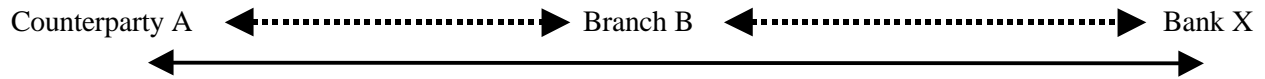
7. The key question is how counterparties to such trades record the position on their balance sheets and who do they records as their counterparty. This is illustrated in the example below:

Counterparty A enters into a contract with bank B. Bank B is a branch whose non-resident parent, X, centralises the group derivatives activity in its home country. Thus the contract will eventually be repatriated to the country where bank X is resident. This paper examines two potential ways this trade could be structured and recorded:

² See the article "New data on financial derivatives for the UK National Accounts and Balance of Payments" by Andrew Grice in the Bank of England publication "Monetary and Financial Statistics," July 1999. This is available on the internet at www.bankofengland.co.uk/mfsd/latest.htm

³ Some market participants can short sell bonds or equities they do not own and thus take on risk on an instrument they do not own.

Case (a): Branch B acts as a postbox; the contractual relationship is between A and X:



8. In this case the counterparty A approaches branch B (dotted line) to enter into a contract. Branch B liases with its parent, bank X (second dotted line) and **bank X** agrees to take the trade onto its balance sheet. Thus the contractual relationship is between counterparty A and bank X (bold line).

9. The concern here is how counterparty A records this trade. Would it consider the contract to be a trade with branch B (with whom most, if not all of its contact has been made) or with bank X? In practice the contract will specify not only the counterparty, but also where that counterparty is based. In this case counterparty A should record the trade as occurring with bank X not branch B. Branch B would not record the contract on its book.

Case (b): Branch B enters into a contract with counterparty A and an offsetting contract with bank X



10. In this case counterparty A enters into the same contract with branch B (first bold line). Bank X still has a policy to centrally pool all its group's derivatives positions. Thus branch B will enter into an equal but offsetting contract with its non-resident parent, bank X (second bold line). For branch B, its net position is zero and for counterparty A and bank X, their effective credit risk position is as in Case (a) above.⁴ For Case (a) only one contract is used so the gross asset and liability positions are smaller than in Case (b) but the overall net position is the same for both.

11. However for locational statistics the two methods are different. In Case (a) counterparty A has a position with a non-resident while in Case (b) A has a position with a resident. Another major difference between the two methods is that, for Case (b), two contracts are used which has the effect of increasing both gross assets and gross liabilities (as there are twice as many contracts) and changing the resident/non resident splits. Branch B also has two offsetting contracts on its books which has an impact on the domestic sectoral splits.

12. The issue here is not the classification of the counterparty (in this case all parties are assumed to be able to classify counterparties correctly - although see Para 15 below) but rather the true size and nature of the derivatives activity in the market as a whole. What is the effect on

⁴ For A, while its credit risk is with branch B, if it defaulted bank X would be expected to meet its obligations because the branch has no separate legal identity from the parent. This situation could be different if B was a subsidiary because it has a legal status in its own right.

the net asset/liability position of the country? UK banks can have large net asset or liability positions whose counterparty is on the balance sheet of a non-resident (but associated) enterprise. This has follow on implications for the interpretation of locational statistics. Banks normally correctly report non-resident business (these data being required for regulatory purposes). Thus the validity of the aggregates is not in question, only their interpretation. Statistics collected from resident banks (ie branch B in the examples above) will correctly exclude Case (a) contracts and include Case (b) contracts.

13. The example above can be simpler than market practice. In Case (b) the branch could wait until the close of business, pool together all its derivatives business in that risk area and then enter into one (very large) offsetting contract with its head office.

Quality of reporting by banks

14. An issue linked to global booking is the quality of the data that banks are able to provide. Research by the Bank of England has suggested that for the three ways of classifying derivatives data - by risk category (interest rate vs. foreign exchange), by product (futures vs. options), or by counterparty (bank, other financial corporation or non-financial corporation) - the counterparty data are the least accurate. Risk and product data are required for supervisory and regulatory reporting and thus easily available for locational statistical enquires.

15. Counterparty statistics are problematic because the data do not easily fall out of banks compilation systems. We have found that some banks use estimates to provide these data. Other banks have informed us that they have problems correctly classifying the sector of their counterparty. For example two counterparties within the same banking group, one a bank and one a security dealer, may have similar names. Positions could be misclassified because a bank's accounting system would not need to know whether their counterparty is a bank or security dealer - only who it is. Thus these errors can have an impact on the quality of the aggregate statistics.

16. The issue of global booking is linked to this question of data quality. By itself we do not think global booking would have a significant impact on the analysis of data, other than the ability for banks to have unexpectedly large net asset or liability positions. However when associated with the issue of the quality of counterparty statistics, the potential impact on sectoral splits could be large.

Missing data

17. An additional concern in the United Kingdom arises from the importance that is placed on the counterparty data in order to quantify the activity of non-financial corporations in the derivatives market. In the UK the major participants in the derivatives market are banks and financial corporations and they are surveyed directly about their derivatives activities (see BOPCOM 98/1/14). However it is possible for a non-financial corporation to enter into a contract with a non-resident bank with the UK branch acting as postbox (as in Case (a) above). In this case the contract will only be picked up in the UK Balance of Payments if the non-financial corporation reports it. In the United Kingdom no such survey is carried out and so this

derivatives activity would not be included within the UK National Accounts. This is unlikely to be significant.

18. The mirror image of this issue, where a UK parent bank reports business generated through its non-resident branch, is less controversial from the UK perspective. The UK bank should correctly report this business (and the counterparty) on its derivatives return and so, for UK statistics, a true picture is gained. However there is an impact on the analytical usefulness of the data.

UK/Bank of England

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Liabilities by product and risk category

	Product							Risk			Total liabilities
	Options	Futures & forwards	Swaps	FRAs ^(a)	Commodity/equity	Credit Derivatives	Other	Interest rate	Foreign exchange	Other ^(b)	
DWQ	TADB	TADC	TADD	TADE	TADF	TADG	TADH	TACS	TACU	TACW	TADA
1998 2nd	46 906	102 609	388 841	4 751	80 920	1 824	21	330 918	212 211	82 745	625 874
3rd	49 198	96 845	437 363	6 332	66 969	1 466	50	380 266	209 522	68 435	658 224
4th	41 843	88 869	426 656	6 782	81 216	918	28	396 359	167 819	82 134	646 312
1999 1st	39 221	65 179	431 802	5 201	71 146	411	68	388 346	153 125	71 557	613 027

Assets by product and risk category

	Product							Risk			Total assets
	Options	Futures & forwards	Swaps	FRAs ^(a)	Commodity/equity	Credit Derivatives	Other	Interest rate	Foreign exchange	Other ^(b)	
DWQ	TADJ	TADK	TADL	TADM	TADN	TADO	TADP	TACT	TACV	TACX	TADI
1998 2nd	45 060	104 629	389 339	5 694	66 389	1 965	18	321 652	223 086	68 354	613 093
3rd	48 001	98 033	444 209	6 634	50 565	1 826	56	388 341	208 591	52 391	649 324
4th	40 299	91 427	432 624	8 024	68 266	452	24	403 548	168 850	68 718	641 116
1999 1st	36 663	67 609	447 106	5 860	60 214	331	24	401 172	156 090	60 545	617 807

Liabilities by counterparty

	Counterparty						Total liabilities
	UK banks & building societies	UK public sector	Other financial corporations	Other UK residents	Non-resident banks	Other Non-Residents	
DWQ	TAEB	TAEC	TAED	TAEE	TAEF	TEAG	TAEA
1998 2nd	111 703	608	93 856	9 434	281 485	128 789	625 874
3rd	123 441	240	104 140	14 315	274 039	142 049	658 224
4th	132 683	115	110 955	6 988	287 377	108 192	646 312
1999 1st	123 373	125	102 945	9 176	272 884	104 524	613 027

Assets by counterparty

	Counterparty						Total assets	Net assets
	UK banks & building societies	UK public sector	Other financial corporations	Other UK residents	Non-resident banks	Other Non-Residents		
DWQ	TAEI	TAEJ	TAEK	TAEL	TAEM	TAEN	TAEH	TAAL
1998 2nd	115 382	1 010	85 974	9 163	273 026	128 538	613 093	- 12 782
3rd	124 654	453	97 381	15 551	274 829	136 456	649 324	- 8 900
4th	135 412	261	103 248	8 514	285 543	108 138	641 116	- 5 196
1999 1st	127 949	246	102 240	9 933	267 644	109 794	617 807	4 779

Notes to table

- (a) FRAs are "Forward Rate Agreements".
 (b) This "Other" category comprises credit derivatives, commodity derivatives and equity derivatives.