

# March 1992 Senior Financial Officer Survey<sup>1</sup>

## Summary

In view of the unusual strength in demand deposits since the beginning of the year, the System conducted a Senior Financial Officer Survey (SFOS) in mid-March to obtain information about the behavior of these deposits.<sup>2</sup> Several questions were drawn from a 1988 SFOS, the last one conducted on this topic, and the responses provide insights about changes in demand deposit management practices.

Nearly half of the reporting banks characterized their demand deposit growth as stronger than normal in recent months. Most banks experiencing stronger growth attributed it to business customers, who had increased compensating balances in response to lower market interest rates. A number of banks pointed to lower interest rates on other deposits, increased activity in financial markets, and higher balances held by mortgage servicers.

Banks reported that businesses continue to hold the bulk of demand deposits, and that roughly half of those deposits are held under formal compensating-balance arrangements. While the share of compensating balances in total demand deposits is lower than was reported in 1988, respondents answered that the share had increased somewhat over the past two years. The current survey also found that few business customers currently hold sweep accounts, which are arrangements to move balances automatically at the end of the day from demand deposits to interest-earning accounts.

The remainder of the survey asked specific questions regarding compensating balances. A significant portion of firms' service charges are paid with earnings credits on these accounts. To calculate earnings credits, banks still predominantly use the three-month Treasury rate, and the

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<sup>2</sup> Fifty-nine banks provided responses to the March 1992 Senior Financial Officer Survey. These banks are drawn from every Federal Reserve District, and are generally among the largest in each District.

rate typically is averaged over a month, as are compensating balances. For the most part, banks continue to adjust deposit balances or the earnings credit rate for the cost of reserve requirements in calculating credits. Banks also commonly price deposit insurance premiums in the compensating balance arrangements, either by reducing the earnings credit rate or by including the premium in the service charges.

## **Demand Deposit Growth**

Slightly less than one-half of the reporting banks experienced stronger-than-normal demand deposit growth in January and February, while only three of the fifty-nine respondents characterized growth as weaker than normal. Nearly all of the banks with stronger-than-normal growth attributed that strength to nonfinancial or financial business depositors; a third of those banks with stronger growth also cited the household sector.

In general, lower market interest rates require customers to increase their compensating balances to generate the same amount of earnings credits. Moreover, in typical calculations, the benchmark market rate is reduced by a proportional factor to account for reserve requirements on demand deposits. A reduction in interest rates reduces the wedge between the earnings credit rate and the benchmark market interest rate. Consequently, the opportunity cost of compensating balances declines, which further encourages the use of these balances. In the survey, three-quarters of the banks with stronger growth cited increased compensating balances resulting from the lower level of market interest rates as a reason. Over 40 percent of the banks experiencing stronger-than-normal inflows included lower interest rates on other types of deposits as a contributing factor; lower rates on alternative uses of funds reduce incentives to economize on demand deposits. Twenty-five percent noted that compensating balances increased because of higher use of credit or operational services.

Other factors playing a role in the strong demand deposit growth included elevated activity in financial markets and higher balances of mortgage servicers. Consistent with this latter explanation, most banks reported that mortgage servicers typically place mortgage payments in demand deposits prior to disbursement to holders of mortgage-backed securities. However, one

bank noted that these funds were held in savings deposits and were transferred to demand deposits just before disbursements were made.

### **Demand Deposits and Compensating Balance Arrangements**

The share of demand deposits held by businesses appears to have remained steady over the past several years. The median bank estimated that between 61 and 80 percent of its demand deposits were held by businesses, similar to the proportion estimated from Deposit Ownership Surveys in 1988. However, the share of business demand deposits held under compensating balance arrangements appears to have fallen, with the median respondent on the current survey placing in the 41 to 60 percent quintile versus the 61 to 80 percent quintile in the 1988 SFOS.

Banks did report that this share had increased slightly over the past two years, with almost one-half of the banks experiencing an increase while one-fifth saw a decline. Some increase is not surprising in view of the decline in market interest rates and earnings credit rates over that period. On the other hand, some banks reportedly have encouraged firms to pay for services with fees, to avoid capital requirements and deposit insurance premiums that result from compensating balance requirements. According to the survey, however, most have not encouraged such a shift.

Earnings credits from compensating balances cover a significant portion of the service charges incurred by business customers. The median bank responded that from 21 to 40 percent of service charges to large firms were met by earnings credits. For their middle market and small business customers, the median-bank response was higher, in the 41 to 60 percent range.

The current survey included a set of questions about sweep accounts that were not on the earlier survey. According to the results, sweep accounts are not common, and some banks do not offer such accounts. The small number of customers holding sweep accounts is consistent with recent conversations that the Board staff has had with corporate cash managers across the country; those cash managers noted that they directly manage their demand deposits rather than delegate the task to a bank, as under a sweep arrangement.

As in 1988, most banks again indicated that earnings credits are computed using a monthly average of the three-month Treasury bill rate computed either from auction results or from secondary market trading. A few banks use a managed rate, generally set by a bank committee based on a variety of money market rates. The survey indicated that over one-half of the banks use a lagged rather than a current rate in calculating earnings credits.

Costs associated with reserve requirements and deposit insurance premiums generally are passed on to business customers. Most institutions directly price deposit insurance premiums in the compensating balance arrangements, either by reducing the earnings credit rate by the amount of the deposit insurance premium or by including it in service charges. To adjust for reserve requirements, banks either pay the earnings credit rate on the nonreservable portion of the demand deposit or, equivalently, reduce the earnings credit rate by the amount of the reserve requirement. Hence, most respondents indicated their intention to increase the nonreservable portion of the demand deposit or to increase the earnings credit rate in response to the recent reduction in the reserve requirement on transaction accounts from 12 to 10 percent.

Roughly 90 percent of the banks allow at least some of their customers to carry account surpluses or deficiencies into the next accounting period. Such carryover provisions suggest that the effects of changes in market interest rates on demand deposit levels would occur with a lag. However, over 85 percent of the banks place limits on these carryovers for some or all of their customers, up from 10 percent in 1988, and two-thirds of the banks do not allow their customers to carry surpluses over into the next calendar year. Finally, banks reported that customers are more likely to make up for the shortfall in earnings credits with additional fee payments rather than with higher balances within current or subsequent accounting periods.

Table 1  
 SENIOR FINANCIAL OFFICER SURVEY ON DEMAND DEPOSITS  
 AT SELECTED LARGE BANKS IN THE UNITED STATES  
 (Survey taken March 16 - 24, 1992)  
 (Number of banks and percent of banks answering question)  
 (By volume of total domestic assets, in \$ billions, as of December 31, 1991)  
 (By type of bank)

Demand deposits have expanded at a very strong pace over the past two months. The Federal Reserve is seeking information from depository institutions about possible reasons for this surge and to update our knowledge about the relationships between compensating balance and mortgage servicing arrangements and demand deposits.

1. Adjusting for normal seasonal variation and any mergers, please characterize demand deposit growth at your bank during January and February.

Number of banks (Percent)

	Very strong	Above normal	About normal	Below normal	Very weak	Total banks
All Respondents	7 (11.9)	20 (33.9)	29 (49.2)	3 (5.1)	0 (0.0)	59
\$10.0 and over	3 (9.4)	12 (37.5)	16 (50.0)	1 (3.1)	0 (0.0)	32
under \$10.0	4 (14.8)	8 (29.6)	13 (48.1)	2 (7.4)	0 (0.0)	27

2. If you characterized recent growth as "very strong" or "above normal", was the strength in (more than one may apply)

Number of banks (Percent)

	Nonfinancial business demand deposits	Financial business demand deposits	Household demand deposits	Other accounts	Total banks
All Respondents	16 (61.5)	14 (53.8)	9 (34.6)	3 (11.5)	26
\$10.0 and over	8 (53.3)	8 (53.3)	7 (46.7)	1 (6.7)	15
under \$10.0	8 (72.7)	6 (54.5)	2 (18.2)	2 (18.2)	11

3. If you characterized recent growth in business demand deposits as "very strong" or "above normal", to what would you attribute the strength? (more than one may apply)
- Increased compensating balance (c.b.) requirements due to lower interest rates
  - Increased compensating balance requirements because of higher use of credit services or operational services
  - Increased compensating balances to make up for shortages relative to requirements late last year
  - Increased demand deposit (d.d.) balances due to increased economic activity
  - Increased demand deposit holdings due to increased activity in financial markets
  - Increased demand deposit balances due to lower interest rates on other types of deposits
  - Increased demand deposit balances due to mortgage servicers holding higher balances
  - Other

Number of banks (Percent)

	a. Increased c.b. requirements due to lower interest rates	b. Increased c.b. requirements because of higher use of credit	c. Increased c.b. to make up for shortages	d. Increased d.d. balances due to increased economic activity
All Respondents	21 (77.8)	7 (25.9)	3 (11.1)	2 (7.4)
\$10.0 and over	11 (73.3)	3 (20.0)	2 (13.3)	2 (13.3)
under \$10.0	10 (83.3)	4 (33.3)	1 (8.3)	0 (0.0)

Number of banks (Percent)

	e. Increased d.d. holdings due to increased financial activity	f. Increased d.d. balances due to lower interest rates on other deposits	g. Increased d.d. balances due to higher balance of mortgage servicers	h. Other	Total banks
All Respondents	7 (25.9)	12 (44.4)	6 (22.2)	2 (7.4)	27
\$10.0 and over	5 (33.3)	7 (46.7)	3 (20.0)	1 (6.7)	15
under \$10.0	2 (16.7)	5 (41.7)	3 (25.0)	1 (8.3)	12

4. If your bank maintains accounts for mortgage servicers that service securitized mortgages, or if your bank services such mortgages directly, in what type of account are the principal and interest payments primarily placed prior to disbursement to the appropriate transfer agency or trustee for the mortgage security?

Number of banks (Percent)

	Demand deposits	MMDAs	Others	Total banks
All Respondents	36 (78.3)	7 (15.2)	6 (13.0)	46
\$10.0 and over	20 (76.9)	4 (15.4)	4 (15.4)	26
under \$10.0	16 (80.0)	3 (15.0)	2 (10.0)	10

Note: Some banks listed more than one type of account.

5. Roughly what proportion of the balances in demand deposits held at your bank are held by businesses?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	1 (1.7)	8 (13.6)	15 (25.4)	24 (40.7)	11 (18.6)	59
\$10.0 and over	1 (3.1)	4 (12.5)	6 (18.8)	14 (43.8)	7 (21.9)	32
under \$10.0	0 (0.0)	4 (14.8)	9 (33.3)	10 (37.0)	4 (14.8)	27

6. Has your bank encouraged the payment for services with fees by pricing such payments more favorably than payments through compensating balances?

Number of banks (Percent)

	Yes	No	Total banks
All Respondents	9 (15.3)	50 (84.7)	59
\$10.0 and over	5 (15.6)	27 (84.4)	32
under \$10.0	4 (14.8)	23 (85.2)	27

7. a. Roughly what proportion of the balances in business demand deposits held at your bank would you estimate typically is made up of funds held under formal compensating balance arrangements? (Include balances held to compensate for credit services and operational services.)

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	17 (28.8)	5 (8.5)	14 (23.7)	16 (27.1)	7 (11.9)	59
\$10.0 and over	8 (25.0)	4 (12.5)	7 (21.9)	8 (25.0)	5 (15.6)	32
under \$10.0	9 (33.3)	1 (3.7)	7 (25.9)	8 (29.6)	2 (7.4)	27

- b. How has this proportion changed over the past two years?

Number of banks (Percent)

	Increased significantly	Increased somewhat	Unchanged	Decreased somewhat	Decreased significantly	Total banks
All Respondents	6 (10.2)	22 (37.3)	19 (32.2)	11 (18.6)	1 (1.7)	59
\$10.0 and over	2 (6.3)	14 (43.8)	9 (28.1)	6 (18.8)	1 (3.1)	32
under \$10.0	4 (14.8)	8 (29.6)	10 (37.0)	5 (18.5)	0 (0.0)	27

8. a. What proportion of your large (over \$250 million in annual sales) business customers hold sweep accounts?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	51 (89.5)	1 (1.8)	2 (3.5)	2 (3.5)	1 (1.8)	57
\$10.0 and over	30 (96.8)	1 (3.2)	0 (0.0)	0 (0.0)	0 (0.0)	31
under \$10.0	21 (80.8)	0 (0.0)	2 (7.7)	2 (7.7)	1 (3.8)	26

- b. What proportion of your middle market (between \$50 million and \$250 million in annual sales) business customers hold sweep accounts?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	46 (82.1)	8 (14.3)	0 (0.0)	1 (1.8)	1 (1.8)	56
\$10.0 and over	28 (93.3)	2 (6.7)	0 (0.0)	0 (0.0)	0 (0.0)	30
under \$10.0	18 (69.2)	6 (23.1)	0 (0.0)	1 (3.8)	1 (3.8)	26

- c. What proportion of your small (under \$50 million in annual sales) business customers hold sweep accounts?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	48 (87.3)	4 (7.3)	3 (5.5)	0 (0.0)	0 (0.0)	55
\$10.0 and over	27 (93.1)	1 (3.4)	1 (3.4)	0 (0.0)	0 (0.0)	29
under \$10.0	21 (80.8)	3 (11.5)	2 (7.7)	0 (0.0)	0 (0.0)	26

### Specific Questions on Compensating Balance Arrangements

Answer the remaining questions only if your institution allows businesses to pay for credit services or operational services with credits earned on compensating balances.

9. a. Please indicate what interest rate is used as a basis for calculating earnings credits.

Number of banks (Percent)

	Three-month Treasury bill	Overnight rate	Fixed nonmarket rate	Other	Total banks
All Respondents	48 (81.4)	0 (0.0)	0 (0.0)	11 (18.6)	59
\$10.0 and over	25 (78.1)	0 (0.0)	0 (0.0)	7 (21.9)	32
under \$10.0	23 (85.2)	0 (0.0)	0 (0.0)	4 (14.8)	27



b. If the interest rate that is used as the basis for calculating earnings credits have been changed over the past two years, please indicate the previous basis.

Number of banks (Percent)

	Three-month Treasury bill	Overnight rate	Fixed nonmarket rate	Other	Total banks
All Respondents	5 (71.4)	0 (0.0)	0 (0.0)	2 (28.6)	7
\$10.0 and over	3 (60.0)	0 (0.0)	0 (0.0)	2 (40.0)	5
under \$10.0	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	2

c. Over what period is this rate measured?

Number of banks (Percent)

	Daily	Weekly	Monthly	Quarterly	Other	Total banks
All Respondents	0 (0.0)	2 (3.4)	53 (89.8)	2 (3.4)	2 (3.4)	59
\$10.0 and over	0 (0.0)	2 (6.3)	29 (90.6)	0 (0.0)	1 (3.1)	32
under \$10.0	0 (0.0)	0 (0.0)	24 (88.9)	2 (7.4)	1 (3.7)	27

d. Over what period are compensating balance requirements measured?

Number of banks (Percent)

	Month	Quarter	Year	Total banks
All Respondents	56 (94.9)	16 (27.1)	13 (22.0)	59
\$10.0 and over	32 (100.0)	10 (31.3)	7 (21.9)	32
under \$10.0	24 (88.9)	6 (22.2)	6 (22.2)	27

Note: Some banks listed more than one period and indicated that the period depended on the customer.

e. Does your institution plan to adjust its earnings credit rate to reflect the upcoming change in reserve requirements?

Number of banks (Percent)

	Yes	No	Total banks
All Respondents	52 (88.1)	7 (11.9)	59
\$10.0 and over	28 (87.5)	4 (12.5)	32
under \$10.0	24 (88.9)	3 (11.1)	27

10. a. Can compensating balance account surpluses in one period be carried over to the following period?

Number of banks (Percent)

	Yes	No	For some customers	Total banks
All Respondents	13 (22.0)	7 (11.9)	39 (66.1)	59
\$10.0 and over	8 (25.0)	1 (3.1)	23 (71.9)	32
under \$10.0	5 (18.5)	6 (22.2)	16 (59.3)	27

b. Can compensating balance account deficiencies in one period be carried over to the following period?

Number of banks (Percent)

	Yes	No	For some customers	Total banks
All Respondents	10 (16.9)	12 (20.3)	37 (62.7)	59
\$10.0 and over	4 (12.5)	6 (18.8)	22 (68.8)	32
under \$10.0	6 (22.2)	6 (22.2)	15 (55.6)	27

c. If either surpluses or deficiencies can be carried over, are there any limits on these period-to-period carryovers?

Number of banks (Percent)

	Yes	No	For some customers	Total banks
All Respondents	31 (54.4)	8 (14.0)	18 (31.6)	57
\$10.0 and over	19 (59.4)	4 (12.5)	9 (28.1)	32
under \$10.0	12 (48.0)	4 (16.0)	9 (36.0)	25

d. Can they be carried past the end of a calendar year?

Number of banks (Percent)

	Yes	No	For some customers	Total banks
All Respondents	3 (5.3)	39 (68.4)	15 (26.3)	57
\$10.0 and over	2 (6.3)	21 (65.6)	9 (28.1)	32
under \$10.0	1 (4.0)	18 (72.0)	6 (24.0)	25

11. a. What proportion of a large (over \$250 million in annual sales) firm's service fees at your bank are typically covered by earnings credits from compensating balances?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	13 (23.6)	17 (30.9)	15 (27.3)	5 (9.1)	5 (9.1)	55
\$10.0 and over	6 (21.4)	10 (35.7)	6 (21.4)	3 (10.7)	3 (10.7)	28
under \$10.0	7 (25.9)	7 (25.9)	9 (33.3)	2 (7.4)	2 (7.4)	27

b. What proportion of a middle market (between \$50 million and \$250 million in annual sales) firm's service fees at your bank are typically covered by earnings credits from compensating balances?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	3 (5.5)	6 (10.9)	32 (58.2)	11 (20.0)	3 (5.5)	55
\$10.0 and over	1 (3.6)	3 (10.7)	17 (60.7)	5 (17.9)	2 (7.1)	28
under \$10.0	2 (7.4)	3 (11.1)	15 (55.6)	6 (22.2)	1 (3.7)	27

c. What proportion of a small (under \$50 million in annual sales) firm's service fees at your bank are typically covered by earnings credits from compensating balances?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	5 (9.1)	12 (21.8)	20 (36.4)	11 (20.0)	7 (12.7)	55
\$10.0 and over	3 (10.7)	6 (21.4)	9 (32.1)	6 (21.4)	4 (14.3)	28
under \$10.0	2 (7.4)	6 (22.2)	11 (40.7)	5 (18.5)	3 (11.1)	27

12. In accounting periods in which earnings credits appear likely to fall below service charges, what proportion of your compensating balance account volumes are held by businesses that

i. would make up the shortfall with fee payments?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	3 (5.5)	5 (9.1)	10 (18.2)	18 (32.7)	19 (34.5)	55
\$10.0 and over	1 (3.6)	2 (7.1)	5 (17.9)	9 (32.1)	11 (39.3)	28
under \$10.0	2 (7.4)	3 (11.1)	5 (18.5)	9 (33.3)	8 (29.6)	27

ii. would adjust balances within the accounting period to make up for the shortfall?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	37 (67.3)	10 (18.2)	7 (12.7)	1 (1.8)	0 (0.0)	55
\$10.0 and over	20 (71.4)	3 (10.7)	4 (14.3)	1 (3.6)	0 (0.0)	28
under \$10.0	17 (63.0)	7 (25.9)	3 (11.1)	0 (0.0)	0 (0.0)	27

iii. would make up for the shortfall by holding higher balances in the next accounting period?

Number of banks (Percent)

	0 to 20 percent	21 to 40 percent	41 to 60 percent	61 to 80 percent	Over 80 percent	Total banks
All Respondents	42 (76.4)	6 (10.9)	5 (9.1)	1 (1.8)	1 (1.8)	55
\$10.0 and over	23 (79.3)	1 (3.4)	4 (13.8)	0 (0.0)	1 (3.4)	29
under \$10.0	19 (73.1)	5 (19.2)	1 (3.8)	1 (3.8)	0 (0.0)	26

13. Please indicate the formula most commonly used at your institution for determining required compensating balances.

Responses discussed in text.