

GAO

Briefing Report to the Chairman,  
Subcommittee on Financial Institutions  
Supervision, Regulation and Insurance,  
Committee on Banking, Finance and  
Urban Affairs, House of Representatives

March 1988

## BANKING

# Off-Balance-Sheet Activities



RESERVED FOR THE  
ACCOUNTING OFFICE  
by the Office of Congressional Oversight



United States  
General Accounting Office  
Washington, D.C. 20548

General Government Division

B-229166

March 17, 1988

The Honorable Fernand J. St Germain  
Chairman, Subcommittee on Financial  
Institutions Supervision, Regulation  
and Insurance  
Committee on Banking, Finance and  
Urban Affairs  
House of Representatives

Dear Mr. Chairman:

In response to your July 22, 1986, request, this report provides information on the extent, risks, and complexities of off-balance-sheet (OBS) activities conducted by commercial banks. These activities, which essentially represent large contingent liabilities that are not recorded on bank balance sheets, have grown tremendously in recent years. In June 1987, the amount of OBS activities reported to regulators exceeded \$3.1 trillion, most of which could be attributed to banks with assets of at least \$10 billion.

The OBS activities that we discuss in this report are grouped into three broad categories: commitments, guarantees, and market-related transactions.

- Commitments generally involve a bank's commitment to extend credit at some time in the future and include loan commitments, revolving underwriting facilities, and, in an indirect form, daylight overdrafts resulting from electronic funds transfers.
- Guarantees are activities in which a bank guarantees the obligations of a customer to a third party and include standby letters of credit.
- Market-related transactions consist of various types of investments and other instruments and include: interest rate swaps, in which two parties exchange each others' interest payments while retaining the underlying debt; currency swaps, which entail the exchange of different currencies; and financial futures and options contracts, which are essentially either a commitment to buy or to sell a financial instrument at some future date.

RESULTS IN BRIEF

The exact amount of commercial bank OBS activity today is unknown because current accounting conventions do not require banks to include all these activities in their published financial statements.<sup>1</sup> Those that are included in the Reports of Condition and Income (Call Reports), which are submitted by banks to their federal regulators, totaled \$3.1 trillion as of June 30, 1987. This amount represented 107.8 percent of bank assets and 1,791 percent of bank equity capital.

Although the volume of OBS activities is large and has become a major aspect of commercial banking, federal bank regulators agree that the dollar volume alone is not a good indicator of banks' risk exposure. They said that, in principle, the risks associated with OBS activities, including credit risk, liquidity risk, interest rate risk, and market risk, are not different from those associated with on-balance-sheet activities. Determining risk exposure is difficult, however, because OBS activities are complex, new, and evolving, and because reporting is incomplete. External factors, such as fluctuating interest rates and foreign exchange rates, may also affect the outcomes. Nevertheless, the recent growth of OBS activities has increased concerns among regulators and they have issued proposals to factor the risks into minimal capital requirements for banks.<sup>2</sup>

---

<sup>1</sup>Banks must disclose the nature and extent of contingent liabilities in a financial statement footnote if the amount of potential loss can be estimated.

<sup>2</sup>Federal Reserve System (FRS), 12 CFR Part 225, Appendix A, [Regulation Y; Docket No. R-0567] Capital Maintenance, Revision to Capital Adequacy Guidelines. The initial FRS risk-based capital system was proposed in January 1986. The 1987 proposal includes adjustments based on FRS discussions with the Comptroller of the Currency (OCC) and the Federal Deposit Insurance Corporation (FDIC), public comments on the initial proposal, and consultation with Bank of England. In late January 1988, the FRS said that it would soon issue for public comment a revised risk-based capital proposal, developed in conjunction with OCC and FDIC, that details how the U.S. bank regulators propose to apply the risk-based capital framework developed by the Basle Committee on Banking Regulations and Supervisory Practices.

OBJECTIVES, SCOPE, AND METHODOLOGY

This report discusses (1) the growth in OBS activities at commercial banks; (2) the nature of certain OBS activities and the primary associated risks; (3) the concerns of federal banking regulators, bankers, and others; and (4) the FRS proposal, similar to those of FDIC and OCC, that would require banks to maintain capital for certain OBS activities. We interviewed officials from FDIC, OCC, and FRS; from commercial banks that had extensive OBS activities; and from industry and international groups.

Data on the volume of reported OBS activities was extracted from our Call Report data base. Call Reports provide the most complete publicly available financial information on commercial banks, but do not contain much historical OBS data. Most of the OBS activities currently reported were not covered until 1983 or 1984. While we did not independently verify the information in these reports, in all other respects we did our work, essentially between January and September 1987, in accordance with generally accepted government auditing standards.

GROWTH IN OBS ACTIVITY

A number of factors and developments have prompted growth in OBS activities. Such factors include:

- The absence of certain regulatory costs. OBS activities are not assets or liabilities, so banks are not routinely required to maintain capital or hold funds in reserve against them.
- Increased competition from non-banking institutions. OBS activities have provided a way to retain customers and market share in the face of increased competition in the traditional lending market.
- Fluctuations in interest rates and foreign exchange rates. Banks can use some OBS activities to insulate against potential losses arising from volatile rates.
- Technological advances that have facilitated the use of certain automated services, such as electronic payment systems. These have, in turn, given rise to certain types of OBS contingencies.

Banks have increasingly adopted OBS activities as a way to hedge risks.<sup>3</sup> Banks also use them to generate income, such as the fees charged for providing a loan commitment. Such fees are separate from the interest the bank would charge for the loan should the customer actually draw against the commitment.

Call Report data reveal that OBS activities rose from \$1.4 trillion at year-end 1984 to \$2.0 trillion at year-end 1986--54 and 67 percent of industry assets and 8.8 and 10.8 times the amount of industry equity capital, respectively. In mid-1987, these OBS activities totaled \$2.6 trillion.<sup>4</sup> Most of the volume is being conducted by banks with assets of at least \$10 billion. The OBS activities covered in Call Reports are listed in table I.1 on page 13. Call Reports do not, however, provide a complete or clear picture of OBS activities. Unreported OBS activities include daylight overdrafts--payments banks electronically transfer to other banks each day before actually having the funds to cover them. FRS staff have estimated these overdrafts exceed \$1 billion per day at some large banks. In other cases, different activities with different risk characteristics are reported together.

#### REGULATORY CONCERNS AND RESPONSES

Federal regulatory officials are concerned about the safety and soundness of individual banks and the banking system. Officials told us that at the bank level, they are concerned about proper management and adequacy of controls once risks are identified. They all said that OBS activities and the associated risks are difficult to understand and assess, and they are also concerned that some OBS activities may be underpriced. Bankers we interviewed expressed similar concerns, indicating that pricing had been driven more by competition than by assessment of the risks.

Regulators are also concerned about the risk that a bank failure could lead to other bank failures or widespread

---

<sup>3</sup>Hedging entails the process of preventing loss due to price fluctuations. The desired result is that the profit or loss on a current sale or purchase be offset by the loss or profit on an offsetting sale or purchase that is usually set for some future date.

<sup>4</sup>For comparative purposes, the 1986 and 1987 totals exclude \$367 billion and \$521 billion for interest rate swaps because this OBS activity was not reported in 1984.

Banks have increasingly adopted OBS activities as a way to hedge risks.<sup>3</sup> Banks also use them to generate income, such as the fees charged for providing a loan commitment. Such fees are separate from the interest the bank would charge for the loan should the customer actually draw against the commitment.

Call Report data reveal that OBS activities rose from \$1.4 trillion at year-end 1984 to \$2.0 trillion at year-end 1986--54 and 67 percent of industry assets and 8.8 and 10.8 times the amount of industry equity capital, respectively. In mid-1987, these OBS activities totaled \$2.6 trillion.<sup>4</sup> Most of the volume is being conducted by banks with assets of at least \$10 billion. The OBS activities covered in Call Reports are listed in table I.1 on page 13. Call Reports do not, however, provide a complete or clear picture of OBS activities. Unreported OBS activities include daylight overdrafts--payments banks electronically transfer to other banks each day before actually having the funds to cover them. FRS staff have estimated these overdrafts exceed \$1 billion per day at some large banks. In other cases, different activities with different risk characteristics are reported together.

#### REGULATORY CONCERNS AND RESPONSES

Federal regulatory officials are concerned about the safety and soundness of individual banks and the banking system. Officials told us that at the bank level, they are concerned about proper management and adequacy of controls once risks are identified. They all said that OBS activities and the associated risks are difficult to understand and assess, and they are also concerned that some OBS activities may be underpriced. Bankers we interviewed expressed similar concerns, indicating that pricing had been driven more by competition than by assessment of the risks.

Regulators are also concerned about the risk that a bank failure could lead to other bank failures or widespread

---

<sup>3</sup>Hedging entails the process of preventing loss due to price fluctuations. The desired result is that the profit or loss on a current sale or purchase be offset by the loss or profit on an offsetting sale or purchase that is usually set for some future date.

<sup>4</sup>For comparative purposes, the 1986 and 1987 totals exclude \$367 billion and \$521 billion for interest rate swaps because this OBS activity was not reported in 1984.

B-229166

disruptions. This concern stems from the large size of the banks conducting most of the OBS activities and the interlinkings of many banks in single transactions. A study group established by the central-bank governors of the United States, some European countries, and Japan has also asked whether certain OBS activities expose the system to a higher level and concentration of credit risk. (See app. III.)

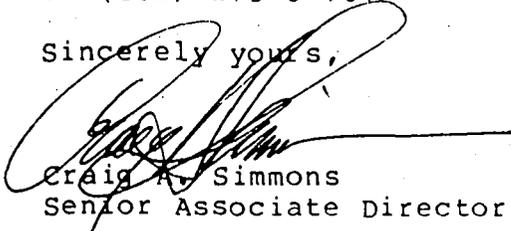
In an effort to more closely align regulatory capital requirements with the risk profiles of individual banks, FRS, OCC, and FDIC have proposed a risk-based capital system, including procedures for assessing risks from certain OBS activities. Presently, banks are not explicitly required to set aside capital for their OBS activities and the same minimum capital requirements apply to all banks. Credit risk associated with OBS activities is the primary OBS risk dealt with; other risks, such as those associated with changing interest rates, are only partially addressed. Some of the public comments received reflect practical limitations about the way OBS activities would be covered under a risk-based capital system. FRS recognized that the proposal did not take into account all risk aspects associated with OBS activities and expects that needed adjustments would be made by regulators during periodic on-site bank examinations. Regulators have noted, however, that there may be limitations to relying on the examination process.

#### AGENCY COMMENTS AND OUR EVALUATION

A draft of this report was provided to FDIC, OCC, and FRS for comment. FRS did not provide official comments. Those from FDIC and OCC, along with our responses, are included as appendixes VI and VII. FDIC and OCC generally agreed with our observations and provided technical comments.

As requested by the Subcommittee, unless you publicly announce its contents earlier, we plan no further distribution of this report until 5 days after its issue date. At that time, we will send copies to other interested parties and make copies available to others on request. If you have any questions regarding this report, please call me on (202) 275-8678.

Sincerely yours,



Craig A. Simmons  
Senior Associate Director

## CONTENTS

|          |   | <u>PAGE</u> |
|----------|---|-------------|
| Letter   |   | 1           |
| Appendix |   |             |
| I        | OFF-BALANCE-SHEET ACTIVITIES OF COMMERCIAL BANKS    | 9           |
|          | Objective, Scope, and Methodology                   | 9           |
|          | OBS Activities--Complex and Diverse                 | 11          |
|          | Rapid Growth in OBS Activities                      | 12          |
|          | Reasons Cited for the Growth in OBS Activities      | 18          |
|          | Agency Comments and Our Evaluation                  | 19          |
| II       | NATURE AND RISKS OF EIGHT OBS ACTIVITIES            | 20          |
|          | Loan Commitments                                    | 20          |
|          | Revolving Underwriting Facilities                   | 22          |
|          | Electronic Funds Transfers and Daylight Overdrafts  | 24          |
|          | Standby Letters of Credit                           | 25          |
|          | Interest Rate Swaps                                 | 27          |
|          | Currency Swaps                                      | 31          |
|          | Financial Futures and Options Contracts             | 33          |
|          | Agency Comments and Our Evaluation                  | 37          |
| III      | CONCERNS REGARDING OBS ACTIVITIES                   | 39          |
|          | Agency Comments and Our Evaluation                  | 44          |
| IV       | RISK-BASED CAPITAL PROPOSAL INCLUDES OBS ACTIVITIES | 45          |
|          | OBS Activities Compared to Capital                  | 45          |

|       |  |    |
|-------|--|----|
|       | How OBS Activities Are Treated Under<br>the Proposal   | 46 |
|       | Competitive Considerations   | 48 |
|       | Limitations  | 49 |
|       | Agency Comments and Our Evaluation   | 50 |
| V     | REQUEST LETTER   | 52 |
| VI    | COMMENTS FROM THE FEDERAL DEPOSIT<br>INSURANCE CORPORATION   | 53 |
| VII   | COMMENTS FROM THE OFFICE OF THE COMPTROLLER<br>OF THE CURRENCY   | 64 |
|       | Glossary   | 76 |
|       | Tables   |    |
| I.1:  | Amount of Off-Balance-Sheet Activities<br>Reported in Schedule L   | 13 |
| I.2:  | Amount of Reported Off-Balance-Sheet<br>Commitments, and Number of Banks by<br>Asset Size, 1985-1987     | 14 |
| I.3:  | OBS Activities as a Percent of Total<br>Assets, 1985-1987  | 15 |
| I.4:  | Number of Reporting Banks and Amount<br>Reported for Loan Commitments, 1983 and<br>1986                  | 16 |
| II.1: | Amount of Loan Commitments and Number of<br>Reporting Banks, 1983-1987                                   | 21 |
| II.2: | Standby Letters of Credit, 1981-1987   | 26 |
| II.3: | Principal Amount of Interest Rate Swaps and<br>Number of Reporting Banks by Asset Size,<br>1985 and 1987 | 30 |

|       |  |    |
|-------|--|----|
| II.4: | Gross Futures and Forwards Contracts,<br>1983-1987                       | 35 |
| II.5: | Obligations Under Options Contracts,<br>1983-1987                        | 36 |
| IV.1: | Reported OBS Activities as a Percent of<br>Equity Capital, 1984-1987     | 46 |
| IV.2: | On-Balance-Sheet Credit Equivalent Amount<br>for Certain OBS Instruments | 47 |

#### Abbreviations

|       |  |
|-------|--|
| BIS   | Bank for International Settlement                  |
| EFT   | Electronic fund transfers                          |
| FDIC  | Federal Deposit Insurance Corporation              |
| FFIEC | Federal Financial Institutions Examination Council |
| FRS   | Board of Governors of the Federal Reserve System   |
| GAO   | General Accounting Office                          |
| GNMA  | Government National Mortgage Association           |
| LIBOR | London interbank offered rate                      |
| NIF   | Note issuance facilities                           |
| OBS   | Off-balance-sheet                                  |
| OCC   | Office of the Comptroller of the Currency          |
| ROA   | Return on Assets                                   |
| RUF   | Revolving underwriting facilities                  |
| SLC   | Standby letters of credit                          |
| SNIF  | Standby note issuance facilities                   |
| TRUF  | Transferable revolving underwriting facilities     |

OFF-BALANCE-SHEET ACTIVITIES OF COMMERCIAL BANKS

It is widely believed that commercial banks are increasingly conducting activities that are not reflected in their financial statements. Although information is limited, off-balance-sheet (OBS) activities reported to regulators amounted to \$3.1 trillion in June 1987. Reported industry assets amounted to \$2.9 trillion at that time. Both U.S. and foreign bank regulators are concerned about the potential risks OBS activities pose for banks and the banking system. Much of this concern stems from the tremendous growth in recent years, its concentration in our nation's largest banks, and the lack of information regarding the risks.

OBS activities can be grouped into three broad categories based on the type of contingency arising from the activity. These categories and the OBS activities discussed in this appendix include:

- Commitments. A bank typically commits itself to extend credit at some time in the future. Commitments include loan commitments, revolving underwriting facilities, and, in an indirect form, daylight overdrafts resulting from large electronic payments.
- Guarantees. A bank guarantees a customer's obligations to a third party. The bank's liability is generally contingent upon the customer's defaulting on the obligation. One type of guarantee is the standby letter of credit.
- Market-related transactions. A bank engages in these various investments, such as interest rate swaps, currency swaps, financial futures and options contracts, to hedge positions and/or generate income.

OBJECTIVE, SCOPE, AND METHODOLOGY

This report was prepared at the request of Congressman St Germain, Chairman of the House Subcommittee on Financial Institutions Supervision, Regulation and Insurance of the Committee on Banking, Finance and Urban Affairs. (See app. V.) In response to that request for information on the extent, risks, and complexities of OBS activities, this report discusses (1) the growth and volume of OBS activities from 1980 to 1987, (2) eight different OBS activities and the related risks, (3) the primary concerns of U.S. and foreign bank regulators, and (4) the Federal

Reserve's recent regulatory proposal, similar to FDIC and OCC proposals, that would require banks to maintain capital for certain OBS activities.

This report does not present an assessment or offer an opinion as to whether OBS activities have made the banking system riskier or safer. Instead, we describe eight different OBS activities in terms of the complexities, associated risks, and related issues. We chose these eight OBS activities either because they involved large dollar amounts (for example, loan commitments) or because they were relatively new developments (for example, interest rate swaps). These eight activities do not represent all OBS activities, and not all banks engage in them. Our work was essentially done in the January through September 1987 period.

Information contained in this report was obtained through interviews with officials of the Board of Governors of the Federal Reserve System (FRS), the Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency (OCC). We also met with representatives of a number of commercial banks with extensive OBS activities, the International Swap Dealers Association (an industry association comprised of major commercial, investment, and merchant banks), and the Study Group established by the central-bank governors of the Group of Ten countries.<sup>1</sup> We reviewed various professional and academic research articles.

In addition, we developed trend data on the volume of OBS activities from our data base of the Reports of Condition and Income, commonly referred to as Call Reports, that federally insured banks file quarterly with their regulators. The Reports of Condition contain capital, asset, and liability balance sheet information and the Reports of Income contain information on income and expenses. Special-topic information is contained in appended schedules, such as Schedule L of the Report of Condition, which provides data on commitments and contingencies, including the OBS activity data. The Call Report tapes for commercial banks were provided to us by FDIC. Call Report data

---

<sup>1</sup>In most countries, the central bank is the central monetary authority. Its functions may include issuing a country's currency, carrying out a nation's monetary policy, and managing the country's foreign exchange reserves and the external value of its currency. In the United States, the Federal Reserve System is the nation's central bank. The Group of Ten countries is composed of the United States, Canada, seven European countries, and Japan.

are the most complete publicly available financial information on commercial banks and are used by federal regulators as well as academic and other researchers. Year-end Call Report data through 1986 and data as of June 1987 are provided. We have not audited the preparation of the reports or their transcription to computerized format. In all other respects, our work was performed in accordance with generally accepted government auditing standards.

#### OBS ACTIVITIES--COMPLEX AND DIVERSE

OBS activities essentially represent promises to either lend or provide funds, and are typically contingent on some future event. Under generally accepted accounting principles, these commitments are not considered an asset or liability, and as such are not reported on U.S. banks' balance sheets.<sup>2</sup>

Some OBS activities provide banks with a source of income in the form of fees without the expenses associated with certain on-balance-sheet activities. For example, for loan commitments, banks can obtain income (fees) without the expenses of obtaining funds, setting aside capital, or setting aside reserves. For a loan, on the other hand, a bank would have to obtain funds (unless existing assets were converted to cash), would need to set aside reserves if the loan were funded with certain types of liabilities (such as deposits), and would have to maintain capital against the asset.

Other OBS activities also provide banks with a means for hedging against potential losses associated with uncertain events in the future. For example, to hedge against a possible decline in the value of a Treasury bond portfolio due to rising interest

---

<sup>2</sup>Accounting for contingencies is covered by the Financial Accounting Standards Board's FASB-5 (Accounting for Contingencies), FASB Interpretation-14 (Reasonable Estimation of the Amount of a Loss), and FASB Interpretation-34 (Disclosure of Indirect Guarantees of Indebtedness of Others). Disclosure in the financial statements essentially depends on the likelihood that a contingency might result in a loss. Possible disclosures include an actual charge to income, a footnote to the financial statements, or no disclosure at all. It should be noted that FASB is currently studying issues related to off-balance-sheet activities. On November 30, 1987, FASB issued for comment an exposure draft that would establish requirements for disclosures about financial instruments for all entities. It is an initial, interim step in the Board's project on financial instruments and off-balance-sheet financing.

rates, banks can sell Treasury bond futures contracts which would benefit from an increase in interest rates. In so doing, gains arising from the futures contract would offset losses in the Treasury bond portfolio if interest rates increased. This is only one kind of hedge. There are others which insulate banks from other risks, such as those arising from foreign exchange rate fluctuations or from funding fixed-rate assets with variable-rate liabilities.

OBS activities consist of a variety of different products, services, and financial instruments. They range from familiar investments, such as futures contracts (commitments to either buy or sell a financial asset at a specified price in the future), to more complex activities, such as interest rate swaps, in which parties exchange each others interest payments but not the underlying debt.

Bank regulators and analysts consider many of these activities to be complex and highly technical. OBS activities have also been an area of continual innovation and development. International capital markets may also be involved, for example, when some commercial banks extend commitments to customers issuing debt overseas.

#### RAPID GROWTH IN OBS ACTIVITIES

The amount of OBS activities held by the nation's commercial banks cannot be readily determined, since accounting conventions do not require banks to include these activities in their published financial statements. Some information is now included in Call Reports as a result of adoption of a 1982 Federal Financial Institutions Examination Council (FFIEC) proposed supplemental schedule (Schedule L) for reporting certain contingent liabilities and other OBS activities. Furthermore, many OBS activities currently reported were not reported until 1984. Nevertheless, the growth in OBS activities during the last few years is partially suggested by table I.1.

Table I.1:

Amount of Off-Balance-Sheet Activities Reported in Schedule L  
(amounts rounded in billions)<sup>a</sup>

| <u>Reported Activity</u>                                | <u>12/84</u> | <u>12/85</u> | <u>12/86</u> | <u>6/87</u> |
|---|--------------|--------------|--------------|-------------|
| Loan commitments  | \$494        | \$531        | \$572        | \$586       |
| Commitments to buy futures/forward contracts            | 40           | 57           | 99           | 129         |
| Commitments to sell futures/forward contract            | 28           | 40           | 80           | 124         |
| Commitments to buy when-issued securities <sup>b</sup>  | 4            | 4            | 10           | 10          |
| Commitments to sell when-issued securities <sup>b</sup> | 4            | 3            | 6            | 9           |
| Obligations to buy under option contracts               | 3            | 11           | 28           | 35          |
| Obligations to sell under option contracts              | 2            | 5            | 12           | 18          |
| Foreign exchange commitments <sup>b</sup>               | 584          | 735          | 893          | 1,419       |
| Standby letters of credit                               | 146          | 175          | 170          | 167         |
| Commercial letters of credit                            | 30           | 28           | 28           | 33          |
| Participations in acceptances bought                    | 2            | 1            | 1            | 1           |
| Securities borrowed                                     | 3            | 4            | 5            | 7           |
| Other significant commitments <sup>b</sup>              | 25           | 59           | 71           | 81          |
| Interest rate swaps                                     | ---          | 186          | 367          | 521         |
| Annual Totals <sup>c</sup>                              | \$1,364      | \$1,840      | \$2,342      | \$3,140     |
|   | =====        | =====        | =====        | =====       |

These activities are described in the glossary at the end of this report. Three Schedule L items are excluded from table I.1. Standby letters of credit participations conveyed to others were excluded since reported amounts were already included in other categories. Securities lent and participations in acceptances conveyed to others were excluded since the associated amounts were also required to be reported in the Report of Condition (balance sheet). Interest rate swaps were not reported by banks until 1985.

This activity does not have to be reported by banks with assets of less than \$100 million.

Totals may not add due to rounding.

Source: Consolidated Reports of Condition. Schedule RC-L: Commitments and Contingencies.

Most of the volume of OBS activities reflected in Schedule L at year end 1985 through June of 1987 can be accounted for by banks with assets of at least \$10 billion. Thus, OBS volume is dominated by a relatively small number of banks; these banks comprised less than 1 percent of all banks as of June 1987, as

shown in table I.2.

Table I.2:

Amount of Reported Off-Balance-Sheet Commitments,  
and Number of Banks by Asset Size, 1985-1987  
(\$ rounded in millions)

| Asset-Size<br>Group    | 12/85                | 12/86                | 6/87                 | June 1987       |                     |
|------------------------|----------------------|----------------------|----------------------|-----------------|---------------------|
|                        |                      |                      |                      | Number of Banks | Percent<br>of Banks |
| Over \$9.9 bil.        | \$1,507,287          | \$1,991,857          | \$2,746,836          | 34              | 0.2%                |
| \$1-9.9 bil.           | 275,923              | 287,128              | 316,587              | 304             | 2.2                 |
| \$300-999 mil.         | 29,964               | 32,422               | 33,605               | 524             | 3.8                 |
| \$100-299 mil.         | 16,355               | 18,091               | 29,260               | 1,865           | 13.4                |
| \$25-99.9 mil.         | 9,595                | 10,677               | 11,838               | 6,530           | 46.8                |
| Under \$25 mil.        | 1,367                | 1,447                | 1,503                | 4,689           | 33.6                |
| All banks <sup>a</sup> | \$1,840,491<br>===== | \$2,341,622<br>===== | \$3,139,629<br>===== | 13,946<br>===== | 100.0<br>=====      |

<sup>a</sup> Totals may not add due to rounding.

Source: Consolidated Reports of Condition, including Schedule RC-L: Commitments and Contingencies. OBS activities included are noted table I.1.

The growth in OBS activities is further underscored when viewed in relation to bank assets, as shown in table I.3.

Table I.3:

OBS Activities as a Percent of  
Total Assets, 1985-1987

| <u>Asset-Size</u><br><u>Group</u> | <u>12/85</u> | <u>12/86</u> | <u>6/87</u> |
|-----------------------------------|--------------|--------------|-------------|
| Over \$9.9 bil.                   | 159.0%       | 188.7%       | 259.6%      |
| \$1-9.9 bil.                      | 33.2         | 31.9         | 35.6        |
| \$300-999 mil.                    | 11.6         | 11.7         | 12.7        |
| \$100-299 mil.                    | 5.7          | 5.9          | 9.7         |
| \$25-99.9 mil.                    | 2.9          | 3.2          | 3.6         |
| Under \$25 mil.                   | 1.8          | 2.0          | 2.2         |
| All banks                         | 67.4%        | 79.6%        | 107.8%      |

Source: Consolidated Reports of Condition, including Schedule RC-L: Commitments and Contingencies. OBS activities included are noted in table I.1.

Although table I.2 shows that most of these commitments are concentrated among a relatively small number of banks, the use of some OBS items is more widespread than aggregate totals suggest. Data on loan commitments (bank commitments to extend credit at some future time) have been available since 1983. Table I.4 shows that the number of banks participating in this OBS activity increased from 5,344 in 1983 to 7,180 in 1986, about 35 percent.

Table I.4:

Number of Reporting Banks and Amount Reported for  
Loan Commitments, 1983 and 1986  
 (amounts rounded in millions)

| <u>Asset-Size</u><br><u>Group</u> |           | <u>1983</u> | <u>1986</u> |
|-----------------------------------|-----------|-------------|-------------|
| Over<br>\$9.9 bil.                | Amount    | \$284,784   | \$357,939   |
|                                   | No. Banks | 22          | 32          |
|                                   | Avg. Amt. | \$12,945    | \$11,186    |
| \$1-9.9 bil.                      | Amount    | \$113,328   | \$168,566   |
|                                   | No. Banks | 213         | 290         |
|                                   | Avg. Amt. | \$532       | \$581       |
| \$300-999 mil.                    | Amount    | \$18,029    | \$22,656    |
|                                   | No. Banks | 347         | 467         |
|                                   | Avg. Amt. | \$52        | \$49        |
| \$100-299 mil.                    | Amount    | \$9,343     | \$13,464    |
|                                   | No. Banks | 915         | 1343        |
|                                   | Avg. Amt. | \$10        | \$10        |
| \$25-99.9 mil.                    | Amount    | \$5,564     | \$8,009     |
|                                   | No. Banks | 2545        | 3460        |
|                                   | Avg. Amt. | \$2         | \$2         |
| Under<br>\$25 mil.                | Amount    | \$782       | \$1,124     |
|                                   | No. Banks | 1302        | 1588        |
|                                   | Avg. Amt. | \$1         | \$1         |
| All banks                         | Amount    | \$431,830   | \$571,758   |
|                                   | No. Banks | 5344        | 7180        |
|                                   | Avg. Amt. | \$81        | \$80        |

Source: Consolidated Reports of Condition, Schedule RC-L:  
 Commitments and Contingencies.

By June of 1987, the number of banks reporting loan commitments continued to increase to 7,592 banks.

Table I.4 shows the dominance of the largest banks in terms of aggregate dollar volume, but the table also reveals that the extent of participation and rate of growth has differed according to bank asset size. That is:

- banks with assets of at least \$1 billion still account for most (92 percent) of the \$572 billion in loan commitments in 1986, and also account for most (over 90 percent) of the growth (about \$140 billion) from 1983 to 1986; however, banks with assets of at least \$10 billion do not appear to be taking larger positions; the average amount of reported loan commitments decreased from \$12.9 billion in 1983 to \$11.2 billion in 1986;
- the use of loan commitments has become more widespread among banks with assets of less than \$1 billion, which as a group account for 95 percent of the growth (an increase of 1,836 banks between 1983 and 1986) in the number of participating banks; and
- much of the \$12 billion increase between 1983 and 1986 in the volume of loan commitments for banks with assets of less than \$1 billion may well be attributable to the increasing number of banks participating in them rather than to the size of the positions being taken.

In our opinion, Call Reports do not provide a complete or clear picture since some OBS activities are unreported or are combined with related activities under a broad general category. Currently, 11 OBS activities (including one "other" category) are reported in the Call Reports. (Of these 11, 3 are reported as component totals, for example commitments to buy futures/forwards and to sell them; see table I.1.) However, in 1985, as part of a special project addressing OBS activities, an FDIC official identified over 35 different OBS activities, and in a Robert Morris Associates study, 44 OBS activities were identified.<sup>3</sup>

We found some indications that these unreported and combined OBS activities may entail large dollar amounts. For example, the reported item for loan commitments should include guarantees given to bank customers issuing short-term notes in the European capital markets. One such arrangement, known as a revolving underwriting facility (RUF), involves a bank's guarantee to either advance funds to a customer who was unable to place notes in the European capital markets or to purchase the notes. FDIC estimates that RUFs amounted to approximately \$200 billion during 1986; RUFs are further discussed in appendix II.

An example of an unreported OBS activity involves large

---

<sup>3</sup>E. Goldberg, E. Altman, and E. Furash, Off-Balance-Sheet Activities of Banks: Managing the Risk/Reward Trade-Offs, (Robert Morris Associates: 1983).

dollar payments which banks electronically transfer to other banks before actually having the funds to cover the payments. Although sufficient funds are normally received by the end of the day, these overdraft payments occur daily and often exceed \$1 billion per day at some large banks.

Although the level of OBS activities is large and has become a major aspect of commercial banking, it should be noted that the dollar volume of the activity alone is not a good indicator of banks' exposure to potential losses. In fact, regulators and others agree that reported amounts only reflect the level of activity, not the nature or extent of the risk. (See appendix III.)

#### REASONS CITED FOR THE GROWTH IN OBS ACTIVITIES

Regulators and others have attributed the rapid growth in OBS activities to a variety of factors and developments. Some of the more frequently cited reasons include:

- The absence of certain regulatory costs. Because OBS activities are not reflected on the balance sheet as either assets or liabilities, these activities are not subject to regulatory capital or reserve requirements. Because OBS activities do not involve the costs associated with capital and reserve requirements, there is a cost avoidance incentive to engage in these activities.
- The apparent financial performance of a bank can be increased by engaging in these activities.<sup>4</sup>
- Increased competition from financial and other institutions, which may have resulted in a declining share of the credit market for banks.<sup>5</sup> In an effort to

---

<sup>4</sup>One commonly used measure of profitability is the return on assets (ROA) ratio, which is computed by dividing net income by assets. A higher level of profitability is reflected by a higher ROA ratio. OBS activities enhance this measurement by allowing a bank to generate fee income which increases the net income component without increasing the asset component.

<sup>5</sup>For a more detailed discussion about the change commercial banks have experienced in loan demand as prime commercial borrowers turn to alternative sources of short-term funds, see Arturo Estrella, "Domestic Banks And Their Competitors In The Prime Commercial Loan Market," Recent Trends In Commercial Bank Profitability: A Staff Study, (Federal Reserve Bank of New York, 1986), pp. 159-178.

retain their traditional markets, banks look to new approaches and to new areas of business. OBS activities are seen as a way to generate fee income, to attract or retain customers by offering a fuller range of services, and to hedge.

- Fluctuations (volatility) in interest and exchange rates. Volatility has increased banks' exposures to potential losses. These exposures arise when assets and liabilities mature, or can be repriced, at different times in relation to each other. (For example, if more liabilities than assets mature during periods of rising interest rates, then interest expense increases faster than interest income.) The uncertainty associated with future interest rate movements has fostered the development of hedging techniques, such as the use of futures contracts.
- Technological advances. Communications and computer innovations have enhanced bank services, such as electronic payment systems. The increase in electronic payments has, in turn, led to an increase in one type of OBS commitment known as daylight overdrafts. This activity essentially consists of banks' electronically transferring an amount of funds exceeding actual on-hand balances.

#### AGENCY COMMENTS AND OUR EVALUATION

OCC agreed that Call Reports do not capture or quantify certain OBS activities. OCC said that, unfortunately, OBS activity risks and volume cannot easily be captured on Call Reports, explained why, and offered their response given this situation. Their comments are provided in appendix VII and discussed on pages 50 and 51.

FDIC and OCC made several suggestions regarding clarification or expansion of technical points. Prominent among these was an FDIC comment that we should exclude the participations in acceptances conveyed to others from the total volume of OBS activities listed in table I.1 on page 13. This has been done. Their comments and our detailed responses follow their official letters, provided in appendixes VI and VII.

NATURE AND RISKS OF EIGHT  
OBS ACTIVITIES

This appendix discusses eight different OBS activities in terms of the associated risks, complexities, and difficulties in measuring potential losses. Potential losses are often difficult to estimate even though the associated types of risks have been identified. Measurement problems stem from the inherent complexities of the activities, difficulties in estimating the likelihood that identified risks will materialize, and the impact of external forces that can change daily. It should also be noted that while individual OBS activities may lead to losses, they may still have fulfilled their purpose if the purpose had been to hedge other risk exposures of the bank. Consequently, any losses arising from OBS activities used for hedging should not be viewed in isolation but in conjunction with any benefits derived from hedging. For example, a bank might sell a Treasury bond futures contract to protect a portfolio of Treasury bonds against rising interest rates. If interest rates declined, losses on the futures contract would be offset by gains from the Treasury bond portfolio.

LOAN COMMITMENTS

With a loan commitment, which is legally binding, a bank promises its customer to extend a stated amount of credit at a specified rate for a certain period in the future. For this promise, banks charge a fee based on the total commitment.<sup>1</sup> Even though the bank generates fees, during the commitment period (before a loan is actually made), the bank may not have obtained the funds to be committed yet (this is then referred to as an unfunded commitment) or available funds may not have been set aside specifically for the commitment. In other words, a loan commitment allows a bank to generate revenue without having to incur the cost of obtaining funds as with a loan.

Loan commitments represent one of the largest types of contingent claims on banks, amounting to about \$586 billion at mid-year 1987. Table II.1 shows the amount of these commitments and differences in the level of activity among six asset-size groups for the years 1983-87.

---

<sup>1</sup>Besides fees, some loan commitments are priced by requiring the customer to maintain minimum balances at the bank (known as compensating balances). Pricing of a loan drawn from a loan commitment varies. Many are variable rate with a compensating balance.

Table II.1:

Amount of Loan Commitments  
and Number of Reporting Banks, 1983-1987  
(\$ rounded in billions)

| <u>Asset-Size Group</u> |                                   | <u>12/83</u> | <u>12/84</u> | <u>12/85</u> | <u>12/86</u> | <u>6/87</u> |
|-------------------------|-----------------------------------|--------------|--------------|--------------|--------------|-------------|
| Over \$9.9 bil.         | Amount                            | \$285        | \$313        | \$323        | \$358        | \$364       |
|                         | Number of banks                   | 22           | 24           | 27           | 32           | 34          |
|                         | Amt. as a % of total <sup>a</sup> | 66.0%        | 63.4%        | 60.9%        | 62.6%        | 62.2%       |
| \$1-9.9 bil.            | Amount                            | \$113        | \$142        | \$165        | \$169        | \$173       |
|                         | Number of banks                   | 213          | 234          | 267          | 290          | 292         |
|                         | Amt. as a % of total <sup>a</sup> | 26.2%        | 28.7%        | 31.1%        | 29.5%        | 29.5%       |
| \$300-999 mil.          | Amount                            | \$18         | \$20         | \$22         | \$23         | \$23        |
|                         | Number of banks                   | 347          | 368          | 410          | 467          | 452         |
|                         | Amt. as a % of total <sup>a</sup> | 4.2%         | 4.1%         | 4.2%         | 4.0%         | 3.9%        |
| 100-299 mil.            | Amount                            | \$9          | \$11         | \$12         | \$13         | \$15        |
|                         | Number of banks                   | 915          | 1066         | 1171         | 1343         | 1391        |
|                         | Amt. as a % of total <sup>a</sup> | 2.2%         | 2.3%         | 2.3%         | 2.4%         | 2.6%        |
| \$25-99.9 mil.          | Amount                            | \$6          | \$7          | \$7          | \$8          | \$9         |
|                         | Number of banks                   | 2545         | 2942         | 3084         | 3460         | 3713        |
|                         | Amt. as a % of total <sup>a</sup> | 1.3%         | 1.3%         | 1.3%         | 1.4%         | 1.6%        |
| Under \$25 mil.         | Amount                            | \$0.8        | \$1          | \$1          | \$1          | \$1         |
|                         | Number of banks                   | 1302         | 1486         | 1516         | 1588         | 1710        |
|                         | Amt. as a % of total <sup>a</sup> | 0.2%         | 0.2%         | 0.2%         | 0.2%         | 0.2%        |
| All banks <sup>b</sup>  | Total Amount                      | \$432        | \$494        | \$531        | \$572        | \$586       |
|                         | Number of banks                   | 5344         | 6120         | 6475         | 7180         | 7592        |

a Percentages calculated using unrounded amounts.

b Totals may not add due to rounding.

Source: Consolidated Reports of Condition, Schedule RC-L: Commitments and Contingencies. (Loan commitments were not reported prior to 1983.)

Overall, loan commitments increased both in terms of the amounts and the number of reporting banks. However, most of the dollar volume can be attributed to banks with assets of at least \$1 billion, which accounted for over 90 percent of the reported commitments in June 1987.

The primary risk associated with a loan commitment is liquidity risk--that is, the inability to fund a large number of customers' simultaneously borrowing under their commitments. A bank's total commitments could exceed its ability to fund the loans if a large number of customers simultaneously asked for credit. A Federal Reserve Board staff study suggests that a large number of simultaneous drawdowns are most likely to occur during periods of credit restraint--conceivably at a time when banks would have difficulty obtaining funds.<sup>2</sup> It would be difficult to estimate when such periods of credit restraint might occur, as would assessing the repercussions if banks were not able to honor their loan commitments. In commenting on a draft of this report, FDIC noted that unexpected drawdowns could also occur during periods when unstable market conditions cause a "flight to quality" by short-term investors, thereby depriving bank customers of funding sources in money markets that might otherwise exist. (See app. VI.)

Loan commitments also entail some credit risk in that a customer's credit-worthiness might decline between the time the commitment was made and credit was actually extended. However, most commitments contain a provision, known as the material adverse change clause, which allows a bank to refuse funding (extending credit) if the customer's financial condition materially worsened during the commitment period.<sup>3</sup>

Banks also face the possibility of having to fund the loan at a low or negative spread (spread being the difference between the bank's lending rate and the bank's borrowing rate) if rates rise during the commitment period. This potential problem, however, would be minimized when loan commitments are priced at adjustable rates.

#### REVOLVING UNDERWRITING FACILITIES

A relatively new and emerging type of bank commitment is the

---

<sup>2</sup>M. Martinson, Cornyn and Houpt, Off-Balance-Sheet Risk, (Financial Analysis/Special Studies Section, Division of Banking Supervision and Regulation, Board of Governors of the Federal Reserve System, 1984), Revised.

<sup>3</sup>FDIC, in commenting on a draft of this report, noted that a number of factors could conceivably result in a bank's decision not to invoke the material adverse change clause. OCC said that enforcement of the clause is questionable and also observed that a commitment may be drawn before the bank recognizes the deterioration in the customer's financial condition.

revolving underwriting facility (RUF). This OBS activity has several variations: note issuance facilities (NIFs), transferable revolving underwriting facilities (TRUFs), and standby note issuance facilities (SNIFs). Notwithstanding the variations, these activities are essentially the same type of product.

In its most basic form, a RUF is a bank's commitment to purchase at a specified price the notes its customer could not sell (at or below some predetermined interest cost) in the European capital markets. The maturity of the customer's notes (known as Euronotes) is typically short-term (1, 3, or 6 months), but the bank's commitment period typically lasts for between 3 and 7 years. This type of OBS activity, in essence, allows the bank's customer to obtain long-term borrowing commitments at short-term rates. In addition, the customer's cost of borrowing under RUFs has been significantly below financing rates for similar arrangements, such as standby lines of credit (Eurocredits).<sup>4</sup>

According to FDIC estimates, the volume of RUFs amounted to about \$200 billion during 1986, up dramatically from slightly over \$1.3 billion during 1981. FDIC estimates that RUFs could reach \$250 billion by the end of 1988.<sup>5</sup> FDIC also notes that virtually all of the bank participation in this market has been by banks with over \$5 billion in total assets. Participation by smaller banks is predicted as the RUF market grows.

As with other commitments, liquidity risk is one of the primary risks with RUFs. Banks generally do not know and are unable to control the timing and amount of required funding. Consequently, they might not be able to fund a large volume of commitments. However, according to an FDIC supervisory memorandum, the typical RUF will most likely never require funding. Actual drawdowns have been low, and many borrowers view these types of commitments as a backup rather than a primary

---

<sup>4</sup>For a more detailed description of how RUFs and similar financing arrangements are structured, see "Note Issuance Facilities (NIFs)," Recent Innovations In International Banking, (Bank for International Settlements, April 1986), and James Chessen, "RUFs, NIFs, and SNIFs," Recent Legislative and Other Developments Impacting Depository Institutions, (FDIC, September 1985).

<sup>5</sup>FDIC volume estimates and the description of the RUF participants were obtained from a Division of Bank Supervision Memorandum regarding "Revised Examination Treatment for Contingent Liabilities," Classification Number 6330 (I-S), September 1986.

source of funds, according to the study group established by the Central Banks of the Group of Ten countries.

RUFs also entail credit risk for the bank (either as a holder of an unplaced note or when funds are advanced for the unplaced note), although this risk is considered to be less than that for a direct loan. This can be attributed to several factors. Under a RUF, funding is required only if the customer decides to issue the notes and is subsequently unable to issue them. FDIC and bankers also say that RUFs are restricted to high-quality companies. FDIC, however, notes that there have been exceptions and RUFs for lower-rated borrowers could be a new growth area for banks. Finally, risk is also tempered since RUFs typically include a protective clause (commonly known as the material adverse change clause) which relieves banks of their commitments if a customer's financial condition worsens during the commitment period. (See footnote 3 on p. 22.)

#### ELECTRONIC FUNDS TRANSFERS AND DAYLIGHT OVERDRAFTS

Communications and computer technology have spurred innovation in the payments system. One aspect of this technology involves multi-million dollar payments made on behalf of bank customers or banks' own accounts, which are electronically transferred among banks on a daily basis. The volume of electronic funds transfers (EFT) has grown steadily, with Federal Reserve estimates put at \$116 trillion in 1980 compared to \$233 trillion (averaging \$925 billion a day) in 1986.

Some banks make large EFT payments to other banks throughout the day before actually having the funds to cover them, but anticipate having sufficient funds by the end of the day. Typically banks are able to cover these intraday overdrafts by the end of the day, either by receiving the anticipated funds or through short-term borrowing from another bank or 1 of the 12 Federal Reserve District Banks. At some large banks these daylight overdrafts often exceed \$1 billion on a given day and as much as \$120 billion on a given day across the entire banking system.

As receivers of large-dollar payments, banks face credit risk to the extent the sending bank is unable to settle at the end of the day.<sup>6</sup> Banks making an EFT payment also face credit

---

<sup>6</sup>The extent of the credit risk varies depending on the payment system used. Under Regulation J, Federal Reserve Banks guarantee payments to receivers of Fedwire payments. On the other hand, private payment systems, such as the Clearinghouse Interbank Payments System, do not guarantee such payments.

risk when the overdraft is made on behalf of a customer who has insufficient funds. The sending bank, in effect, extends a loan to the customer.

Although daylight overdrafts occur daily and can be large at some banks, Federal Reserve and OCC officials said that there have not been any bank failures due to daylight overdrafts. While the possibility of banks' experiencing problems appears remote in light of historical experience, the amount of potential losses could be large in light of the size of the overdrafts. We further discuss the risk implications of daylight overdrafts in appendix III.

#### STANDBY LETTERS OF CREDIT

In a standby letter of credit (SLC), a bank guarantees a customer's obligation to a third party. If the customer defaults, the bank is obligated to "standby" the customer, typically by paying the third party. SLCs are generally used for two purposes. One is a financial guarantee (known as a credit enhancement) backing a customer's repayment on debt issues, such as commercial paper and municipal bonds. The other type of SLC is a performance guarantee used to support a customer's obligation to provide goods or services, such as construction projects.<sup>7</sup>

SLCs have more than doubled from \$71.5 billion at year-end 1981 to \$167.1 billion at mid-year 1987, as shown in table II.2. Although not reflected in the table, approximately \$34.6 billion of the SLCs reported in the June 1987 Call Reports involved non-U.S. addresses (the bank's customer holding the SLC had a foreign address). Banks with assets of at least \$10 billion accounted for slightly under 75 percent of the total SLC activity at mid-year 1987.

---

<sup>7</sup>For further details on the mechanics and uses of standby letters of credit, see James Chessen, "Standby Letters of Credit," Economic Outlook, (FDIC, November 1985), pp. 13-25.

Table II.2:

Standby Letters of Credit, Selected Years 1981-1987  
(\$ rounded in millions)

| <u>Asset-Size Group</u>                   | <u>12/81</u>      | <u>12/83</u>       | <u>12/85</u>       | <u>6/87</u>        |
|---|-------------------|--------------------|--------------------|--------------------|
| Over \$9.9 bil.                           | \$55,102          | \$91,634           | \$131,522          | \$124,044          |
| \$1-9.9 bil.                              | 10,649            | 20,610             | 35,203             | 34,669             |
| \$300-999 mil.                            | 2,740             | 3,283              | 4,120              | 4,366              |
| \$100-299 mil.                            | 1,739             | 2,351              | 2,489              | 2,382              |
| \$25-99.9 mil.                            | 1,094             | 1,559              | 1,531              | 1,463              |
| Under \$25 mil.                           | 166               | 208                | 177                | 166                |
| All Banks <sup>a</sup>                    | \$71,491<br>===== | \$119,646<br>===== | \$175,041<br>===== | \$167,091<br>===== |
| Total as a percent<br>of industry assets  | 3.8%              | 5.1%               | 6.4%               | 5.7%               |
| Total as a percent<br>of industry capital | 60.4%             | 85.2%              | 103.4%             | 95.3%              |

<sup>a</sup> Totals may not add due to rounding.

Source: Consolidated Reports of Condition, including Schedule RC-L: Commitments and Contingencies.

SLCs are guarantees and the associated credit risk is considered greater than for OBS commitments, such as RUFs. Furthermore, unlike commitments, SLCs are, in fact and in practice, irrevocable and are activated when problems are experienced by the customer. According to bankers we met, however, credit risk is tempered by the use of collateral, the same credit review standards and procedures used for direct loans, and the historically low drawdown and loss rates.

Liquidity risk is also associated with SLCs, but not as a result of a single defaulting customer, since SLCs are subject to legal lending limits. Liquidity problems could develop if there were a large number of unanticipated drawdowns due to external factors. Such a potential liquidity problem is associated primarily with SLCs backing commercial paper and municipal bond issues. The FDIC staff study cited earlier in this SLC discussion suggests that a major disruption in these types of financial markets might result in a large number of drawdowns. It is for this reason, the study notes, that bankers consider SLCs backing financial instruments riskier than SLCs backing

performance obligations, such as construction bids.<sup>8</sup>

### INTEREST RATE SWAPS

One of the newer OBS developments has been the interest rate swap, which came into prominence around 1981. Since then the activity has grown into an international market, with commercial banks contributing significantly to its development. In June 1985, regulators began requiring banks to report interest rate swaps in the Call Reports.

In its simplest form, an interest rate swap is an agreement between two parties to exchange or "swap" each others' interest payments. For example, one party exchanges fixed-rate interest payments for the variable-rate interest payments of the other party. Only the future interest payments are exchanged, not the underlying liability. Swaps have a maturity ranging from 1 to 12 years and the underlying debt of the transaction ranges from \$5 million to \$500 million, according to information provided by the International Swap Dealers Association.

Swaps are essentially based on exchanging the comparative borrowing advantage one party has in one market for the borrowing advantage the other party has in another market. This enables one or both parties to obtain lower rates and funds than those which might otherwise be available. Swaps allow parties to borrow from markets in which they can obtain the best relative terms and then swap payments to obtain the desired interest rate structure.<sup>9</sup>

---

<sup>8</sup>The notion of performance SLCs being less risky than credit-enhancement SLCs was also mentioned in the FRS proposal for a risk-based capital system, discussed in appendix IV. In discussing OBS items, the proposal says that a counterparty involved in trade-related contingencies has a strong incentive to meet its obligations if it wishes to continue as an on-going business. Moreover, such trade-related SLCs are often short term, and banks maintain that their loss record on these instruments is favorable.

<sup>9</sup>The type of interest rate swap described in this report is a simplified example involving only two counterparties and an exchange of fixed versus variable rate interest payments. Much more complex variations exist, some involving multiple parties, differing currencies (this should not be confused with currency swaps discussed later), the same type of interest payments (fixed for fixed and floating for floating), and reverse swaps, which entail entering another swap to offset an existing swap. Swaps were originally based on liabilities, but recently asset-based

The following hypothetical situation illustrates how a swap might work. A thrift has lent \$20 million in fixed-rate mortgages at 14.5 percent, but it had to borrow the \$20 million from depositors at variable rates close to the Treasury bill rate. Although the thrift is currently making money on the mortgages, it runs the risk that its borrowing costs will rise above 14.5 percent.

A bank, on the other hand, has borrowed \$20 million at a fixed rate of 13 percent for 7 years. The \$20 million was put into corporate loans with adjustable rates tied to the London interbank offered rate (LIBOR), the rate that European banks pay for dollar-denominated deposits.

If the corporate loan pays the LIBOR rate plus 2 percent and the LIBOR rate is currently 11.5 percent, the bank makes a 50 basis point (1 basis point equals 1/100 of 1 percent) profit. But it runs the risk that interest rates will decline and its loan income will fall below what it pays on its borrowings.

In this situation, the thrift and the bank arrange a swap. The thrift agrees to pay the bank 13 percent on \$20 million for 7 years, while the bank agrees to pay the thrift the LIBOR rate on \$20 million during the same period.

As a result of the swap, the thrift has locked in a spread of 150 basis points--the difference between interest income at 14.5 percent and payment to the bank at 13 percent--on \$20 million for 7 years. If interest rates rise and the thrift has to pay more on its deposits, it is still covered because the LIBOR rate (and the bank's payments) will also increase.

For its part, the bank has added 200 basis points to its spread on its \$20 million. The thrift is paying off the 13

---

swaps involving the exchange of interest income from assets (as opposed to interest payments on debt) have also been arranged.

For further details see Swap Financing Techniques, (Euromoney Publications Ltd., 1983); "Currency and Interest Rate Swaps," Recent Innovations In International Banking, (Bank for International Settlements, April 1986); M. Martinson, Cornyn and Houpt, "Off-Balance-Sheet Risk," (Financial Analysis/Special Studies Section, Division of Banking Supervision and Regulation Board of Governors of the Federal Reserve System, 1984), Revised; and J. Gregg Whittaker, "Interest Rate Swaps: Risk and Regulation," Economic Review, (Federal Reserve Bank of Kansas City, March 1987).

percent interest on the bank's borrowing, and the bank is paying the thrift at the LIBOR rate while it receives the interest on the corporate loans at LIBOR plus 2 percent. The 200 basis spread will hold no matter how interest rates fluctuate.<sup>10</sup>

As this hypothetical illustration shows, banks can use interest rate swaps to hedge against interest rate risk. Banks also earn fee income by acting as an intermediary between swap counterparties. At one large money center bank, we were told that interest rate swaps also presented arbitrage opportunities; this involves the simultaneous buying and selling of financial instruments in separate markets to profit from momentary price differences.

It is widely believed that interest rate swaps have grown rapidly since 1981. The International Swaps Dealers Association put estimates at \$3 billion (cited by the principal underlying debt and not the interest payments) for 1982. In 1985 interest rate swaps were added to the Call Reports, and from 1985 to 1987 Call Report data reveal that the volume of swaps had increased and that banks with assets of \$1 billion or more accounted for most of the interest rate swap activity, as shown in table II.3.

---

<sup>10</sup>Example was taken from David Zigas, "Interest Rate Swaps Popular, but Credit Quality Problems Remain," (American Banker, October 10, 1984).

Table II.3:

Principal Amount of Interest Rate Swaps and Number  
of Reporting Banks By Asset Size, 1985 and 1987  
(\$ rounded in millions)

| Asset-Size<br>Group    |                 | 12/85     |                     | 6/87      |                     |
|------------------------|-----------------|-----------|---------------------|-----------|---------------------|
|                        |                 | Amount    | Percent<br>of total | Amount    | Percent<br>of total |
| Over<br>\$9.9 bil.     | Amount          | \$167,025 | 89.7%               | \$490,308 | 94.0%               |
|                        | Number of banks | 27        | 11.2                | 34        | 10.1                |
| \$1-9.9 bil.           | Amount          | \$17,902  | 9.6                 | \$27,716  | 5.3                 |
|                        | Number of banks | 117       | 48.5                | 139       | 41.1                |
| \$300-999 mil.         | Amount          | \$742     | 0.4                 | \$2,696   | 0.5                 |
|                        | Number of banks | 35        | 14.5                | 66        | 19.5                |
| \$100-299 mil.         | Amount          | \$380     | 0.2                 | \$584     | 0.1                 |
|                        | Number of banks | 41        | 17.0                | 66        | 19.5                |
| \$25-99.9 mil.         | Amount          | \$108     | 0.1                 | \$150     | 0.0                 |
|                        | Number of banks | 18        | 7.5                 | 32        | 9.5                 |
| Under<br>\$25 mil.     | Amount          | \$1       | 0.0                 | \$0.02    | 0.0                 |
|                        | Number of banks | 3         | 1.2                 | 1         | 0.3                 |
| All banks <sup>a</sup> | Amount          | \$186,159 |                     | \$521,452 |                     |
|                        | Number of banks | 241       |                     | 338       |                     |

<sup>a</sup> Totals may not add due to rounding.

Source: Consolidated Reports of Condition, Schedule RC-L: Commitments and Contingencies.

Banks engaging in interest rate swaps are primarily exposed to credit risk stemming from the possibility that a counterparty might default on its interest payment obligations. The potential loss exposure is not, however, equal to the underlying debt (as reported in Call Reports) of the swap. Rather than the principal (also known as the notional amount), the amount of credit exposure is the cost of replacing the defaulted swap agreement. Replacement costs depend largely on prevailing interest rates and the remaining time to maturity of the swap. In effect, replacement costs vary daily and do not necessarily decrease over

time because of the interest rate factor.<sup>11</sup>

A bank's credit risk exposure also varies depending on its role in the swap agreement. Little, if any, credit risk exists when a bank serves as an agent between two swap parties. Credit risk increases substantially, however, if a bank as intermediary also guarantees the interest payments of one or both counterparties. As a guarantor, a bank is then exposed if either counterparty defaults during the term of the swap.<sup>12</sup> OCC, in commenting on a draft of this report, said that banks rarely act as agents that do not guarantee swaps. (See app. VII.)

Counterparty default could also leave the non-defaulting bank exposed to interest rate risk. In those instances where a bank uses an interest rate swap to hedge against rate volatility, the defaulting counterparty in effect removes the hedge. The bank would remain exposed to interest rate risk until the defaulting swap party could be replaced, another hedging device was instituted, or the source of the interest rate risk was eliminated.

#### CURRENCY SWAPS

The term "currency swap" is used for a variety of currency transactions in which different currencies are exchanged for a predetermined length of time and at a predetermined exchange rate. Use of currency swaps is primarily a result of sharp and unpredictable shifts in exchange rates and/or nations' exchange control regulations, which may prohibit or discourage certain types of financial transactions.

A straight currency swap involves the exchange of two

---

<sup>11</sup>On any given day, replacement cost equals the difference between the present value of the remaining fixed rate and variable rate interest payments discounted at prevailing market rates. Estimating replacement costs is further complicated if there are multiple counterparties and cross currencies, which would also involve estimating future exchange rates. An assessment of such intricacies is beyond the scope of this report; they are only mentioned to illustrate some of the complexities and difficulties in measuring a bank's potential loss exposure.

<sup>12</sup>It should also be noted that default could result in a gain as well as a loss. Prevailing rates at the time of the default might actually be to the non-defaulting party's or intermediary's advantage in that the replacement cost might be less than the cost under the original swap agreement.

currencies and an agreement to re-exchange these currencies after a set period of time. The initial exchange is made at the prevailing exchange rate, and the same exchange rate is used for the future exchange, regardless of intervening exchange rate changes. Unlike an interest rate swap, currency swaps generally entail the exchange of both interest and principal amounts.

Interest payments are usually exchanged annually during the swap period, whereas the principal amount is re-swapped at the end of the swap period.<sup>13</sup> Currency swaps tend to be individualized contracts, so their size and maturity can vary. Maturities generally run from 5 to 10 years and the amount (in dollar equivalents) of most contracts tend to be for \$10 million to \$50 million.<sup>14</sup> OCC officials indicated that some currency swaps could exceed \$100 million at large money center banks.

Currency swaps consist of a variety of arrangements. The straight currency swap was chosen for discussion in this report because, while relatively simple, it illustrates the concept. Other common types of currency swaps include the parallel loan, the long-term forward exchange rate contract, and an exchange of borrowing.<sup>15</sup>

The use of currency swaps evolved in response to volatile exchange rates and interest rates. Currency swaps provide banks with (1) a means of hedging against exchange rate risk, (2) a means of obtaining foreign currency which may not otherwise be available, (3) arbitrage opportunities, and (4) a means of obtaining foreign currency at favorable rates. When a bank acts as an intermediary, currency swaps generate fee income. According to regulators, currency swaps are primarily the domain of large money center banks--those with large international trading activities.

Call Reports currently do not provide a separate breakout

---

<sup>13</sup>Interest payments are individually negotiated but generally reflect the difference in prevailing interest rates between the two currencies. Generally, the party with the lower interest rate pays the other party.

<sup>14</sup>Estimates taken from John A. M. Price, "Development of the Swap Market," Swap Financing Techniques, (Euromoney Publications, 1983), pp. 23-34.

<sup>15</sup>For further details, see Boris Antl, "Mechanics and Key Characteristics: Parallel Loans, Swaps and Foreign Exchange Contracts," Swap Financing Techniques, (Euromoney Publications, 1983), pp. 1-10.

for currency swaps. Consequently, reliable data was not readily available showing the extent of this activity.<sup>16</sup> However, one estimate at the beginning of 1986 was put at \$90 billion, and a recent study for the Bank for International Settlements (BIS) claims that the outstanding volume of currency swaps was less than interest rate swaps.<sup>17</sup>

Although views differ, one OCC official said that currency swaps expose banks to more risk than do interest rate swaps since principal, not just interest, is swapped and therefore subject to default. As with interest rate swaps, the amount of potential losses or gains on currency swaps fluctuates daily because the replacement costs are affected by prevailing interest rates, exchange rates, and the remaining time to maturity. In addition, counterparty default would expose a bank to potential exchange rate losses if the principal amount of the swapped foreign currency had to be converted back to the original currency at a lower exchange rate.

#### FINANCIAL FUTURES AND OPTIONS CONTRACTS

A futures contract obligates its holder to either sell or purchase a specified security or money market instrument at a specified price and date in the future. These are standardized contracts which are traded on organized exchanges.<sup>18</sup>

An options contract, on the other hand, gives its purchaser the option (but not the obligation) to either sell or purchase a financial instrument at a specified price at any time during the term of the contract. Some of the underlying financial instruments covered by these contracts include U.S. Treasury bonds, notes and bills, Government National Mortgage Association (GNMA) securities, and certificates of deposit. The complexities

---

<sup>16</sup>Banks file a monthly report (FFIEC 35) with the OCC on their gross assets, liabilities, and foreign exchange positions in six foreign currencies. The report is primarily a maturity schedule and does not provide a separate breakout for currency swaps.

<sup>17</sup>S. Andrews and H. Sender, "Off-Balance-Sheet Risk: Where Is It Leading Banks?," (Institutional Investor, January 1986), and Recent Innovations In International Banking, Prepared by a Study Group established by the Central Banks of the Group of Ten countries, (Bank For International Settlements, April 1986), Chapter 2.

<sup>18</sup>Also see Securities and Futures, How the Markets Developed and How They Are Regulated, (GAO Staff Study, May 15, 1986), GAO/GGD-86-26.

of some of these instruments can be quite involved, such as options contracts covering futures contracts. Options are traded either on an organized exchange, or in the over-the-counter market.

Banks use futures and options contracts primarily as a hedging tool to reduce the risk of potential losses due to volatile interest rates and exchange rates. The need for hedging against volatile rates, in turn, arises from (1) dealer trading and arbitrage operations, (2) hedging specific assets and liabilities, and (3) managing the bank's overall asset/liability position.<sup>19</sup>

Table II.4 shows the amount of futures and forwards contracts reported between the years 1983 and 1987.<sup>20</sup> Banks with at least \$10 billion in assets accounted for 86 percent of the \$253 billion in reported contracts in 1987 and accounted for most of the growth.

---

<sup>19</sup>A number of banks function as government securities dealers, trading these securities on a daily basis. In functioning as securities dealers, they accept the risk that securities bought to sell will decline in price before they are sold. In the process, banks may engage in arbitrage strategies.

<sup>20</sup>Forwards contracts are similar to futures contracts but are traded over-the-counter rather than on organized exchanges. Because these items are reported together the amount of futures contracts could not be reported separately in the table.

Table II.4:

Gross Futures and Forwards Contracts, 1983-1987  
(\$ rounded in millions)

| <u>Asset-Size Group</u> | <u>12/83</u>      | <u>12/84</u>      | <u>12/85</u>      | <u>12/86</u>       | <u>6/87</u>        |
|-------------------------|-------------------|-------------------|-------------------|--------------------|--------------------|
| Over \$9.9 bil.         | \$50,002          | \$58,795          | \$80,141          | \$161,357          | \$217,891          |
| \$1-9.9 bil.            | 10,451            | 8,269             | 16,184            | 16,656             | 26,590             |
| \$300-999 mil.          | 1,660             | 724               | 1,056             | 470                | 504                |
| \$100-299 mil.          | 655               | 479               | 202               | 474                | 8,319              |
| \$25-99.9 mil.          | 223               | 115               | 112               | 148                | 136                |
| Under \$25 mil.         | 16                | 22                | 7                 | 31                 | 10                 |
| All banks <sup>a</sup>  | \$63,006<br>===== | \$68,403<br>===== | \$97,702<br>===== | \$179,135<br>===== | \$253,449<br>===== |

<sup>a</sup> Totals may not add due to rounding.

Source: Consolidated Reports of Condition, Schedule RC-L: Commitments and Contingencies. (Data includes commitments to buy and to sell futures and forwards contracts combined.)

Options contracts have also increased, but have not approached the same volume as futures and forwards contracts, as shown in table II.5. Banks with assets of \$10 billion or more wrote (or sold) 90 percent of the \$51.6 billion options reported in 1987.

Table II.5:

Obligations Under Options Contracts, 1983-1987  
( \$ rounded in millions)

| <u>Asset-Size Group</u> | <u>12/83</u>     | <u>12/84</u>     | <u>12/85</u>      | <u>12/86</u>      | <u>6/87</u>       |
|-------------------------|------------------|------------------|-------------------|-------------------|-------------------|
| Over \$9.9 bil.         | \$1,214          | \$3,577          | \$11,337          | \$34,988          | \$46,469          |
| \$1-9.9 bil.            | 1,421            | 892              | 3,936             | 3,941             | 4,302             |
| \$300-999 mil.          | 39               | 12               | 114               | 387               | 708               |
| \$100-299 mil.          | 21               | 24               | 241               | 183               | 60                |
| \$25-99.9 mil.          | 19               | 38               | 41                | 75                | 41                |
| Under \$25 mil.         | <u>3</u>         | <u>2</u>         | <u>9</u>          | <u>3</u>          | <u>4</u>          |
| All banks <sup>a</sup>  | \$2,717<br>===== | \$4,545<br>===== | \$15,678<br>===== | \$39,576<br>===== | \$51,584<br>===== |

a Totals may not add due to rounding.

Source: Consolidated Reports of Condition, Schedule RC-L: Commitments and Contingencies. (Data includes commitments to buy and sell option contracts.)

An FRS staff study attributed the heavier use (in terms of volume) of futures, forwards, and options contracts by larger banks to the fact that large banks were more likely to have dealer operations, were in a better position to attract the expertise needed to engage in these activities, and were better able to accommodate the large size of these contracts. It is also believed that smaller banks view these types of activities as too speculative for their use.<sup>21</sup>

Banks engaging in futures and options contracts are exposed to market risk, that is the difference between market value and contract price. Theoretically, however, they are insulated against losses since these OBS activities essentially serve as a hedge: gains incurred from these contracts offset losses due to unfavorable interest rate movements, and losses from these

<sup>21</sup>M. Martinson, Cornyn and Houpt, Off-balance Sheet Risk, (Financial Analysis/Special Studies Section, Division of Banking Supervision and Regulation, Board of Governors of the Federal Reserve System, 1984), Revised.

contracts offset gains arising from favorable rate movements.<sup>22</sup> However, banks face the risk that other factors, such as trading abuses, failure to take into account overall interest rate exposure, and uninformed or unauthorized trading, will expose them to market risks since gains and losses would not then necessarily offset each other.

For options, the amount of potential loss differs depending upon the type of contract. When a bank purchases an options contract, its loss exposure is limited to the price of the option. If the option becomes unprofitable to exercise, the bank simply lets the option expire by not selling or purchasing the underlying instrument at the specified price. However, a bank's loss exposure is theoretically unlimited if the bank sells (writes) an option contract that gives the holder the right to buy an instrument from the bank at a specified price (a "call" option). If the bank sells (writes) an option that gives the holder the right to sell an instrument to the bank at a specified price (a "put" option), the bank's exposure is limited to the amount the specified price exceeds the available market price. Of the \$51.6 billion in options reported in the Call Reports for 1987, about 34 percent (\$17.8 billion) were reported as sell positions.

Some analysts also note that credit risk is associated with futures contracts. However, the risk is considered small since it largely stems from the possibility that one of the exchanges will not be able to deliver or sell the underlying security to the bank.<sup>23</sup>

#### AGENCY COMMENTS AND OUR EVALUATION

FDIC and OCC suggested clarifying or expanding a number of technical points. Most of these are discussed directly following their letters in appendixes VI and VII. FDIC and OCC both noted

---

<sup>22</sup>In practice, the risks associated with using futures and options for hedging are substantially more complex than suggested here. For a detailed discussion, see "Trading and Hedging with Short-term Interest Rate Futures," (Chicago Mercantile Exchange, 1984); Joanne M. Hill and Thomas Schneeweis, "Reducing Volatility with Financial Futures," Financial Analysts Journal, (Nov.-Dec. 1984); and Jeffrey M. Walters, "The Futures Alternative to Fixed-Rate Financing," The Journal of Commercial Bank Lending, (February 1985).

<sup>23</sup>Credit risk is considered greater with forward contracts since these contracts are not traded through an organized exchange, but rather between two parties directly.

that our draft report was incorrect in saying that currency swaps are not reported in the Call Reports. We have revised our language to say that they are not reported separately. They are, instead, included together with routine foreign currency and U.S. dollar exchange transactions. (The eighth item listed on table I.1.) Consequently, data on the extent of currency swaps is not available from the Call Reports, as both FDIC and OCC recognize.

CONCERNS REGARDING OBS ACTIVITIES

With OBS activities growing so rapidly, U.S. and foreign regulatory agencies, the Bank for International Settlements (BIS), and others have expressed concern over the associated risks. According to an FRS official, OBS activities have not resulted in any major problems or bank failures, and an FDIC staff study on OBS activities says that losses on these activities historically appear to have been very small.<sup>1</sup> The FDIC study adds that regulators do not view OBS activities as risk free, however, and OCC cautions that there have been occasional problems. (See p. 65.) Regulators and others say that much of the risk associated with these activities cannot be quantified in terms of accurately measuring potential losses. All three regulators have undertaken studies to better understand the associated risks.<sup>2</sup> In this appendix, we discuss concerns about risk to individual banks and to the banking system.

OCC, FDIC, and FRS officials told us that one of their primary concerns was whether banks engaging in OBS activities had adequate controls and were properly managing the associated risks. Regulators also said they were continually assessing these activities. Such an assessment, some said, was made more difficult because of the following factors:

- Incomplete reporting and nonuniform accounting. Regulatory officials say that more detailed disclosure is needed for analysis in order to completely understand the associated risks. There is agreement that data now in the Call Reports only reflects the level of activity and not necessarily the risks.
- Continuing evolution and development. An FDIC supervisory official likened OBS activities to "a moving target," claiming that many are still new and continually evolving.
- The complex and technical nature of some activities. The BIS Committee on Banking Regulations and Supervisory Practices in a recent study described some

---

<sup>1</sup>James Chessen, "Off-Balance-Sheet Activity: A Growing Concern," Regulatory Review (FDIC: May 1986), pp. 1-15.

<sup>2</sup>Similar efforts had been undertaken by a study group established by the Central Banks of the Group of Ten countries, and the Committee on Banking Regulations and Supervisory Practices at the Bank for International Settlements in Basel, Switzerland.

of these activities as being "technically very complicated and . . . probably only fully understood by a small number of traders and market experts."<sup>3</sup>

- Difficulties in measuring/quantifying potential loss exposures. Regulatory officials acknowledge that the risks associated with some of these activities are difficult to quantify and point out that in some instances loss exposures were subject to constant fluctuations.

Bank regulators acknowledged that some OBS activities, such as financial futures, may be effectively used to hedge against interest rate risk. However, they caution that improper use of these instruments could just as easily increase--rather than decrease--interest rate risk. Regulators view such activities as unsafe and unsound banking practices when used to speculate on future rate movements.

There is also concern that OBS activities may pose added risks to the banking system as a whole. The question is whether OBS activities taken together increase the chances that the failure of one bank could lead to other bank failures or widespread disruptions. Views differ on this subject, and few empirical studies have been done to measure OBS banking risks.

Much of the research assesses specific OBS activities rather than all OBS activities collectively. One study covered 63 bank holding companies and concluded there was little evidence that the equity markets required a significantly higher risk premium for banks issuing OBS guarantees. It found that loan commitments and commercial letters of credit were not perceived by the market as risk-increasing activities for banks.<sup>4</sup> On the other hand, the authors recognized that the risks perceived by a well-diversified investor and the FDIC, insurer of individual banks, differed.

Another study, examining bank failures and SLCs, showed that the 120 banks that failed between January 1984 and June 1985 did

---

<sup>3</sup>The Management of Banks' Off-Balance-Sheet Exposures: A Supervisory Perspective, Committee on Banking Regulations and Supervisory Practices at the Bank for International Settlements in Basel, Switzerland, (March 1986).

<sup>4</sup>E. Brewer III, G. D. Koppenhaver, and Donald H. Wilson, "The Market Perception of Bank Off-Balance-Sheet Activities," Proceedings: Bank Structure and Competition, (Federal Reserve Bank of Chicago, May 1986).

not have extraordinary levels of outstanding SLCs, compared to a control group of non-failing banks.<sup>5</sup>

Questions about risk to the banking system stem from a variety of concerns including: (1) possible underpricing of some OBS activities, (2) the size of the banks that account for most of the OBS activities, (3) the effect of increased interlinking of OBS participants, and (4) the possibility that the banking system is exposed to higher levels, and a concentration of, credit risk as a result of OBS activities.

In terms of pricing, regulators are concerned about possible underpricing of some OBS activities in relation to the associated risks. If underpriced, many thinly margined products would be needed to cover a single but large loss. (The margin is the difference between costs and income.) Bankers we interviewed also expressed similar concerns. Standby letters of credit and interest rate swaps were cited as examples of activities where competition had affected pricing. They said that competition from foreign banks in the SLC market was a primary factor contributing to underpricing. One banker noted in a speech that foreign competitors, Japanese banks in particular, have been pricing SLCs used in the municipal bond market as if there were no risk. He said fees have been so low that if only one deal out of a hundred defaulted and the principal was lost, these fees from SLCs would be small compensation.

Regulators and others note that, based on the extent of participation, the risks associated with OBS activities are concentrated among those banks with the greatest impact on the banking system. Over 97 percent of the reported OBS activities were held by less than 3 percent of all banks at mid-year 1987; these banks accounted for over 65 percent of the industry's assets. The banking system would be more adversely affected if large banks rather than smaller banks experienced problems. This is not to say, however, that large banks are more likely to experience OBS problems simply because they account for most of the activity. In fact, one reason cited for large banks' higher level of activity is their ability to attract the expertise needed to engage in these activities.

Another cause for concern relates to the linking in some instances of multiple parties under a single OBS transaction. The linking of multiple parties increases the potential domino

---

<sup>5</sup>Lawrence M. Benveniste and Allen N. Berger, "An Empirical Analysis of Standby Letters of Credit," Proceedings: Bank Structure and Competition, (Federal Reserve Bank of Chicago, May 1986).

effect in the system if one participating bank experiences problems. An FRS staff research paper showed how one large bank's inability to cover a daylight overdraft might cause a series of other banks to incur daylight overdrafts which, in turn, could not be settled by the affected banks. It was shown that as many as 73 other banks could have been affected when the inability to settle was defined as a net overdraft position amounting to at least 10 percent of the bank's capital.<sup>6</sup> These 73 banks' own electronic payments were dependent on the receipts from the large bank that was unable to cover the daylight overdraft. The researchers concluded that "systemic risk can be significant and that its possible effects on financial markets may be large enough to be a serious problem."

While this example illustrates how the interlinking of transactions could cause systemic problems, there have not been any major losses to date.<sup>7</sup> In addition, the Federal Reserve Board has undertaken several initiatives to increase controls over electronic payment systems.<sup>8</sup>

---

<sup>6</sup>David B. Humphrey, "Payments Finality and Risk of Settlement Failure: Implications for Financial Markets," Prepared for the Conference on Technology and the Regulation of Financial Markets, Salomon Brothers Center for the Study of Financial Institutions, Graduate School of Business Administration, New York University, May 1985.

<sup>7</sup>Two instances regarding payment system problems include the 1974 failure of the Bankhaus Herstatt in West Germany, which affected the interbank foreign exchange market, and the 1985 computer breakdown at the Bank of New York which would have adversely affected the government securities market if not for a multi-billion dollar overnight loan from the Federal Reserve Bank of New York.

<sup>8</sup>In March 1986, the Federal Reserve Board established a policy which encourages banks to voluntarily establish limits (caps) over their daylight overdrafts. Federal Reserve statistics show the volume of overdrafts in 1986 had not grown over 1985 levels even though the volume of funds transfers had increased. The average daily volume of funds transferred in 1986 increased to \$932 billion from \$742 billion in 1985. However, the average daily amount of overdrafts in 1986 decreased to \$78 billion from \$79 billion in 1985. By the first quarter of 1987, average daily overdrafts amounted to \$83 billion and funds transfers amounted to \$1.1 trillion, which was an increase over the prior quarter.

In July 1987, the Board of Governors asked its Large-Dollar

Another concern is that a number of OBS activities may concentrate risks that were previously more widely dispersed within the banking system. Such concentration is believed to be an indirect result of some OBS activities used to hedge interest rate and exchange rate risks (e.g. options, futures, and swaps, as discussed in appendix II). Although a bank can hedge certain risks, its exposure to risk is not totally eliminated. As discussed in appendix II, some OBS hedging activities expose banks to credit risk. Because most of these OBS hedging activities are concentrated among banks with assets of at least \$10 billion (representing less than 1 percent of all banks), the additional credit risk exposure from these OBS hedges is concentrated among a small number of banks.

It is also possible that the existence of hedging opportunities would encourage banks to take on more interest rate and exchange rate risk exposures than would otherwise be the case, with the expectation that the exposures could be hedged.<sup>9</sup> This, in turn, would further compound the level of credit risk assumed by large banks.

The fundamental question is, credit risk notwithstanding, are banks exposed to smaller or greater potential losses than they would have been exposed to if these OBS activities used for hedging had not been undertaken? In light of the specific measurement difficulties discussed in appendix II, there seems to be a consensus that it is unlikely that a reliable estimate of the resulting risk exposure can be determined at this time.

In addition, it is possible that the implementation of some OBS activities may also expose the system to risks that cannot be avoided through diversification and are vulnerable to external economic factors. Such risks are similar to those of certain on-balance-sheet activities. For example, loans or SLCs may be

---

Payments System Advisory Group and a staff task force to explore more fully the pricing of overdrafts, further cap reductions, clearing balance requirements, collateralization, and other techniques for reducing the risks associated with large-dollar transfers.

<sup>9</sup>The Management of Banks' Off-Balance-Sheet Exposures: A Supervisory Perspective, Committee on Banking Regulations and Supervisory Practices at the Bank for International Settlements in Basel, Switzerland, March 1986; Recent Innovations in International Banking, Study Group established by the Central Banks of the Group of Ten Countries, Bank for International Settlements, April 1986.

concentrated in a single sector or industry, or may be diversified. This vulnerability with respect to SLCs used to back financial instruments, such as commercial paper, was discussed in appendix II.

Bank regulatory officials we met with were generally uncertain as to whether OBS activities as a whole increased risk to the system. Some said that, intuitively, it seems logical that such risk may have increased because of the interlinking and the potentially large exposures of some activities. On the other hand, some acknowledged the risk-reducing benefits such as hedging. However, most indicated that the banking system's net risk exposure was not now measurable.

Another issue related to OBS activities is that banks are not now routinely required to maintain a specified level of capital for these activities, as they are for on-balance-sheet activities which entail similar risks. Consequently, banks (and thus the system) are not required to have a cushion specifically earmarked to absorb any losses that might arise from these activities. As previously discussed, some of these losses could be extensive and possibly affect other banks. The issue of having banks maintain capital for OBS activities is discussed in appendix IV.

#### AGENCY COMMENTS AND OUR EVALUATION

OCC said that the draft report gave the impression that OBS activities are very risky when in fact no one knows the extent of risk. We did not intend to give such an impression. In fact, we specifically say that OBS risks are not precisely measurable and are therefore difficult to gauge relative to those of on-balance-sheet activities. Besides discussing the risks associated with OBS activities, we also report that OBS activities are used for hedging, which reduces other exposures, and that the dollar volume alone is not a good indicator of banks' exposure to losses. (See pp. 3, 4, 18, and 19.) While the extent of OBS risks may not be precisely known, we do agree with those, including regulators, who contend that OBS activities are not risk free.

RISK-BASED CAPITAL PROPOSAL INCLUDES  
OBS ACTIVITIES

In light of the rapid growth of OBS activities and the uncertainties about the associated risks, regulators have proposed that banks be required to maintain capital for certain OBS activities. This is part of an overall attempt to more closely align required capital levels with individual bank risk profiles, rather than just the amount of assets. Presently, banks are not specifically required to maintain capital against OBS activities.<sup>1</sup> This appendix discusses how OBS activities would be incorporated under the risk-based capital system proposed by the Federal Reserve Board in February 1987.<sup>2</sup> We also summarize some of the comments regulators received on several aspects of the proposal related to OBS activities, as well as the views of regulatory officials.

OBS ACTIVITIES COMPARED TO CAPITAL

Appendix I described how rapidly OBS activities have grown in recent years and how extensive they have become when compared to bank assets. Comparing the volume of OBS activities to bank capital levels further underscores the dramatic growth in these

---

<sup>1</sup>Although OBS activities are not explicitly factored into the calculation of minimum regulatory capital requirements, regulators' current capital maintenance regulations allow them to require capital above minimum standards in light of various factors including OBS activities.

<sup>2</sup>Federal Reserve System, 12 CFR Part 225, Appendix A [Regulation Y; Docket No. R-0567] Capital Maintenance: Revision to Capital Adequacy Guidelines, February 12, 1987. The FDIC and OCC subsequently issued their own proposals on March 31, 1987 and June 11, 1987, respectively. FDIC's and OCC's treatment of OBS activities is identical to that in the FRS proposal. However, OCC's and FDIC's proposals do not specifically address interest rate swaps or foreign exchange rate contracts, but instead refer to the FRS's supplemental proposal covering these two OBS items. The risk-based capital proposals were based on joint discussions among the FRS, FDIC, OCC and the Bank of England. In December 1987, the Committee on Banking Regulations and Supervisory Practices of the BIS issued a proposed framework for risk-based capital developed jointly by the 12 leading industrial countries. FRS, FDIC, and OCC took part in its development and the three agencies announced that in the near future they will issue detailed proposals for applying the newly developed framework to U.S. banking organizations.

activities, as shown in table IV.1. As discussed in appendix II, it must be noted that the volume of activity alone does not equate to risk and that certain OBS activities offset other risks.<sup>3</sup>

Table IV.1:

Reported OBS Activities as a Percent of Equity Capital  
1984-1987

| <u>Asset-Size Group</u> | <u>12/84</u> | <u>12/85</u> | <u>12/86</u> | <u>6/87</u> |
|-------------------------|--------------|--------------|--------------|-------------|
| Over \$9.9 Bil.         | 2632%        | 3235%        | 3671%        | 6146%       |
| \$1-9.9 Bil.            | 507          | 567          | 537          | 584         |
| \$300-999 Mil.          | 157          | 163          | 174          | 178         |
| \$100-299 Mil.          | 76           | 78           | 82           | 128         |
| \$25-99 Mil.            | 34           | 35           | 39           | 42          |
| Under \$25 Mil.         | 17           | 18           | 21           | 22          |
| All banks               | 884%         | 1087%        | 1283%        | 1791%       |

Source: Consolidated Reports of Condition, Schedule RC-L: Commitments and Contingencies. OBS activities included in this table are described in table I.1.

HOW OBS ACTIVITIES ARE TREATED UNDER THE PROPOSAL

The overall approach of the risk-based capital proposal entails placing each bank's assets in one of five risk categories for purposes of computing the "weighted risk assets." Risk weights used are 0, 10, 25, 50, and 100 percent with the higher weights representing greater risk. Depending on an asset's risk characteristics, the amount of each asset is multiplied by 1 of the 5 weights, and the resulting sums are then added together to obtain total risk-adjusted-assets. Bank capital is then assessed relative to the total of risk-adjusted assets.

For OBS activities, the process entails an additional

---

<sup>3</sup>James Chessen in his article "Feeling the Heat of Risk-Based Capital: The Case of Off-Balance-Sheet Activity," Regulatory Review, FDIC, August 1987, suggests that banks may already be responding to risk-based capital proposals in anticipation of their eventual implementation. The author cites the risk-based proposal as one of several possible reasons for the apparent slowdown in the growth of certain OBS activities at commercial banks.

intermediate step. The face amount of each OBS activity is multiplied by one of four "credit conversion factors".<sup>4</sup> Table IV.2 illustrates the calculation for a few OBS items.

Table IV.2:

| <u>On-Balance-Sheet Credit Equivalent Amount</u><br><u>for Certain OBS Instruments</u><br>(\$ in millions) |                         |                                 |  |
|--|-------------------------|---------------------------------|--|
| <u>Off-Balance-Sheet Instrument</u>  | <u>Principal Amount</u> | <u>Credit Conversion Factor</u> | <u>On-Balance-Sheet Credit Equivalent Amount</u> |
| Standby letter of credit (financial)   | \$40,000                | x 1.0                           | = \$40,000                                       |
| Loan commitment (original maturity of 3 years)   | 20,000                  | x 0.25                          | = 5,000  |
| Commercial letter of credit  | <u>10,000</u>           | x 0.50                          | = <u>5,000</u>                                   |
| Total  | <u>\$70,000</u>         |                                 | <u>\$50,000</u>                                  |

Source: Examples and formulas presented in FRS proposal.

The resulting credit equivalent amounts are then assigned to one of the five risk categories. The specific risk category used is based on how a direct claim on the customer would be treated under the overall proposal and, in certain cases, the maturity of the instrument. In principle, the process determines the amount of credit risk associated with each OBS activity. The process for converting interest rate and exchange rate contracts is

<sup>4</sup>The four credit conversion factors are grouped into the following categories: (1) "direct credit substitutes," such as financial guarantees and SLCs and certain asset sales with recourse, are converted at 100 percent; (2) "trade-related contingencies," such as performance SLCs and "other commitments" with maturities over 5 years such as overdraft facilities, are converted at 50 percent; and (3) "other commitments," such as RUFs and consumer credit lines with maturities of up to 1 year, are converted at 10 percent and those with maturities of over 1 year to 5 years are converted at 25 percent.

similar, but more complex.<sup>5</sup>

FRS, OCC, and FDIC requested comments on an earlier proposal in 1986, which treated OBS activities in a similar manner in that certain OBS activities were grouped in one of four risk categories. (The most recent proposal provides for using credit conversion factors as an intermediate step before using one of five risk categories.) Most of the written responses from the domestic and public sectors, banking officials, and other interested parties supported the concept of a risk-based capital system. However, some cited practical limitations to including OBS activities and generally felt that the process for determining the amount of capital needed to support OBS activities was better left to the examination process rather than having OBS activities covered in the risk-based capital system. (The comments did not contain specific discussions as to how this could be done, however.)

#### COMPETITIVE CONSIDERATIONS

Comments from bankers on the prior proposals reflected concern over the competitive implications of having to maintain capital for OBS activities. Some claimed that subjecting banks to higher capital requirements would put them at a pricing disadvantage with thrifts, nonbank institutions, and foreign banks, all of which provide similar products but are not subject to similar capital requirements. Such concern relates, in particular, to standby letters of credit and to interest rate swaps.

Competition has already been noted as a factor influencing the pricing of swaps and SLCs, and there is concern that banks may not be obtaining an adequate rate of return as a result. (See app. III.) Any such pricing deficiencies could be further compounded if banks continued to offer these products at the same rates despite the higher implied costs due to required capital. Banks could be faced with either losing market share to nonbank competitors or having to assume greater risks due to smaller margins.

---

<sup>5</sup>For these types of OBS activities, the proposal recognizes that credit exposures are related primarily to replacement costs rather than the principal amounts of the contracts. Accordingly, credit equivalents are obtained by summing the current replacement costs and a measure of potential future increases in replacement costs. Credit conversion factors for future replacement costs are based on probability distributions for various rates and the remaining time on the contract.

Regulatory officials recognize the potential competitive and pricing implications of the risk-based proposal. None we met with, however, indicated the impact would be so adverse as to warrant excluding these items from the risk-based system. One official cited offsetting benefits, such as the increased safety generally associated with increased capital. Others indicated that the impact of capital on competition and pricing was too difficult to determine precisely.

#### LIMITATIONS

The FRS proposal does not factor in all types of risk. The risk weights primarily reflect credit risk considerations, with some sensitivity to liquidity and interest rate risks. As we noted in appendix II, the primary risk for some OBS items is not necessarily limited to credit risk. RUFs, loan commitments, and standby letters of credit either primarily or also entail liquidity risk in that banks might not be able to meet their obligations to extend credit if large numbers of borrowers were to simultaneously ask for funds.

Some of the comments received by FRS on the earlier proposal called for a more precise recognition of risk for certain OBS activities, suggesting that a given activity could not always be grouped into a single broad risk category. For example, respondents noted the riskiness of SLCs could vary depending on the quality of collateral, maturity, and the underlying credit. Further underscoring the possible limitations of using broad risk categories were comments that suggested a range of risk weights for SLCs from 0 percent to 100 percent.

In general, the proposal gives only limited consideration to the risk-reducing effects of collateral. It recognizes U.S. Government securities and cash by including assets fully supported with these forms of collateral in a risk category of either 25 or 50 percent. The proposal does not explicitly take into account any other form of collateral, guarantee, or credit enhancement. The risk-reducing effects of collateral, other than cash or U.S. Government securities, that support OBS activities, such as SLCs, would not be recognized.

The proposal also does not incorporate the risk-reducing benefits of certain OBS activities used for hedging. Some comments from banks suggested that banks using instruments such as futures and swaps should somehow be rewarded for reducing other types of risk exposures. Other respondents claimed these types of hedging activities were too complicated to incorporate in the proposal and that this was better left to the examination process.

FRS has solicited the views of bankers and researchers as to how the other factors related to OBS activities, such as liquidity risk, might be incorporated into the system. Until refinements can be made, FRS anticipates such considerations would be taken in account during on-site examinations and continues to study the issue.

We asked regulators about leaving the process of determining required capital for OBS activities under the risk-based system to bank examiners in light of some of the difficulties in assessing risk. An OCC official said that the large number of banks alone precluded making a sufficient number of periodic assessments. FDIC officials acknowledged that there were some practical limitations, and FRS officials said that there were practical limitations to relying solely on examiners. Comments by FDIC Chairman L. William Seidman further underscore the potential limitations of leaving needed refinements to on-site examinations. On May 21, 1987, Mr. Seidman told the Senate Committee on Banking, Housing and Urban Affairs, that "It is clear that our present number of examiners is insufficient to deal with our responsibilities and the current level of problems in the bank system."

#### AGENCY COMMENTS AND OUR EVALUATION

Both FDIC and OCC commented on our citation of Chairman Seidman's statement in the preceding paragraph concerning the number of bank examiners. FDIC did not deny there were difficulties but said that it has intensified its efforts to increase the size of the examination force and that, even allowing for attrition, there would be an increase of more than 15 percent in the number of field examiners in 1987. (See app. VI.)

OCC said that our quote from FDIC Chairman Seidman may have been taken out of context and that the issue Mr. Seidman may have been talking about was more one of examiner experience and expertise, not the number of examiners per se. (See app. VII.) FDIC's comments to our draft report show that the quote was not taken out of context. (See app. VI.) OCC, in its comment, implies it believes the issue is one of examiner experience and expertise in these highly technical areas.

OCC offered some general comments concerning the reporting and supervision of OBS activities at the close of its letter. It said that our draft correctly observed that certain OBS risks and volumes are not captured or quantified in the Call Reports. OCC went on to say that, unfortunately, OBS activities cannot be easily captured in a meaningful way through the call system and elaborated on reasons why this is the case. OCC said that a

comprehensive risk-based capital framework and reporting system that also capture OBS risks appears to be a more promising approach, together with the regulators' supervision of bank management related to OBS activities. Since our review did not seek to assess regulatory oversight of OBS activities, we have no comments on the OCC's statement concerning the activities of bank examiners in connection with bank OBS activities.

FERNANDU. ST GERMAIN, RHODE ISLAND, CHAIRMAN

FRA'K ANNUNZIO, ILLINOIS  
CARROLL HUBBARD, JR., KENTUCKY  
DOUG BARNARD, JR., GEORGIA  
JOHN J. LAFALCE, NEW YORK  
MARY ROSE OAKAR, OHIO  
BRUCE F. VENTO, MINNESOTA  
ROBERT GARCIA, NEW YORK  
LES E. SCHUMER, NEW YORK  
Y FRANK, MASSACHUSETTS  
RD H. LEHMAN, CALIFORNIA  
DOOPER, TENNESSEE  
JUDY ROEMER, LOUISIANA  
MARCY KAPTUR, OHIO  
BILL NELSON, FLORIDA  
PAUL E. KANJORSKI, PENNSYLVANIA  
BART GORDON, TENNESSEE  
THOMAS J. MANTON, NEW YORK

REQUEST LETTER

U.S. HOUSE OF REPRESENTATIVES  
SUBCOMMITTEE ON FINANCIAL INSTITUTIONS  
SUPERVISION, REGULATION AND INSURANCE  
OF THE

COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS

NINETY-NINTH CONGRESS  
WASHINGTON, DC 20515

July 22, 1986

CHALMERS P. WYLIE, OHIO  
JIM LEACH, IOWA  
STEWART B. MCKINNEY, CONNEC  
NORMAN D. SHUMWAY, CALIFOR  
BILL MCCOLLUM, FLORIDA  
GEORGE C. WORTLEY, NEW YORK  
DAVID DREIER, CALIFORNIA  
STAN PARRIS, VIRGINIA  
MARGE ROUKEMA, NEW JERSEY  
DOUG BERUTER, NEBRASKA  
STEVE BARTLETT, TEXAS  
TOBY ROTH, WISCONSIN

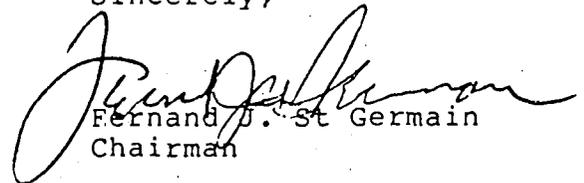
Mr. Charles A. Bowsher  
Comptroller General  
U.S. General Accounting Office  
Room 7000  
441 G Street, N.W.  
Washington, D.C. 20548

Dear Mr. Bowsher:

The Subcommittee on Financial Institutions Supervision, Regulation, and Insurance is becoming increasingly aware of the significance of the growing volume of off-balance sheet activities at major U.S. banks. We are concerned about potential risks the proliferation of such activities may pose to the U.S. banking system. We therefore ask you to provide the Subcommittee with any currently available data, based on prior or ongoing GAO efforts, that provide information on the extent and complexity of off-balance sheet activities at U.S. financial institutions.

Thank you for your cooperation on this matter.

Sincerely,

  
Fernand J. St Germain  
Chairman

FStG:mmm

COMMENTS FROM THE FEDERAL DEPOSIT  
INSURANCE CORPORATION

**FDIC**

Federal Deposit Insurance Corporation  
Washington, DC 20429

Division of Bank Supervision

December 7, 1987

Mr. Craig A. Simmons  
Senior Associate Director  
General Government Division  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Mr. Simmons:

Thank you for providing us with a draft copy of your briefing report on off-balance sheet activities of commercial banks. We understand that the report is being prepared at the request of Congressman Fernand J. St Germain, Chairman of the House Subcommittee on Financial Institutions Supervision, Regulation and Insurance, and we appreciate the opportunity to comment on your preliminary version of this report.

See pp. 2 and 18.

See pp. 3, 19, 40, and  
app. II.

The report focuses on a selected group of off-balance sheet transactions and includes a variety of statistics that compare the volume and growth of off-balance sheet activities, including letters of credit and loan commitments, to certain other target figures, such as total assets and equity capital. In this respect, we agree with the observation in your report that although the gross dollar amounts of the selected off-balance transactions continue to increase, the amount of actual and potential exposure cannot be determined simply by looking at gross volume figures, especially for such interest rate and foreign exchange related transactions as interest rate futures, option contracts, interest rate swaps, currency swaps and foreign exchange forward contracts. We also agree that when off-balance sheet transactions are properly monitored, controlled and utilized for hedging purposes, the activities may in fact limit or reduce a bank's overall exposure to risk.

See pp. 4, 39, and 45.

Nonetheless, we realize that if a financial institution is not fully aware of the sophisticated nature of, and the risks associated with, some of these off-balance sheet activities, or if the transactions are speculatively used to expose a bank to an inordinate amount of risk, such off-balance sheet arrangements can substantially increase the potential for loss. Therefore, the sophistication of bank management, and the nature and degree of policies, controls and limits established by a bank to monitor and manage these risks, are important considerations for banks that engage in these off-balance sheet activities and for examiners that evaluate a bank's overall safety and soundness during the course of onsite examinations.

- 2 -

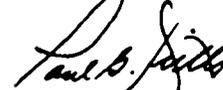
Now on p. 50.

See p. 50.

With respect to the specifics of your draft report, we have commented on a number of technical points in the enclosure to this letter. Apart from these, however, we note that on page 70 of your draft report, FDIC Chairman L. William Seidman was quoted as telling the Senate Committee on Banking, Housing and Urban Affairs on May 21, 1987 that "it is clear that our present number of examiners is insufficient to deal with our responsibilities and the current level of problems in the bank system." During 1987, the FDIC has intensified its efforts to increase the size of its examination force. As a result, the number of FDIC field examiners has increased from 1,726 at year-end 1986 to 1,919 as of September 30, 1987, and is expected to increase to a level of 2,000 by year-end 1987. Even after allowing for attrition, this would represent more than a 15 percent increase in the total number of field examiners during 1987.

If you have any questions regarding our comments on your draft report, feel free to contact Examination Specialist Stephen G. Pfeifer at 898-6894.

Sincerely,



Paul G. Fritts  
Director

Enclosure

TECHNICAL RESPONSES TO GAO'S REQUEST FOR COMMENT ON ITS DRAFT  
REPORT ON OFF-BALANCE SHEET ACTIVITIES OF COMMERCIAL BANKS

|                                       | <u>Page Number</u> | <u>Comments</u>   |
|---------------------------------------|--------------------|---|
| Now on p. 3.<br>See comment 1.        | 2                  | The introductory section of the report refers to the Federal Reserve Board's risk-based capital proposal but ignores any reference to the fact that the framework for the proposal was developed jointly by all three bank regulatory agencies and the fact that the FDIC and OCC also issued similar proposals. To appropriately reflect the joint nature of this risk-based capital initiative, it may be appropriate to at least clarify in the introductory section of the paper that all three agencies have issued such proposals.  |
| Now on p. 3.<br>See comment 2.        | 4                  | The report indicates that since off-balance sheet activities are not assets or liabilities, banks are not required to hold capital against these activities. Although off-balance sheet activities are not at present explicitly factored into the calculation of the minimum regulatory capital requirements, section 325.3(a) of the FDIC's capital maintenance regulation does indicate that when "the FDIC determines that the financial history or condition, including off-balance sheet risk, managerial resources, and/or future earnings prospects of a bank are not adequate . . . the FDIC may determine that the minimum adequate amount of total capital and/or primary capital for that bank is greater than the minimum standards stated in this section." |
| Now on pp. 4 and 5.<br>See comment 3. | 7                  | The report indicates regulators said that off-balance sheet activities and the associated risks are difficult to understand and assess. Although the complex nature of some of these activities does require a certain degree of sophistication in order to appropriately understand and utilize the transactions, the general types of risk (e.g., credit risk, interest rate risk, liquidity or funding risk, foreign exchange rate risk, and market risk) are no different from the general types of risk that can be encountered with direct on-balance sheet activities. As a result, the controls and limits placed on these risks, whether they represent on- or off-balance sheet transactions, are of prime importance.  |
| Now on p. 5.<br>See comment 4.        | 9                  | The report indicates that needed refinements to the risk-based capital system would be made by examiners during periodic onsite bank examinations but that "regulators have noted, however, that there may be practical limitations." The context and meaning of the quoted phrase is not entirely clear and could lead one to believe that the risk-based capital framework would be the primary or sole means that will be used to analyze a bank's capital adequacy. On the contrary, the FDIC's March 1987 risk-based capital proposal  |

- 2 -

| <u>Page Number</u>              | <u>Comments</u>   |
|---------------------------------|---|
| 9 (cont'd)                      | stated that "the calculation of a risk-based capital ratio is only one step in evaluating capital adequacy. Many other factors must be taken into account in connection with the examination process before an overall determination of capital adequacy can be made . . . Adjustments based on those factors made by examiners and supervisors will mean that the final supervisory judgment of an organization's capital adequacy may differ significantly from conclusions that might be drawn solely from the absolute level of an organization's risk-based capital ratio."  |
| Now on p. 11.<br>See comment 5. | 17 The report indicates that, when granting a loan, a bank must "set aside reserves for that liability and set aside capital for the resulting asset." This statement is not entirely accurate. With respect to reserves for liabilities, certain types of funding, such as deposits and certain other liabilities, are indeed subject to reserve requirements under the Federal Reserve's Regulation D. However, other sources of funds, including equity capital, federal funds purchased, and many repurchase agreements, are not subject to Regulation D reserve requirements. In addition, if the funds for a loan come from the conversion of other existing assets into cash, no additional amount of reserves or capital would necessarily need to be set aside.  |
| Now on p. 12.<br>See comment 6. | 18 The report indicates that the amount of off-balance sheet activities held by the nation's commercial banks "cannot be readily determined, since accounting conventions do not require banks to include these activities in their published financial statements." Under generally accepted accounting principles, not all of the off-balance sheet items mentioned in the GAO report are required to be disclosed; however, many of the annual reports prepared by the nation's larger banking organizations within the past several years have expanded the discussion and disclosure of these off-balance sheet activities. This trend is expected to continue in light of the proposal issued on November 30, 1987 by the Financial Accounting Standards Board which, if adopted, would require a number of additional footnote disclosures relating to credit risks, interest rates, and market values of financial instruments, including off-balance sheet financial instruments. In addition, the gross face amount/par value of all of the off-balance sheet activities mentioned in the GAO report are already captured in Schedule RC-L of the quarterly Call Reports filed by banks (with the exception of certain exclusions allowed for smaller banks.) Although these figures admittedly do not reflect the amount of potential risk exposure, which is normally much less than the face amounts disclosed in the Call Reports, they do nonetheless provide a volume indicator that reflects the extent of a bank's involvement in these off-balance sheet activities. |

- 3 -

|  | <u>Page Number</u> | <u>Comments</u>   |
|--|--------------------|---|
| Now on p. 13.<br>See comment 7.          | 19                 | Off-balance sheet activities relating to "securities lent" were excluded from Table I-1 since "the associated amounts were also reported in the Report of Condition (balance sheet)." However, participations in acceptances sold were included in Table I-1 even though the associated amounts are also reflected as a liability on the bank's balance sheet (i.e., "bank's liability on acceptances executed and-outstanding"). For reporting consistency purposes, if securities lending activities are excluded from Table I-1, it would appear that participations in acceptances conveyed (i.e., sold) to others should also be excluded.   |
| Now on p. 15<br>See comment 8.           | 21                 | The reference to Table I-3 at the bottom of the page appears to be incorrect — the reference should be to Table I-4.  |
| Now on p. 16.<br>See comment 9.          | 22                 | Table I-4 (as well as some of the other tables) display comparisons over time of off-balance sheet activities for banks grouped by asset size. However under the method used by GAO to compile the data in Table I-4, a particular bank might be included in one asset size group in one year and a different asset size group in another year. Therefore, the Table I-4 statistics can be misleading if used as an indicator for comparing growth rates in off-balance sheet activities for a group of banks from year to year. For example, ten banks included in the \$10 billion and above category for 1986 were included in the \$1 billion to \$10 billion category for 1983. We believe the correct approach in analyzing the growth in off-balance sheet activities for a group of banks over time would be to track the same group of banks (defined as of a certain date, say 1983) rather than to allow banks to move into a different group because of subsequent changes in asset size. |
| Now on pp. 17 and 18.<br>See comment 10. | 23-24              | The report indicates that revolving underwriting facilities (RUFs) are not currently required to be reported under existing Call Report instructions. This is not correct. Although the instructions do not explicitly refer to RUFs, RUFs are a form of loan commitment and should therefore be reflected in Schedule RC-L of the Report of Condition under the line item for "commitments to make or purchase loans."   |
| Now on p. 19.<br>See comment 11.         | 25                 | When describing interest rate risk in the last indented paragraph on the page, it would be more appropriate to focus on when assets and liabilities can be "repriced" rather than on when they "mature." For example, an adjustable rate loan tied to prime might have a 5-year remaining term to maturity but a much shorter length of time until the next repricing opportunity.  |
| Now on p. 22.<br>See comment 12.         | 30                 | A larger than expected number of drawdowns on loan commitments could occur not only during periods of credit restraint, but also during time periods when unstable market conditions cause a "flight to quality" by short-term investors, thereby   |

- 4 -

| Page Number                                 | Comments  |
|---|---|
| 30 (cont'd)                                 | depriving a bank's borrowing customers of funding sources in the money markets that might otherwise have existed. Such a situation arose in the early 1970s when Penn Central's default on the commercial paper it had issued adversely affected the ability of other companies to borrow funds in the commercial paper market as well.   |
| Now on p. 22.<br>See comment 13.            | 30-31 The report indicates that the presence of a material adverse change (MAC) escape clause in a loan commitment "allows a bank to refuse funding (extending credit) if the customer's financial condition materially worsened during the commitment period." Although the potential benefits of MAC clauses as a means for minimizing credit risk on loan commitments should not be entirely ignored, it is also true that a number of other factors could conceivably result in a bank's decision to fund a commitment to a borrower in a financially deteriorating situation, notwithstanding the existence of a MAC clause. For example, a bank may conclude that its prospects for being repaid on existing loans to a customer may be enhanced if the bank continues to extend further credit rather than refusing to do so. The recent surge in "lender liability" lawsuits filed by troubled borrowers against lenders is another of the many factors a bank may need to consider when determining whether to invoke the use of a MAC clause. |
| Now on p. 24.<br>See comment 14.            | 33 The reference to "material adverse clause" in the final sentence of the first full paragraph should be corrected to read "material adverse change clause."   |
| Now on p. 26.<br>See comment 15.            | 36 Rather than indicating that standby letters of credit (SBLCs) are "generally irrevocable," it should be emphasized that such SBLCs are, in fact and in practice, "irrevocable."  |
| Now on pp. 32 and 33.<br>See pp. 37 and 38. | 46 The report indicates that currency swaps are not reported on the Call Reports. A currency swap involves an exchange of currencies both at the beginning and at the expiration of the swap contract. After the initial exchange has been completed, a currency swap is similar in many respects to a forward foreign exchange contract in that a commitment exists to purchase (i.e., exchange) foreign currency or U.S. dollars at a specified future date. As a result, currency swaps should be included in Schedule RC-L of the Report of Condition under the line item for "commitments to purchase foreign currency and U.S. dollar exchange (spot and forward)."   |
| Now on p. 36.<br>See comment 16.            | 50 Table II-5 is headed "Options Contracts." It may be more appropriate to revise the heading to "Obligations Under Options Contracts" since the data in the table only refers to option contracts under which commercial banks have the <u>obligation</u> to purchase or sell and does not include any data on contracts under which banks have the <u>option</u> to purchase or sell.   |

- 5 -

|   | <u>Page Number</u> | <u>Comments</u>   |
|---|--------------------|---|
| Now on p. 37.<br>See comment 17.                        | 51-52              | When describing the potential loss exposure than can arise for banks that <u>write</u> option contracts, the report focuses only on those options written by a bank that obligate a bank to sell an instrument to another party at the option of that other party. However, no mention is made of the risk involved when a bank writes an option that obligates the bank to <u>purchase</u> a financial instrument at the option of the other party. In this regard, the Call Report instructions require disclosure of option contracts <u>written</u> by the reporting bank, regardless of whether it represents an obligation to purchase or an obligation to sell. On the other hand, the Call Report instructions do not require disclosure of option contracts that are purchased by the reporting bank (i.e., contracts in which the bank has the <u>option</u> to purchase or sell rather than the obligation). |
| Now on p. 45.<br>See comment 18.<br>Footnote is now #2. | 62                 | With respect to footnote 1, it should be noted that, like the OCC's proposal, the FDIC's March 1987 risk-based capital proposal also refers to the Federal Reserve's supplemental proposal for interest rate swaps and foreign exchange contracts and further indicated that "the FDIC intends to evaluate the comments received by the Federal Reserve in response to that proposal."  |
| Now on p. 78.<br>See comment 19.                        | 74                 | In defining a "standby letter of credit," it might be helpful if the glossary of the GAO report also included the more detailed definition that is used in Part 337 of the FDIC's Rules and Regulation. In this regard, section 337.2(a) defines a standby letter of credit as "any letter of credit, or similar arrangement however named or described, which represents an obligation to the beneficiary on the part of the issuer (1) to repay money borrowed by or advanced to or for the account of the account party, or (2) to make payment on account of any indebtedness undertaken by the account party, or (3) to make payment on account of any default (including any statement of default) by the account party in the performance of an obligation."   |

The following are GAO's comments on the Federal Deposit Insurance Corporation Letter dated December 7, 1987.

- 
- GAO Comments
1. FDIC commented that, when stating that this report would discuss the risk-based capital proposal, we only cited the FRS proposal. On pages 2, 5, and 45, the report does note that FDIC and OCC issued their own proposals and that the FRS proposal was based on joint discussions among the three federal agencies' and the Bank of England. We have revised the sentence referred to on page 3, however, to prevent any misunderstanding.
  2. FDIC thought the draft report implied that banks are never required to hold capital against off-balance-sheet activities. We expanded the point made on page 3 and the discussion on pages 5 and 45 to say that the federal regulators can consider off-balance-sheet risk in raising minimum regulatory capital requirements in light of various factors. Off-balance-sheet activities, however, are not explicitly factored into the calculation of the minimum regulatory capital requirement, as FDIC notes in its letter.
  3. FDIC said that OBS activities are complex but that the associated risks are similar to those of on-balance-sheet activities. FDIC emphasized the prime importance of bank management controls and the limits placed on the risks. FDIC's comments essentially restate our discussion of these topics. (See pp. 2, 3, 4, 5, 18, 19, 39 and 45.)
  4. FDIC believed that our discussion on page 9 regarding the practical limitations of making adjustments to required capital levels during on-site bank examinations might incorrectly give the impression that the risk-based capital framework would be the sole means for determining capital adequacy. The paragraph has been revised to preclude any such misunderstanding.
  5. FDIC suggested clarifying the sentence on the costs to a bank associated with loans. To avoid misinterpretation, it has been revised to account for the exceptions pointed out by FDIC. (See p.

11.)

6. FDIC said that banks are increasingly disclosing and discussing OBS activities in their published financial statements. In the absence of uniform reporting requirements for all banks as prescribed by generally accepted accounting principles, however, we do not believe such information could be aggregated in a uniform basis for our reporting.

As we said in the draft report, the Financial Accounting Standards Board has been studying issues related to off-balance-sheet activities. It has now released a proposal for public comment, as we note in the report on page 11.

We agree with FDIC that the Call Report data alone are not an absolute indicator of the banks' exposure to potential losses but do provide an indication of the amount of OBS activities at commercial banks. However, the data do not provide a complete or clear picture since some OBS activities are not reported or are combined with related activities under a broad general category. (See pp. 2, 12, 17 and 18.)

7. FDIC suggests that to be consistent we should exclude participations in acceptances sold (in addition to excluding securities lent) from our total of OBS activities reported in Call Report Schedule RC-L, since both items are also reported in combination with other reported on-balance-sheet items. We agree and have changed table I.1 to exclude participations in acceptances sold. Their inclusion in the draft of this report was due to our reading of the bankers acceptances discussion in the glossary of the FFIEC instructions to banks for filling out the Call Reports. The instructions specifically say that participations in acceptances conveyed (sold) are not to be included in the balance sheet but rather put on schedule RC-L. We discussed this situation with FDIC officials, who acknowledged that the instructions were confusing. We then contacted the FFIEC, whose Task Force on Reports is responsible for Call Report instructions. An FFEIC official told us he would formally bring the need for clarification to the attention of the

Task Force.

8. Correction has been made.

9. FDIC suggests an alternative methodology for tracking the growth of OBS activities among asset-size groupings. FDIC's suggested approach was not used because our objective in table I.4 and elsewhere was to show the level of activity for several asset-size groups, regardless of the component banks, and not to follow specific groups of banks.

10. FDIC and OCC say that banks should report revolving underwriting facilities (RUFs) in Schedule RC-L of the Report of Condition. They should be included in the entry for loan commitments according to the regulators. We have restated the references to the reporting of RUFs on page 17 to make clear that while RUFs are not reported separately, they are to be included in loan commitments. It should be noted that regulatory officials told us that there is considerable variation in the types of commitments banks write and that there is not a clear industry-wide standard of exactly what constitutes a loan commitment. It has been suggested that some banks may be excluding certain commitments based on their interpretation of Call Report instructions and that revising the definition of reportable loan commitment may be needed to improve the consistency of reporting.

11. FDIC suggested using the term "repriced" rather than "mature" in describing interest rate risk. FDIC is technically correct, but we believe that discussing when assets and liabilities mature is appropriate for our illustration on page 19. We have, however, added a clause with reference to repricing.

12. FDIC provided information on another circumstance that might result in an unexpected number of loan commitment drawdowns. The purpose of our discussion was to illustrate the liquidity risk associated with loan commitments by citing what the FRB staff study felt was the most likely circumstance leading to unexpected drawdowns, and not to detail all the circumstances. We have,

however, added FDIC's example.

13. FDIC said there are circumstances that could influence a bank's willingness to invoke the use of a material adverse change clause under loan commitments. FDIC's cautionary note, along with OCC's (different) note on this subject, have been incorporated in the footnote on page 22.

14. FDIC observed that we omitted the word "change" in the phrase "material adverse change clause" on page 24; the word has been inserted.

15. FDIC suggested clarification concerning the irrevocability of standby letters of credit. This point has been clarified on page 26.

16. FDIC suggested clarifying the title for table II.5 (regarding options), which has been done. (See p. 36.)

17. FDIC suggested that we mention the risk involved when a bank sells (writes) an options contract that obligates the bank to purchase a financial instrument at the option of the other party, in addition to our discussion of the risks involved when a bank is obligated to sell the instrument. We focused on the latter because of its unlimited loss potential, but have added specific recognition of the other type. (See p. 37.)

18. FDIC said that its risk-based capital proposal also refers to the Federal Reserve's supplemental proposal for interest-rate swaps and foreign exchange contracts. We expanded the cited footnote on page 45.

19. FDIC suggests an expanded definition for SLCs for inclusion in the glossary. While accurate, it is not being used because of its length; our glossary's purpose is to give short and relatively simple definitions of terms used.

COMMENTS FROM THE OFFICE OF THE  
COMPTROLLER OF THE CURRENCY




---

Comptroller of the Currency  
Administrator of National Banks

---

Washington, D.C. 20219

December 14, 1987

Mr. Craig A. Simmons  
Senior Associate Director  
General Government Division  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Mr. Simmons:

We have reviewed your draft report "Bank Activities not Shown on Balance Sheets" for comment. The proposed report is a comprehensive analysis of the risks, characteristics and challenges to off-balance-sheet (OBS) banking. The draft is factual in nature and our comments provide a page-by-page analysis and general reaction. We did not attempt to verify the statistics provided in the draft.

Now on p. 17.

Page 4

The statement that call reports omit bank commitments to purchase short term notes in the European capital markets is incorrect. (The same statement is also made on page 24.) Call report schedule RC requires reporting of all fee-paid or binding commitments to purchase loans, securities and money market instruments.

Now on p. 17.  
See comment 1.

The statement that daylight overdrafts are not reported is technically correct; however, it may be misconstrued as a criticism of the call report system. Call reports only capture transactions that are outstanding at the close of business on a given reporting date and not intraday positions. As explained later in the draft, the Federal Reserve has implemented policy guidelines for limiting daylight overdrafts, partly because these intraday transactions do not lend themselves to regulatory reporting.

See comment 2.

OBS activities provide banks with a means of insulating (hedging) against volatile risks. You may wish to add that OBS activities also enable bank customers to hedge.

Now on p. 3.  
See comment 3.

Now on p. 2.  
See comment 4.

Pages 5 and 6

In stating that OBS activities represented 80% of bank assets in 1986, you correctly explain that volume alone is not a good indicator of risk. You may wish to consider adding that, in many cases, OBS risks are only a fraction of the credit risks present in bank assets.

Now on p. 39.  
See comment 5.

Page 7

The statement that there have been no major problems or bank failures from OBS activities may need further explanation. Likewise, not all OBS activities are new. While there have been no recent failures or serious losses, OBS activities have been conducted for many years and problems have occurred on occasion. For example, U.S. National Bank (San Diego) failed in the early 1970s, partly as a result of fraudulently concealed standby letters of credit (SLC). Over the years, a number of banks have suffered losses from dealing in securities commitments as a result of speculation, ignorance or fraud. Similarly, foreign exchange traders are sometimes discovered conducting unauthorized trading, but none of these currency trading scandals has been known to cause a failure. While OBS losses have occurred in various banks over the years, it would be accurate to conclude that OBS losses are miniscule in relation to conventional credit losses from lending.

Now on p. 5.  
See comment 6.

Page 9

The first full paragraph seems to have some words missing and could be more clearly written.

Now on p. 9.  
See comment 7.

Page 13

The comparison of OBS activities to industry assets might indicate that the risk exposure implied by \$1 of OBS activity is not the same as that for \$1 of on-balance-sheet assets.

Now on pp. 9 and 10.  
See comment 8.

Page 14

The Federal Reserve Board's risk-based capital proposal is described. The OCC and the FDIC have also made similar proposals and have worked closely with the Federal Reserve on the issues.

Now on p. 11.  
See comment 9.

Page 17

We suggest that the wording of the first full sentence appear as follows: "For a loan, on the other hand, a bank would have to obtain funds, to set aside reserves for that asset and liability and to consider its affect on capital adequacy."

See comment 10.

A better example might be used in the first full paragraph.

Now on p. 13.  
See comment 11.

Page 19

Table I.1 shows a large dollar amount of "foreign exchange commitments." Traditional spot and forward exchange transactions represent a very large portion of the amount reported. Yet, only currency swaps are specifically discussed in the remainder of the report. A more complete discussion of other foreign exchange commitments may be warranted in view of the large dollar volume involved.

Now on p. 15.  
See comment 12.

Page 21

The reference to Table I.3 should be to Table I.4.

Now on p. 18 and 19.  
See comment 13.

Page 25

The list of reasons for rapid growth in OBS activities appears to omit an equally important point. OBS activities generate fee income that increases the real, as well as the apparent, income of the bank. Although there is a hint of this fact in the discussion of competition, it may be important enough to stand alone in the listing.

Now on p. 20.  
See comment 14.

Page 27

Some loan commitments are not legally binding.

Now on p. 20.  
See comment 14.

Pages 30 through 33

In discussing loan commitments and revolving underwriting facilities (RUF), there is no mention of the questionable enforcement of material adverse change clauses. Recent court decisions suggest that the presence of these clauses cannot necessarily be relied upon to relieve a bank of its obligations. In addition, the possibility exists that a commitment may be drawn before the bank recognizes the deterioration in the customer's financial condition.

Now on pp. 22 through  
24.  
See comment 15.

Pages 31 through 33

In discussing loan commitments, it was noted that the bank may have to fund the commitment at a low or negative spread. For parallel treatment, the discussion of RUFs should mention that these instruments entail similar risks.

Now on p. 23.  
See comment 16.

Page 32

The meaning of the first complete sentence is unclear.

Now on p. 24.  
See comment 17.

Page 33

The word "change" has been omitted from the phrase "material adverse change clause."

Now on p. 26.  
See comment 18.

Page 36

It is not clear why SLCs are riskier than RUFs. Except for the possible existence of a material adverse change clause (with questionable enforceability), RUFs are functionally very similar to SLCs. Page 16 of the draft cites a study by James Chessen that "products such as RUFs -- which can act as substitutes for SLCs -- [have] driven some fees [down]."

Now on p. 23.

Now on pp. 27 and 28.  
See comment 19.  
Prior footnote 8 is  
now footnote 9.

Page 39

The definition of currency swap seems to differ from that commonly used. In footnote 8, the report warns the reader not to confuse interest rate swaps involving two different currencies with currency swaps. Usually, a swap in which interest payments are exchanged in a single currency is considered an interest rate swap. When each leg of the swap payment is denominated in a different currency, it is considered a currency swap, whether or not the principal amount is exchanged.

Now on p. 31.  
See comment 20.

Page 43

It may be misleading to say that: "Besides the replacement costs, counterparty default could also lead to interest rate risk." In fact, replacement costs are an alternative to interest rate risk. A more clear presentation could state that a counterparty default may leave the bank exposed to interest rate risk. If the bank chooses to reduce this risk by replacing the swap, the bank will incur the replacement costs.

See comment 21.

Because banks rarely act as agents that do not guarantee swap interest payments, the distinction between banks as agents and as intermediaries may be unnecessary. If made, perhaps there should be some reference to the relative frequency with which banks assume each role.

See comment 22.  
Prior footnote 11 is  
now footnote 12.

In reference to footnote 11, although it is theoretically possible for a default to result in a gain, it is unlikely that someone in a profit position would default.

Now on pp. 32 and 33.  
See pp. 37 and 38.

Page 46

The statement that currency swaps are not included in call reports is incorrect. All foreign currency contracts (swaps, forward and spot) are reported as an aggregate figure in Schedule RC-L (Commitments and Contingencies), item 5. It is true that long-dated swaps are not itemized separately from routine foreign exchange transactions.

Now on p. 33.  
See comment 23.

Page 47

The definition of a futures contract applies only to financial futures contracts; commodity futures contracts also exist.

Now on p. 37.  
See comment 24.

Pages 51 and 52

The discussion of options refers to "sell positions" without noting whether these are sales of call or put options.

- o When selling a call option, the bank is selling the right to buy an instrument from the bank at a specified price. The risk exposure is theoretically unlimited if the bank does not possess the instrument and, to deliver it, must buy the instrument at the future market price.
- o When selling a put option, the bank's risk exposure may be large, but it is not unlimited. The bank is committed to pay a specified amount for the instrument; its potential loss is limited to that amount.

Now on p. 43.  
See p. 44.

Page 60

The draft leaves the impression that OBS activities are very risky when, in fact, no one knows the extent of risk, particularly as they compare to commercial loans.

Now on p. 44.  
See comment 25.

Page 61

The question of whether OBS activities, as a whole, increase risk to the banking system may be too broad. There is a wide range of OBS instruments and, as the draft report discusses, they expose banks to risk in fundamentally different ways. It may be more useful to ask whether individual types of instruments increase risk to the system. For example, instruments such as swaps, futures, forwards and options may be used for speculation or for hedging interest or exchange rate risk. Their contribution to risk depends on how bank management uses them. On the other hand, commitments, RUFs and SLCs expose banks to the same sort of risks as do on-balance-sheet assets, especially credit risk. As such, these activities unambiguously add to the risk exposure of issuing banks. In an attempt to offset the risk entailed in OBS instruments, regulators have proposed risk-based capital guidelines that incorporate OBS activities.

Now on p. 50.

Page 70

The quote from FDIC Chairman Seidman may have been taken out of context. He may have been talking about the increased number of problem banks and the decreased number of examiners. The issue may be more one of examiner experience and expertise in these highly technical areas rather than numbers per se, because OCC has the larger banks pretty well covered.

See pp. 50 and 51.

General

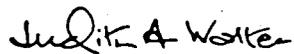
Your draft report correctly observes that call reports do not capture or quantify certain OBS risks and volumes. Unfortunately, OBS activities cannot be easily captured in a meaningful way through the call report system. Many OBS transactions are very different from conventional assets and liabilities, and may resemble agreements or contracts more than debits or credits. To be meaningful, OBS reports must somehow capture the true risk involved and not just aggregate notational amounts. Individual banks have dealt with this problem by devising various internal reporting systems, many of which are based on subjective factors and take into account probability rates and measures of historic volatility. These internal bank reports are often complicated, detailed or bulky. No relatively simple and perfect system has been developed that could be adapted to call reporting.

Given these circumstances, bank regulators must move cautiously to assure that any required reporting system minimizes reporting burdens while providing useful data. Call reports traditionally reveal a "snapshot" of risks at one point in time, but these risks often change dramatically by the opening minutes of the next business day. A comprehensive risk-based capital framework and reporting system that also captures OBS risks appears to be a more promising approach. The regulators are actively working to implement such a system. Regulators have also responded to the growth of OBS business in other ways. Bank examiners ensure that

banks possess the expertise, controls, limits, policies and internal reports necessary to manage the risks. Examiners review both internal and external audit coverage to determine that banks' controls are tested thoroughly.

We hope that you find our comments useful and appreciate the opportunity to provide them.

Sincerely,



Judith A. Walter  
Senior Deputy Comptroller for Administration

The following are GAO's comments on the Comptroller of the Currency Letter dated December 14, 1987.

---

**GAO COMMENTS**

1. FDIC and OCC said that banks should report revolving underwriting facilities (RUFs) in Schedule RC-L of the Report of Condition. They should be included in the entry for loan commitments according to the regulators. We have restated the references to the reporting of RUFs on page 17 to make clear that while RUFs are not reported separately, they are to be included in loan commitments. It should be noted that regulatory officials told us that there is considerable variation in the types of commitments banks write and that there is not a clear industry-wide standard of exactly what constitutes a loan commitment. It has been suggested that some banks may be excluding certain commitments based on their interpretation of Call Report instructions and that revising the definition of a reportable loan commitment may be needed to improve the consistency of reporting.
2. OCC said that readers might misconstrue our observation that daylight overdrafts are not being reported as a criticism of the Call Report system. Our statement is merely one of fact given as an example of an OBS activity that is not included in Call Reports.
3. OCC suggested we note that OBS activities also enable bank customers to hedge. The suggestion is not incorporated because the report focuses on the use of OBS activities by banks, not by bank customers.
4. OCC agreed with our statement that OBS volume alone is not a good indicator of risk and then suggests we add that, in many cases, OBS risks are only a fraction of the credit risk present in bank assets. The suggested wording was not incorporated into the report because it incorrectly implies that the level of credit risk associated with all OBS activities is precisely measurable and entails less credit risk than do bank assets. OCC's own risk-based capital proposal suggests that OBS risk is not always less than that of bank assets or the same across all

OBS activities. For example, financial standby letters of credit are subject to a 100 percent credit conversion factor, whereas performance standby letters of credit are converted at 50 percent. The converted off-balance-sheet amounts are "then assigned to the same risk category as a direct loan to the account party," not a fraction (less than) thereof.

5. OCC accepted our statement that there have been no major problems or bank failures from OBS activities, and then suggested adding that there have been occasional problems. We did so on page 39.

6. The cited paragraph has been edited for clarity.

7. OCC said that our comparison of OBS activities and industry assets might indicate that there is a difference in risk exposure for \$1 of OBS activities versus \$1 of on-balance-sheet assets. The comparison is intended to give the reader some perspective on the amount of reported OBS activities. A relative risk comparison was not intended, nor do we believe it is implied. Indeed, we say that volume alone is not a good indicator of risk. (See pp. 2 and 18.)

8. OCC commented that, when saying that this report would discuss the risk-based capital proposal, we only cited the FRS proposal. On pages 2, 5, and 45, the report does say that FDIC and OCC issued their own proposals and that the FRS proposal was based on joint discussions among the three federal agencies and the Bank of England. We have revised the sentence referred to on pages 9 and 10, however, to prevent any misunderstanding.

9. OCC suggested clarifying the discussion on page 11 of the costs associated with a loan. The sentence has been changed to preclude giving the wrong impression that in all instances loans require additional capital and reserves. OCC's suggested wording was not used, however, because it might be interpreted that the amount of regulatory capital held against assets was at the discretion of banks.

10. OCC suggested using a different example of banks' use of OBS activities to hedge. While a more complex example could be used, our intention is to provide a relatively straightforward illustration of the process.

11. OCC suggested we expand the discussion of foreign exchange transactions to include types of foreign exchange commitments other than currency swaps. Our purpose in this report was not to discuss all OBS activities. As discussed on page 10, we selected eight OBS activities that involved large dollar amounts or were relatively new. GAO is, however, presently reviewing federal regulatory supervision of bank foreign exchange activities.

12. The table number has been corrected.

13. OCC suggested additional emphasis on the generation of fee income from OBS activities as a reason for their growth. Generating fee income is one purpose of OBS activities, but not a reason for their growth parallel to those cited. For this reason, it is not separately listed.

14. OCC said that some loan commitments may not be legally binding but did not elaborate. Call Report instructions specifically cite "legally binding" as a criteria for reporting the activity under the loan commitment line item. We recognize that there are exceptions and that the question of an activity's being "legally binding" has been confusing for banks. In fact, an FDIC official has pointed out that some banks may not be reporting all loan commitments, based on their interpretation of what constitutes a legally binding loan commitment. OCC also noted that drawdowns may occur before that clause is invoked. We have added OCC's points on page 22.

15. OCC suggests adding that a RUF entails the risk, similar to that of a loan commitment, of having to fund the commitment at a low or negative spread. We did not do so for two reasons. First, under RUFs banks guarantee to purchase unsold notes at a price guaranteeing them a predetermined spread above a given Eurodollar rate, such as the

London Interbank Offering Rate (LIBOR). . . Consequently, if the commitment had to be funded, the bank could borrow funds at the cited rate and still have a positive spread. Second, banks also generate up-front arrangement and management/participation fees, which are not typical of traditional loan commitments. The arrangement fee to the bank is a percent of the total principal amount of the facility regardless of the ultimate commitment. Banks are also paid a facility fee and an annual maintenance fee. An FDIC official has said that these fees help make RUFs attractive to banks in spite of the very narrow pricing margins.

16. The sentence has been clarified.

17. The correction has been made in the cited sentence.

18. OCC said that it was not clear why SLCs are riskier than RUFs, saying that except for the possible existence of a material adverse change clause (with questionable enforceability), RUFs are functionally very similar to SLCs. We do not agree. Even though the clause may not always be legally enforceable (or may not be invoked by a bank--see p. 22), it nevertheless does act to reduce risk. SLCs are, in contrast, irrevocable. The BIS study, cited on p. 33, brought out another reason. It groups SLCs under a category called guarantees, and groups RUFs under a category called commitments. Guarantees are depicted as riskier in that a bank has underwritten a current obligation to a third party, whereas with commitments a bank has no immediate credit risk exposure but may become exposed at a future date. Finally, the FDIC study cited notes the similarity between RUF's and SLC's from a bank customer perspective, not from a bank-risk-exposure perspective.

19. OCC said that our definition of a currency swap seems to differ from that commonly used. As we note in the report, there are many variations to the basic interest rate swap discussed in the report. With so many variations, we believe it can be difficult to distinguish between products with similar characteristics, as underscored by

OCC's comments.

According to our information, the primary distinction between a straight currency swap and an interest rate swap involving different currencies is that the former involved an exchange of principal whereas the latter only entails an exchange of interest payments. The definition used in the report is consistent with that used by a bank with assets in excess of \$20 billion that was involved in merchant banking. The Euromoney Publications reference cited in a footnote on page 28 also makes a distinction between a straight currency swap and an interest rate swap involving different currencies. The latter is referred to as a cross-currency interest rate swap.

20. OCC apparently misconstrued our original sentence, and we have modified it to make clear that exposure to interest-rate risk is presented as an additional situation that could occur.

21. OCC questioned whether it was necessary to note the different roles banks might play in an interest-rate swap transaction. We do so because of the differences in the associated risks. Neither the studies we reviewed nor our discussions with bankers provided data on the extent to which banks acted as agents versus intermediaries. However, on page 31 we have added OCC's statement that banks rarely act as agents that do not guarantee swaps.

22. OCC said it is unlikely that someone in a profit position would default. We were not suggesting that the potential for profit was a motivation for defaulting but just pointing out-- in a footnote--that a counterparty default does not necessarily result in a loss to the non-defaulting party.

23. OCC notes that futures contracts also cover commodities as well as financial instruments. Although our discussion relates only to futures contracts to sell or purchase securities or money market instruments, as stated, we added the term "financial" to the side-caption to preclude any misinterpretation.

24. OCC suggests we use the terminology "put" and "call" in referring to the discussion of the specific types of option contract that commit a bank. We thought that it would be more helpful to describe the mechanics of a "call" option (see p. 37) rather than cite it by name. We have, however, added these terms parenthetically.

25. OCC suggests that it might be more useful to discuss the impact of individual types of OBS activities on the banking system. The question as to the aggregate risk of OBS activities was raised in our discussions with bank regulators, including the OCC, and also in the study by the central banks of the Group of Ten countries cited on page 43. We believe the discussion is valid because of the common characteristics of the activities, i.e. they are not reflected on banks' balance sheets. The varying risks of the individual OBS activities discussed are addressed in appendix II. We discuss how regulators view the use of OBS activities for speculation versus hedging on page 40. We also discuss how OBS activities would be covered under regulators' risk-based capital proposals in appendix IV.

## GLOSSARY

### Arbitrage

The simultaneous purchase and sale of the same or equivalent financial instrument in separate markets in order to profit from price differences.

### Bank for International Settlements

(BIS) was established in 1930 and is an important international monetary institution whose primary function is that of a forum for consultation and exchange of opinions among the leading central banks of the world. Although not a member, the Federal Reserve regularly participates in BIS meetings.

### Central Bank

The central monetary authority in most countries, its functions may include issuing the country's currency, carrying out monetary policy, and foreign exchange reserve management. The Federal Reserve is the central bank for the United States.

### Commercial letter of credit

A financial document issued by a bank on behalf of its customer specifically to facilitate trade or commerce.

### Credit Risk

This refers to the risk of losses in revenue or in the value of assets essentially arising when a borrower defaults on existing obligations to the bank, such as loans.

### Currency Swap

A financial transaction whereby specific amounts of two different currencies are exchanged at the outset and exchanged back after a specified agreed to period.

### Daylight Overdraft

This situation occurs when a depository institution sends funds over Fedwire in excess of the balance in its reserve or clearing account, or sends more funds over a private network than it has received.

### Foreign Exchange Commitment

A financial commitment or contract to purchase foreign and U.S. currencies.

### Futures Contract

Exchange-traded contracts to buy or sell commodities including financial instruments at a stated price on a specified future date.

### Hedging

The process whereby banks anticipating a future transaction in a financial asset can

transfer the risk of price changes through the purchase or sale of future and/or option contracts. Normally, only a small percentage of these contracts are ever executed since their main purpose is to assure price certainty to hedgers by providing a temporary substitute for an eventual transaction, rather than actual possession of the asset underlying the contract.

Interest Rate Swap

A financial transaction in which interest payments of the same currency are exchanged, such as exchanging floating interest payments for fixed rate payments.

Interest Rate Risk

This consists of the risk of either a negative or declining spread between interest income and interest expenses. This situation arises when the maturity of an institution's liabilities differs from that of its earning assets. This maturity mismatch leaves the bank vulnerable to volatile interest rates, which can result in the repricing of assets and liabilities at different rates.

Liquidity Risk

This entails the risk that a bank is unable to economically obtain funds needed to meet obligations as they mature. This risk is most likely to occur when a bank relies on large short-term liabilities but does not have a comparable volume of short-term assets. If the bank experiences difficulties, providers of the short-term funds may become reluctant to continue supplying funds at competitive rates.

Loan Commitment

A financial transaction consisting of a bank's committing itself to extend a stated amount of credit for a certain period, usually subject to conditions such as maintenance of the customer's sound financial condition.

Market Risk

This consists of the risk of losses in the value of loans or bank investments arising from such factors as changing interest rates or changing prices of marketable securities, foreign currency, or real property. Even U.S. government securities may be a risky investment because their market value would decrease if the general level of interest rates rises before the securities mature.

Options Contract

A financial contract giving its holder either the option to buy or the option to sell securities at a stated price during a specified period.

Participation in Acceptances

A bank's agreement with another bank to share in the conveying or acquiring of a draft or bill of exchange that has been drawn on and accepted by a bank for payment at a specified future date.

Revolving Underwriting Facility

A medium-term revolving loan commitment which guarantees the overseas sale of short-term negotiable promissory notes issued by the borrower at or below a predetermined interest rate.

Securities Borrowed

Securities banks borrow for such purposes as pledges against deposit liabilities or delivery against certain sales of financial instruments.

Standby Letter of Credit

A financial transaction whereby a bank agrees to ensure its customer's obligation under a contract with a third party, thus substituting the bank's own obligation for that of its customer.

When-issued Securities

A financial transaction involving the commitment to either sell or buy securities that have not yet been issued when they are issued.

---

Requests for copies of GAO publications should be sent to:

U.S. General Accounting Office  
Post Office Box 6015  
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each publication are free. Additional copies are \$2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

United States  
General Accounting Office  
Washington, D.C. 20548

Official Business  
Penalty for Private Use \$300

First-Class Mail  
Postage & Fees Paid  
GAO  
Permit No. G100