FYI: An Update on Emerging Issues in Banking

What the Yield Curve Does (and Doesn't) Tell Us

February 22, 2006

Historically, the yield curve spread, or the difference between short-term and long-term interest rates, has had some predictive power for the performance of the U.S. economy and banking industry. In the past, a narrowing, or flattening, of the spread has tended to foretell both slower economic growth and increased pressure on bank earnings. Furthermore, the yield curve generally has *inverted*—a condition where short-term rates exceed long-term rates—up to two years ahead of a recession. Based on this historical context, the flattening in the yield curve since mid-2004 has been on the minds of many economists and banking analysts. Sometimes, however, the yield curve flattens or inverts for reasons that may not necessarily foreshadow slower economic growth.

The shape of the yield curve spread also has held implications for bank margins and profits. Historically, bank net interest margins have tended to decline one to two quarters after a decline in the yield curve spread. While many banks have found ways of reducing their sensitivity to changes in yield curve spreads in recent years, the largest banks have seen their margins squeezed substantially by the recent flattening in the yield curve. And although smaller banks have been less affected so far, the earnings of all lenders will likely be affected should the yield curve remain flat for several more quarters. This issue of *FYI* examines the historical relationships of the yield curve with economic growth and how changes in the spread have affected banks.
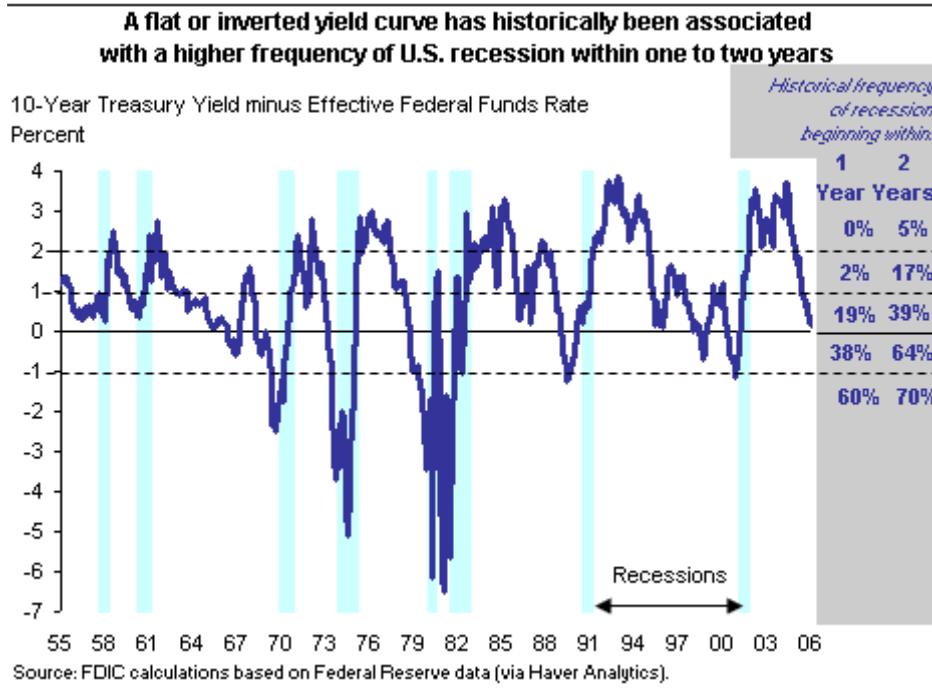
The Yield Curve and the U.S. Economy

A yield curve is simply a graph depicting the yields of similar debt instruments of differing maturities. There are many yield curves and many ways of measuring the difference, or spread, in short- and long-term interest rates along these curves. A common measure of this difference is the spread between the federal funds rate, which is set by the Federal Reserve and used in pricing overnight interbank loans, and the 10-year Treasury note yield, which is linked to the pricing of traditional fixed-rate mortgages. Two other common measures of the spread take the difference between 3-month and 10-year Treasury yields or the difference between 2-year and 10-year Treasury yields. Some research indicates that calculating spreads using very short-term rates, such as the federal funds rate or 3-month Treasury yield, is a more useful indicator of future economic activity than using a 2-year Treasury yield as a short-term rate.[1] In keeping with this prior research, we will focus on the spread between the federal funds rate and the 10-year Treasury yield when measuring the shape of the yield curve.

Inverted Yield Curves Sometimes Precede Recessions
Historically, the shape of the yield curve has been a useful leading indicator of economic growth. For instance, the beginning of a recession has seldom followed a period with a steep (positively sloped) yield curve within two years (see Chart 1). In fact, during months in which the spread has measured at least 200 basis points (2 percentage points), a recession has ensued within two years only 5 percent of the time. The shape of the yield curve has also told us when recessions may be more likely. In Chart 1, we see that the yield curve has inverted significantly, or by at least 100 basis points, within two years prior to each of the past six recessions.

Chart 1

A flat or inverted yield curve has historically been associated with a higher frequency of U.S. recession within one to two years

10-Year Treasury Yield minus Effective Federal Funds Rate
Percent

	Historical frequency of recession beginning within:	
	1 Year	2 Years
	0%	5%
	2%	17%
	19%	39%
	38%	64%
	60%	70%

Recessions

Source: FDIC calculations based on Federal Reserve data (via Haver Analytics).

However, the slope of the yield curve does not have a perfect track record when it comes to foretelling the future. Chart 1 shows that the yield curve did not invert before the two recessions that occurred in the late 1950s and early 1960s, a period when long-term yields were exceptionally low, as they are today. The inverted yield curve during 1966, the near-inversions in both 1987 and 1995, and the inversion in 1998 are also examples of inaccurate growth signals. Surging job growth and falling unemployment contributed to a spike in inflation in 1966. As the Federal Reserve decreased money supply growth in response, the effective federal funds rate rose and the yield curve inverted briefly between mid-1966 and early 1967. The near-inversion in 1987 occurred during the stock market crash that year, known as Black Monday. The near-inversion during the mid-1990s reflected an economic soft patch that followed a 3 percentage point increase in the federal funds rate over a 13-month period. And, the inversion in 1998 came during the financial market turmoil surrounding the collapse at Long-Term Capital Management. These episodes passed without any recession beginning in the next two years. What this tells us is that a flattening yield curve may be a necessary, but not a sufficient, condition for recession.

The Yield Curve Can Invert for Reasons Not Related to Future Economic Growth

While inversions of the yield curve spread generally precede a recession, the yield curve can also invert for reasons not related to slower economic growth. Historically, short- and long-term yields tended to move in the same direction, but since the 1990s this relationship has been disappearing. More recently, between June 2004 and January 2006, the Federal Reserve gradually increased its target federal funds rate by 350 basis points, from 1 percent to 4.5 percent.[2] Yet over the same period, 10-year Treasury yields fell from 4.7 percent to 4.5 percent, which resulted in a pronounced flattening of the yield curve (see Chart 1). The relatively stable and low level of long-term interest rates in the presence of strong economic growth and rising short-term interest rates has been somewhat of a mystery to economists, even prompting former Federal Reserve Chairman Alan Greenspan to famously label their behavior a "conundrum."[3] Several explanations have been suggested for the flattening of the yield curve during the past two years.

Low Term Premium

First, some have speculated that increased stability in global financial markets has resulted in a low term premium. The term premium is the additional yield required by investors for purchasing long-term securities. To compensate for the fact that an investor is exposed to more risks over a 10-year investment horizon relative to a 3-month investment horizon, yields on longer-dated securities tend to be greater than the yields on similar, but shorter-dated, securities. Research by the Federal Reserve indicates that investors may have become more willing to invest long term in recent years, perhaps encouraged by recent stability in economic conditions and financial markets.[4] Alternatively, financial market innovations such as derivatives may provide investors the

means to reduce long-term investment risk. As a result, increased demand for long-term securities has caused yields on these securities to fall.

Low Inflation Expectations

Second, the flatness of the yield curve could be due to the easing of long-term inflation expectations, which are an important component of the term premium. Since inflation erodes the future value of an investment, investors require an inflation premium in the form of higher long-term interest rates to compensate for this lost value. However, according to the Philadelphia Fed survey of professional economic forecasters, long-term inflation expectations have steadily declined over the past 10 years. If market participants expect inflation to remain low in the future, then they will require a lower inflation premium to compensate them for future inflation.

Demand from Foreign Central Banks

Third, foreign central banks have continued to maintain strong demand for U.S. securities, especially long-term Treasuries. Central banks in Japan, China, and Europe have been major purchasers of Treasuries and have generally purchased Treasury notes and bonds rather than short-term bills.[5] For example, at the end of 1999, China held $52 billion worth of U.S. Treasury securities. By November 2005, China's holdings of these securities totaled $250 billion, an increase of nearly 400 percent. Similarly, Japan increased its holdings from $320 billion at year-end 1999 to $682 billion by November 2005. Central banks in many large European countries also have increased their holdings of U.S. Treasury securities. This steady source of demand has, by supporting the price of Treasury securities, kept a lid on long-term interest rates.

Investment Activities by Pension Funds and Hedge Funds

Fourth, investment activities by pension funds and hedge funds could be depressing long-term yields. Pension funds across the United States and Europe have increasingly sought to match the durations of their liabilities with their assets.[6] Given the long durations of pension liabilities, many funds have sought to invest in long-term Treasury bonds to better match the timing of their future liabilities. Hedging and investment activities by funds and corporations have tended to flatten the yield curve as well. For example, many hedge funds may take positions in long-term U.S. Treasury securities in order to execute investment strategies, thus generating extra demand.[7]

Although these explanations clarify why long-term interest rates have remained comparatively low, their influence is hard to isolate from investor concerns about a possible slowdown in economic growth. It is important to understand the reasons why the yield curve flattens or inverts so that we can fully grasp its predictive power as a leading economic indicator. Because of our uncertainty, it is essential to view the yield curve in conjunction with other economic and financial statistics to avoid misreading the tea leaves. At this time, other leading economic indicators are not raising recession concerns.[8]

The Yield Curve and Banks

Just as the yield curve is not a perfect indicator of future economic growth, it also does not provide perfect foresight as to how bank net interest margins (NIMs) and earnings will fluctuate. The traditional view of the banking business holds that banks pay interest on their deposits based upon shorter-term interest rates while making loans tied to longer-term interest rates. Thus, the difference between interest paid and received—the margin—should be influenced by the slope of the yield curve. There is some empirical support for this view. For instance, Chart 2 shows that, until recently, overall bank NIM declined over a period of three to six months following a drop in the yield curve spread.

Chart 2

Net interest margins have become less sensitive to changes in the yield curve spread.

Yield Curve Spread
Basis Points

Median Net Interest Margin
Percent

Legend:
- Yield Curve Spread
- All Bank NIMs
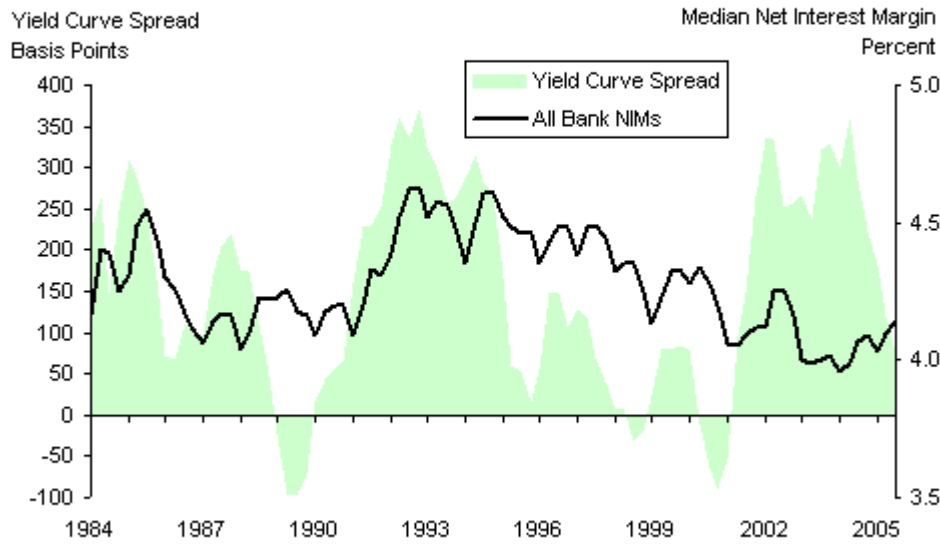
Source: FDIC

The fairly tight correlation between changes in the yield curve and NIMs, however, generally held true only through the mid-1990s. It has weakened since then. The correlation between changes in the yield curve spread and bank NIMs with a two-quarter lag was 70 percent between 1984 and 1994. Since 1994, the correlation has fallen to negative 17 percent, suggesting that there has been very little systematic relationship between NIMs and changes in the yield curve spread over the past decade. For example, since the yield curve began to flatten during mid-2004, NIMs at FDIC-insured institutions have risen from just under 4.00 percent to 4.14 percent in third quarter 2005.

Some analysts assert that bank earnings have become less sensitive to changes in the slope of the yield curve. Recent FDIC research finds that banks react differently to changes in interest rates based on their asset size and their ability to offer various types of customer products.[9] International research supports this finding. Banks in major industrialized countries have become better able to shield themselves against adverse changes in the slope of the yield curve over time.[10] As a result, the yield curve appears to have lost some of its usefulness as an indicator of the banking industry's overall health and profitability.

Large Bank Net Interest Margins Have Been Squeezed by the Flat Yield Curve
A flat or inverted yield curve spread can impact individual banks in different ways. For example, looking at Chart 3, we can see that median NIMs have behaved differently based on bank size. Since mid-2004, the median NIM for banks with total assets over $10 billion has fallen in tandem with the flattening yield curve, while those for institutions with total assets under $10 billion have increased. But why have only the largest banks responded in typical fashion to a flatter yield curve? Chart 4 adds some insight to this disparity. The median yield on assets at banks exceeding $10 billion in size has consistently been about 50 basis points below that of smaller banks since 2004. At the same time, the relative cost of funding those assets at the largest banks has risen faster over the same period. As a result, median large bank NIMs have been compressed relative to their smaller peers. These two aspects are discussed in more detail below.

Chart 3

Net interest margins for varying asset size groups are diverging after a decade of convergence.

Median Net Interest Margin
Percent

Bank asset size group
— Under $100 million
— $100 million to $1 billion
— $1 billion to $10 billion
— Over $10 billion

Recessions

1984 1987 1990 1993 1996 1999 2002 2005

Source: FDIC.
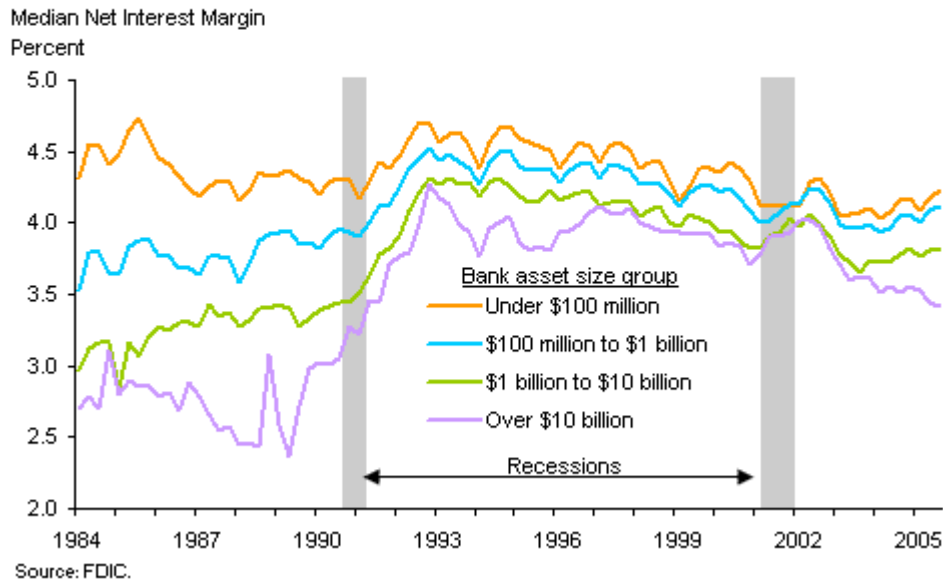
Chart 4

The cost of funding assets has risen faster for large banks in recent quarters, pressuring their net interest margins.

Yield on Earning Assets
Percent

Cost of Funding Assets
Percent

Bank asset size group
— Under $100 million
— $100 million to $10 billion
— Over $10 billion

2000 2001 2002 2003 2004 2005   2000 2001 2002 2003 2004 2005

Source: FDIC.
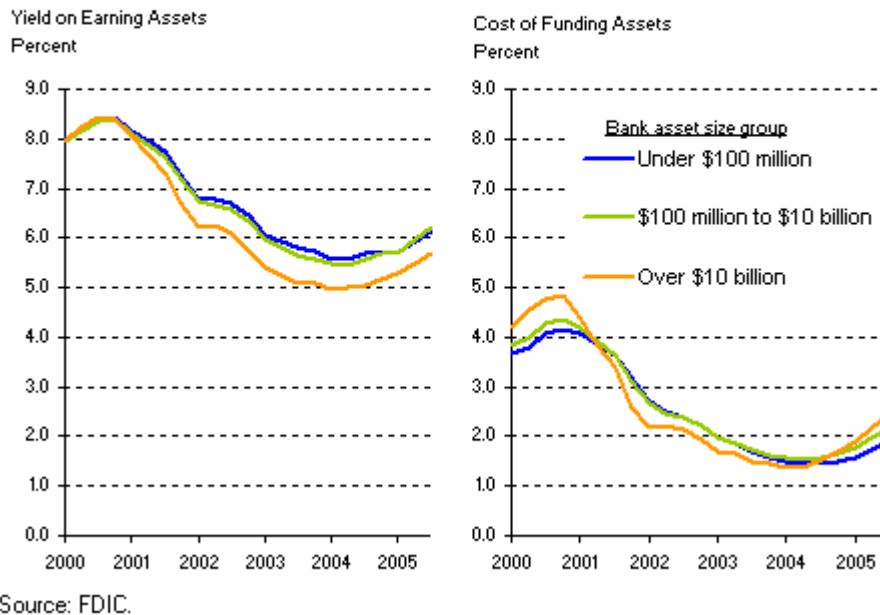
Yields on Assets Have Been Lower for Large Banks

In 2000, banks in varying size groups had similar median asset yields, but the rate of decline in asset yields between 2001 and 2003 was the greatest for the largest institutions. Further, these large institutions have been slow to close the resulting gap since yields began to rise again in 2004. This may be due to the fact that larger banks have a different asset composition than smaller banks. For example, large banks tend to have higher concentrations of commercial and industrial (C&I) loans and credit card receivables. The C&I lending environment, especially for large loans exceeding $1 million, has been very competitive in recent years.[11] Not only do banks compete against other banks, but they also compete against capital markets, which have become a popular source of funding for corporations. Lending standards, and particularly the rates charged on business loans, have generally fallen because of this highly competitive environment. In addition, many corporations have experienced increases in their cash balances in recent years, creating less incentive to reach out to banks for

financing. This strong corporate cash position has weighed on C&I loan growth. Thus, it is likely that weaker pricing and volume growth have together caused the median asset yield at large commercial lenders to lag behind that of their smaller peers.

Funding Costs Have Risen More Quickly for Large Banks

The second factor that explains why large and small bank NIMs have behaved differently concerns the cost of funding assets. Chart 4 indicates that funding costs at large banks were below that of small banks between 2001 and 2003. However, since early 2004, funding costs at large banks have risen much faster relative to small banks. Large banks have a greater reliance on overnight and wholesale funding than smaller banks. These funds tend to reprice faster than longer-term deposits, such as certificates of deposit and money market accounts, when short-term interest rates rise. As a result, smaller institutions may be able to reprice their deposits at a slower rate relative to larger institutions, thus preserving (and even boosting) their margins, at least for a time.

Banks Have Reduced Their Exposure to Changes in the Yield Curve

Major changes in the past two decades have greatly reduced the effect of shifts in the yield curve on banks. Changing banking regulations, product differentiation, new asset/liability management practices, and increased use of non-interest-bearing funding sources have helped financial institutions mitigate the yield curve's effects on profits.

Changing Banking Regulations Have Allowed Banks to Find New Sources of Income

During the 1980s, the banking industry went through a series of structural changes that had meaningful economic and financial impacts.[12] The Depository Institutions and Deregulation and Monetary Control Act of 1980 allowed banks to pay interest on time and savings deposits, expanded lending and investment powers for institutions, and removed restrictions on statewide banking. In 1982, the Garn–St. Germain Depository Institutions Act increased loan limits and removed restrictions on the ability of national banks to make real estate loans. Interstate banking and interstate branching were fully adopted through the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994. More recently, the Gramm-Leach-Bliley Act of 1999 removed restrictions on the mergers of banks, insurance companies, and brokerages. Together, these changes allowed banks to develop a vast array of customer products beyond traditional lending services. As a result, the makeup of bank revenues has changed since the 1980s (see Table 1). Non-interest income has become a larger factor in total income, especially since 1990. The importance of non-interest income has been more noticeable for larger banks with assets exceeding $1 billion.

Table 1

Non-interest income has become a more important source of earnings, especially for larger banks.					
	Ratio = Non-Interest Income / (Non-Interest Income + Interest Income)				
Bank Size	**1985**	**1990**	**1995**	**2000**	**2005**
Under $100 Million	5.2%	5.7%	7.3%	6.7%	9.1%
$100 million to $1 billion	6.4%	5.8%	8.1%	7.9%	10.8%
$1 billion to $10 billion	8.9%	9.4%	12.8%	10.8%	14.1%
Over $10 billion	9.7%	11.9%	17.9%	19.8%	25.1%

Ratio is year-end median data for each asset size group.

Source:FDIC

Product Differentiation Has Allowed Banks of All Sizes to Increase Non-Interest Income

Although the largest banks have traditionally benefited most from non-interest income, this trend may be changing. Increased telecommunication speeds and the development of new information technologies have

reduced the cost of offering new products to customers for banks of all sizes. These technologies also allow bankers to maximize fee-based revenues across a diverse customer base. In recent years, smaller banks have increasingly sought to diversify into non-traditional banking services. In part because of cheaper and better technologies, some small- and medium-sized lenders have expanded their product mix to include insurance and investment activities, further diversifying their sources of non-interest income.

New Asset/Liability Management Techniques Have Helped Reduce the Risks of Changes in the Yield Curve Spread

On top of an increased reliance on fee and other non-interest income, banks have additional means to reduce the impact of yield curve changes on profits. For example, many banks, especially the large ones, have been able to hedge their interest rate exposure by using derivatives such as interest rate swaps.[13] Banks have also been able to reduce the effect of interest rate moves by directly selling their fixed-rate loans to investors or by securitizing the loans into financial instruments such as mortgage-backed securities. Further, banks have been able to more narrowly adjust the costs and durations of deposits and loans. Federal Home Loan Bank advances have provided banks a flexible source of fixed-rate funding with average durations exceeding that of their core deposits. Access to these alternative funding sources has helped insulate bank funding from interest rate shifts, as traditional deposits may be more exposed to the risks of short-term interest rate volatility. On the asset side, banks have been increasingly offering variable-rate loans, such as adjustable-rate mortgages (ARMs), where in the past they may have only offered loans tied to a long-term fixed rate. Since ARMs reprice faster than traditional fixed-rate mortgages, NIMs may not contract by as much as they otherwise would when the yield curve flattens.

Use of Non-Interest-Bearing Liabilities Has Helped Support Net Interest Margins

Finally, greater use of non-interest-bearing funding sources, such as demand deposits and equity, may be supporting NIMs. Chart 5 divides NIM into two separate components to help explain why margins have risen despite a flattening yield curve.[14] The first component, the NIM on interest-bearing liabilities, is the net return on assets funded by interest-bearing liabilities (for example, certificates of deposits and money market accounts). In essence, this component represents the traditional view of the banking business. Since 2001, the NIM on interest-bearing liabilities has steadily weighed on net interest margins as the spread between the prices paid on liabilities and the yield received on assets narrowed.

The second component of NIM, the NIM on non-interest-bearing liabilities, is the net return on assets funded by non-interest liabilities (for example, equity and demand deposits). Because market rates on assets increased and these liabilities carried no explicit interest cost, this component helped to offset the reduction in overall NIMs resulting from the first component. Thus, banks may have been able to offset at least some of the compression in the total NIM by funding more of their assets through non-interest-bearing liabilities. In particular, corporate demand deposits that would normally be swept into interest-bearing, non-deposit investments have accumulated on bank balance sheets during a period of historically low short-term interest rates. But as is evident in the scales of the two charts, the overall industry impact has been small. The share of NIM tied to non-interest-bearing liabilities has only risen to 24 percent, from 18 percent in 2003, accounting for an increase in NIMs of only 17 basis points versus a drop of 26 basis points in the NIM associated with interest-bearing liabilities.

Chart 5

Use of non-interest-bearing liabilities has helped to support net interest margins.

NIM on Interest-Bearing Liabilities
Percent

NIM on Non-Interest-Bearing Liabilities
Percent
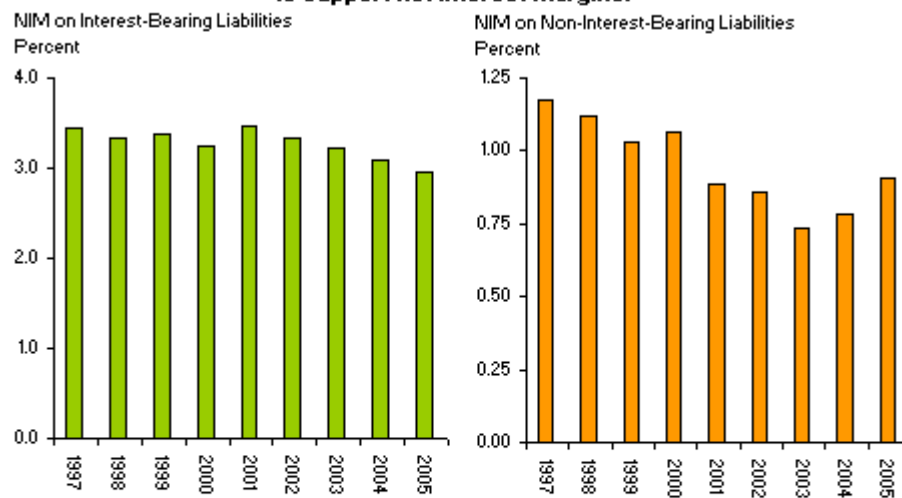
Total NIM = (1) NIM on Interest-Bearing Liabilities + (2) NIM on Non-Interest-Bearing Liabilities

(1) NIM on Interest-Bearing Liabilities:
(Rate Earned - Rate Paid) × (interest-bearing liabilities / interest-earning assets)

(2) NIM on Non-Interest-Bearing Liabilities:
(Rate Earned) × [1 - (interest-bearing liabilities / interest-earning assets)]

Sources: FDIC; "Profits and Balance Sheet Developments at U.S. Commercial Banks in 2003," Federal Reserve, *Federal Reserve Bulletin*, Spring 2004.

Conclusion

History suggests that the odds of recession increase when the yield curve spread flattens or becomes inverted. But past recessions only occurred with a high frequency after the curve inverted by a significant amount for a sustained period of time. Further, the yield curve spread can invert for reasons other than the possibility of slower economic growth. We have presented some of these possible explanations, which include expectations of lower long-term inflation, a recent reduction in the term premium, strong demand for longer-term debt by foreign central banks, and investment activities by pension and hedge funds. As a result, the flat yield curve spread may not be signaling increased odds of a recession at present. By the same token, the structural forces holding long-term interest rates down may be with us for some time, even as the cyclical increase in short-term rates subsides. The presence of these structural forces suggests that a flat yield curve could persist for some time.

Similarly for banks, flat or inverted yield curves have historically been associated with narrowing NIMs and lower earnings. Many smaller banks thus far have been able to insulate themselves from changes in the yield curve spread, because they have only slowly raised the interest rates they pay on their liabilities. In contrast, the largest banks have seen their liability costs rise more rapidly, while at the same time their asset yields have lagged those for smaller banks. This situation has resulted in a classic margin squeeze for the largest banks as the yield curve has flattened. Even so, it may be just a matter of time before margins for smaller banks begin to be squeezed, especially if the flat yield curve persists. Regardless of the slope of the existing yield curve—positive, flat, or negative—bankers will benefit from strategies designed to cope with the uncertainty of changing interest rates.

Endnotes

[1] Arturo Estrella and F.S. Mishkin, "Predicting U.S. Recessions: Financial Variables as Leading Indicators," Review of Economics and Statistics, February 1998. Also see: Arturo Estrella, http://www.ny.frb.org/research/capital_markets/ycfaq.html October 2005.

[2] Statements from the Federal Open Market Committee indicate that the committee began to raise its target interest rate in June 2004 to remove accommodative monetary policy. See: http://www.federalreserve.gov/fomc/.

[3] Testimony of Alan Greenspan, Federal Reserve Board's Semiannual Monetary Policy Report to the Congress http://www.federalreserve.gov/boarddocs/hh/2005/february/testimony.html, February 16, 2005.

[4] Testimony of Alan Greenspan, Federal Reserve Board's Semiannual Monetary Policy Report to the Congress http://www.federalreserve.gov/boarddocs/hh/2005/july/testimony.html, July 20, 2005.

[5] U.S. Treasury, Treasury International Capital System (TIC) data.

[6] "U.K. 50-Year Borrowing Cost to Fall on Pension Demand," Bloomberg, December 5, 2005.

[7] This extra demand is evidenced by strong demand of U.S. Treasuries by Caribbean banking centers, which some analysts believe largely consist of offshore hedge funds. Some of these hedge funds may be engaging in the carry trade, which involves taking a long position in a long-term Treasury security while simultaneously taking a short position in a short-term Treasury security.

[8] For example, the Economic Cycle Research Institute's weekly leading index moved higher in January, and the Index of Leading Economic Indicators, which includes the yield curve spread as one of its components, was not signaling recession in late 2005.

[9] Furthermore, bank earnings are more sensitive to changes in credit conditions than to changes in interest rates. See: Gerald Hanweck and Lisa H. Ryu, The Sensitivity of Bank Net Interest Margins and Profitability to Credit, Interest-Rate, and Term-Structure Shocks across Bank Product Specializations, https://www.fdic.gov/bank/analytical/working/index.html Federal Deposit Insurance Corporation, Working Paper 05-02, January 2005.

[10] For example, banks have adopted new ways of selecting assets and liabilities, modifying the manner in which they set rates on core deposits and retail loans, and engaging in hedging activities. See: William B. English, Interest Rate Risk and Bank Net Interest Margins, Bank of International Settlements Quarterly Review, December 2002. "http://www.bis.org/publ/qtrpdf/r_qt0212.pdf.

[11] See: Federal Reserve, Senior Loan Officer Opinion Survey on Bank Lending Practiceshttp://www.federalreserve.gov/boarddocs/SnLoanSurvey/, October 2004.

[12] History of the 1980s – Lessons for the Future, Vol. I https://www.fdic.gov/bank/historical/history/, Federal Deposit Insurance Corporation, December 1997.

[13] While almost 900 institutions report holdings of derivatives, the vast majority of these holdings are at banks with assets over $10 billion. See: FDIC Quarterly Banking Profile https://www.fdic.gov/bank/analytical/qbp/, Federal Deposit Insurance Corporation, Third Quarter 2005.

[14] This analysis updates work originally published in: "Profits and Balance Sheet Developments at U.S. Commercial Banks in 2003," Federal Reserve, Federal Reserve Bulletin, Spring 2004.

Disclaimer

Chart 1

A flat or inverted yield curve has historically been associated with a higher frequency of U.S. recession within one to two years.		
Date (yyyymm)	Recession Indicator: 1 = recession; -1 = no recession	Treasury yield curve: 10-year Treasury yield minus effective federal funds rate (percentage points)
195407	-1	1.50
195408	-1	1.14
195409	-1	1.32
195410	-1	1.58
195411	-1	1.65
195412	-1	1.23
195501	-1	1.22
195502	-1	1.36
195503	-1	1.33
195504	-1	1.32
195505	-1	1.33
195506	-1	1.14
195507	-1	1.22
195508	-1	1.01
195509	-1	0.79
195510	-1	0.64
195511	-1	0.54
195512	-1	0.48
195601	-1	0.45
195602	-1	0.34
195603	-1	0.46
195604	-1	0.56
195605	-1	0.32
195606	-1	0.29
195607	-1	0.36
195608	-1	0.60
195609	-1	0.43
195610	-1	0.38
195611	-1	0.61
195612	-1	0.65
195701	-1	0.62
195702	-1	0.34

195703	-1	0.45
195704	-1	0.48
195705	-1	0.60
195706	-1	0.80
195707	-1	0.94
195708	1	0.69
195709	1	0.45
195710	1	0.47
195711	1	0.44
195712	1	0.23
195801	1	0.37
195802	1	1.38
195803	1	1.78
195804	1	1.62
195805	-1	2.29
195806	-1	2.04
195807	-1	2.52
195808	-1	2.01
195809	-1	2.00
195810	-1	2.00
195811	-1	1.47
195812	-1	1.44
195901	-1	1.54
195902	-1	1.53
195903	-1	1.19
195904	-1	1.16
195905	-1	1.41
195906	-1	0.95
195907	-1	0.93
195908	-1	0.93
195909	-1	0.92
195910	-1	0.55
195911	-1	0.53
195912	-1	0.70
196001	-1	0.73
196002	-1	0.52
196003	-1	0.41
196004	1	0.36
196005	1	0.50
196006	1	0.83
196007	1	0.67

196008	1	0.82
196009	1	1.20
196010	1	1.42
196011	1	1.49
196012	1	1.86
196101	1	2.39
196102	1	1.24
196103	-1	1.72
196104	-1	2.29
196105	-1	1.73
196106	-1	2.15
196107	-1	2.75
196108	-1	2.04
196109	-1	2.10
196110	-1	1.66
196111	-1	1.33
196112	-1	1.73
196201	-1	1.93
196202	-1	1.67
196203	-1	1.08
196204	-1	1.06
196205	-1	1.51
196206	-1	1.23
196207	-1	1.30
196208	-1	1.05
196209	-1	1.08
196210	-1	1.03
196211	-1	0.98
196212	-1	0.93
196301	-1	0.91
196302	-1	0.92
196303	-1	0.95
196304	-1	1.07
196305	-1	0.93
196306	-1	1.00
196307	-1	1.00
196308	-1	0.51
196309	-1	0.60
196310	-1	0.61
196311	-1	0.64
196312	-1	0.75

196401	-1	0.69
196402	-1	0.67
196403	-1	0.79
196404	-1	0.76
196405	-1	0.70
196406	-1	0.67
196407	-1	0.77
196408	-1	0.69
196409	-1	0.75
196410	-1	0.83
196411	-1	0.63
196412	-1	0.33
196501	-1	0.29
196502	-1	0.23
196503	-1	0.17
196504	-1	0.11
196505	-1	0.11
196506	-1	0.17
196507	-1	0.11
196508	-1	0.13
196509	-1	0.28
196510	-1	0.27
196511	-1	0.35
196512	-1	0.30
196601	-1	0.19
196602	-1	0.23
196603	-1	0.22
196604	-1	0.08
196605	-1	-0.12
196606	-1	-0.36
196607	-1	-0.28
196608	-1	-0.31
196609	-1	-0.22
196610	-1	-0.52
196611	-1	-0.60
196612	-1	-0.56
196701	-1	-0.36
196702	-1	-0.37
196703	-1	0.01
196704	-1	0.54
196705	-1	0.91

196706	-1	1.04
196707	-1	1.37
196708	-1	1.38
196709	-1	1.31
196710	-1	1.60
196711	-1	1.62
196712	-1	1.19
196801	-1	0.93
196802	-1	0.85
196803	-1	0.69
196804	-1	-0.12
196805	-1	-0.24
196806	-1	-0.35
196807	-1	-0.52
196808	-1	-0.61
196809	-1	-0.32
196810	-1	-0.33
196811	-1	-0.12
196812	-1	0.01
196901	-1	-0.26
196902	-1	-0.42
196903	-1	-0.49
196904	-1	-1.24
196905	-1	-2.35
196906	-1	-2.33
196907	-1	-1.89
196908	-1	-2.50
196909	-1	-1.99
196910	-1	-1.90
196911	-1	-1.71
196912	1	-1.32
197001	1	-1.19
197002	1	-1.74
197003	1	-0.69
197004	1	-0.71
197005	1	-0.03
197006	1	0.24
197007	1	0.25
197008	1	0.92
197009	1	1.10
197010	1	1.13

197011	1	1.24
197012	-1	1.49
197101	-1	2.10
197102	-1	2.39
197103	-1	1.99
197104	-1	1.68
197105	-1	1.76
197106	-1	1.61
197107	-1	1.42
197108	-1	1.02
197109	-1	0.59
197110	-1	0.73
197111	-1	0.90
197112	-1	1.79
197201	-1	2.45
197202	-1	2.79
197203	-1	2.24
197204	-1	2.02
197205	-1	1.86
197206	-1	1.65
197207	-1	1.56
197208	-1	1.41
197209	-1	1.68
197210	-1	1.44
197211	-1	1.22
197212	-1	1.03
197301	-1	0.52
197302	-1	0.06
197303	-1	-0.38
197304	-1	-0.45
197305	-1	-0.99
197306	-1	-1.59
197307	-1	-3.27
197308	-1	-3.10
197309	-1	-3.69
197310	-1	-3.22
197311	1	-3.30
197312	1	-3.21
197401	1	-2.66
197402	1	-2.01
197403	1	-2.14

197404	1	-3.00
197405	1	-3.73
197406	1	-4.39
197407	1	-5.12
197408	1	-3.97
197409	1	-3.30
197410	1	-2.16
197411	1	-1.77
197412	1	-1.10
197501	1	0.37
197502	1	1.15
197503	1	2.19
197504	-1	2.74
197505	-1	2.84
197506	-1	2.31
197507	-1	1.96
197508	-1	2.26
197509	-1	2.19
197510	-1	2.32
197511	-1	2.83
197512	-1	2.80
197601	-1	2.87
197602	-1	3.02
197603	-1	2.89
197604	-1	2.74
197605	-1	2.60
197606	-1	2.38
197607	-1	2.52
197608	-1	2.48
197609	-1	2.34
197610	-1	2.39
197611	-1	2.34
197612	-1	2.22
197701	-1	2.60
197702	-1	2.71
197703	-1	2.77
197704	-1	2.64
197705	-1	2.11
197706	-1	1.89
197707	-1	1.91
197708	-1	1.50

197709	-1	1.20
197710	-1	1.05
197711	-1	1.07
197712	-1	1.13
197801	-1	1.26
197802	-1	1.25
197803	-1	1.25
197804	-1	1.26
197805	-1	0.99
197806	-1	0.86
197807	-1	0.83
197808	-1	0.37
197809	-1	-0.03
197810	-1	-0.32
197811	-1	-0.95
197812	-1	-1.02
197901	-1	-0.97
197902	-1	-0.96
197903	-1	-0.97
197904	-1	-0.83
197905	-1	-0.99
197906	-1	-1.38
197907	-1	-1.52
197908	-1	-1.91
197909	-1	-2.10
197910	-1	-3.47
197911	-1	-2.53
197912	-1	-3.39
198001	1	-3.02
198002	1	-1.72
198003	1	-4.44
198004	1	-6.14
198005	1	-0.80
198006	1	0.31
198007	1	1.22
198008	-1	1.49
198009	-1	0.64
198010	-1	-1.06
198011	-1	-3.17
198012	-1	-6.06
198101	-1	-6.51

198102	-1	-2.74
198103	-1	-1.58
198104	-1	-2.04
198105	-1	-4.42
198106	-1	-5.63
198107	1	-4.76
198108	1	-2.88
198109	1	-0.55
198110	1	0.07
198111	1	0.08
198112	1	1.35
198201	1	1.37
198202	1	-0.35
198203	1	-0.82
198204	1	-1.07
198205	1	-0.83
198206	1	0.15
198207	1	1.36
198208	1	2.93
198209	1	2.03
198210	1	1.20
198211	1	1.35
198212	-1	1.59
198301	-1	1.78
198302	-1	2.21
198303	-1	1.74
198304	-1	1.60
198305	-1	1.75
198306	-1	1.87
198307	-1	2.01
198308	-1	2.29
198309	-1	2.20
198310	-1	2.06
198311	-1	2.35
198312	-1	2.36
198401	-1	2.11
198402	-1	2.25
198403	-1	2.41
198404	-1	2.34
198405	-1	3.09
198406	-1	2.50

198407	-1	2.13
198408	-1	1.08
198409	-1	1.22
198410	-1	2.17
198411	-1	2.14
198412	-1	3.12
198501	-1	3.03
198502	-1	3.01
198503	-1	3.28
198504	-1	3.16
198505	-1	2.88
198506	-1	2.63
198507	-1	2.43
198508	-1	2.43
198509	-1	2.45
198510	-1	2.25
198511	-1	1.73
198512	-1	0.99
198601	-1	1.05
198602	-1	0.84
198603	-1	0.30
198604	-1	0.31
198605	-1	0.86
198606	-1	0.88
198607	-1	0.74
198608	-1	1.00
198609	-1	1.56
198610	-1	1.58
198611	-1	1.21
198612	-1	0.20
198701	-1	0.65
198702	-1	1.15
198703	-1	1.12
198704	-1	1.65
198705	-1	1.76
198706	-1	1.67
198707	-1	1.87
198708	-1	2.03
198709	-1	2.20
198710	-1	2.23
198711	-1	2.17

198712	-1	2.22
198801	-1	1.84
198802	-1	1.63
198803	-1	1.79
198804	-1	1.85
198805	-1	2.00
198806	-1	1.41
198807	-1	1.31
198808	-1	1.25
198809	-1	0.79
198810	-1	0.50
198811	-1	0.61
198812	-1	0.35
198901	-1	-0.02
198902	-1	-0.19
198903	-1	-0.49
198904	-1	-0.66
198905	-1	-0.95
198906	-1	-1.25
198907	-1	-1.22
198908	-1	-0.88
198909	-1	-0.83
198910	-1	-0.83
198911	-1	-0.68
198912	-1	-0.61
199001	-1	-0.02
199002	-1	0.23
199003	-1	0.31
199004	-1	0.53
199005	-1	0.58
199006	-1	0.19
199007	1	0.32
199008	1	0.62
199009	1	0.69
199010	1	0.61
199011	1	0.58
199012	1	0.77
199101	1	1.18
199102	1	1.60
199103	1	1.99
199104	-1	2.13

199105	-1	2.29
199106	-1	2.38
199107	-1	2.45
199108	-1	2.24
199109	-1	2.20
199110	-1	2.32
199111	-1	2.61
199112	-1	2.66
199201	-1	3.00
199202	-1	3.28
199203	-1	3.56
199204	-1	3.75
199205	-1	3.57
199206	-1	3.50
199207	-1	3.59
199208	-1	3.29
199209	-1	3.20
199210	-1	3.49
199211	-1	3.78
199212	-1	3.85
199301	-1	3.58
199302	-1	3.23
199303	-1	2.91
199304	-1	3.01
199305	-1	3.04
199306	-1	2.92
199307	-1	2.75
199308	-1	2.65
199309	-1	2.27
199310	-1	2.34
199311	-1	2.70
199312	-1	2.81
199401	-1	2.70
199402	-1	2.72
199403	-1	3.14
199404	-1	3.41
199405	-1	3.17
199406	-1	2.85
199407	-1	3.04
199408	-1	2.77
199409	-1	2.73

199410	-1	2.98
199411	-1	2.67
199412	-1	2.36
199501	-1	2.25
199502	-1	1.55
199503	-1	1.22
199504	-1	1.01
199505	-1	0.62
199506	-1	0.17
199507	-1	0.43
199508	-1	0.75
199509	-1	0.40
199510	-1	0.28
199511	-1	0.13
199512	-1	0.11
199601	-1	0.09
199602	-1	0.59
199603	-1	0.96
199604	-1	1.29
199605	-1	1.50
199606	-1	1.64
199607	-1	1.47
199608	-1	1.42
199609	-1	1.53
199610	-1	1.29
199611	-1	0.89
199612	-1	1.01
199701	-1	1.33
199702	-1	1.23
199703	-1	1.30
199704	-1	1.38
199705	-1	1.21
199706	-1	0.93
199707	-1	0.70
199708	-1	0.76
199709	-1	0.67
199710	-1	0.53
199711	-1	0.36
199712	-1	0.31
199801	-1	-0.02
199802	-1	0.06

199803	-1	0.16
199804	-1	0.19
199805	-1	0.16
199806	-1	-0.06
199807	-1	-0.08
199808	-1	-0.21
199809	-1	-0.70
199810	-1	-0.54
199811	-1	0.00
199812	-1	-0.03
199901	-1	0.09
199902	-1	0.24
199903	-1	0.42
199904	-1	0.44
199905	-1	0.80
199906	-1	1.14
199907	-1	0.80
199908	-1	0.87
199909	-1	0.70
199910	-1	0.91
199911	-1	0.61
199912	-1	0.98
200001	-1	1.21
200002	-1	0.79
200003	-1	0.41
200004	-1	-0.03
200005	-1	0.17
200006	-1	-0.43
200007	-1	-0.49
200008	-1	-0.67
200009	-1	-0.72
200010	-1	-0.77
200011	-1	-0.79
200012	-1	-1.16
200101	-1	-0.82
200102	-1	-0.39
200103	1	-0.42
200104	1	0.34
200105	1	1.18
200106	1	1.31
200107	1	1.47

200108	1	1.32
200109	1	1.66
200110	1	2.08
200111	1	2.56
200112	-1	3.27
200201	-1	3.31
200202	-1	3.17
200203	-1	3.55
200204	-1	3.46
200205	-1	3.41
200206	-1	3.18
200207	-1	2.92
200208	-1	2.52
200209	-1	2.12
200210	-1	2.19
200211	-1	2.71
200212	-1	2.79
200301	-1	2.81
200302	-1	2.64
200303	-1	2.56
200304	-1	2.70
200305	-1	2.31
200306	-1	2.11
200307	-1	2.97
200308	-1	3.42
200309	-1	3.26
200310	-1	3.28
200311	-1	3.30
200312	-1	3.29
200401	-1	3.15
200402	-1	3.07
200403	-1	2.83
200404	-1	3.35
200405	-1	3.72
200406	-1	3.70
200407	-1	3.24
200408	-1	2.85
200409	-1	2.52
200410	-1	2.34
200411	-1	2.26
200412	-1	2.07

200501	-1	1.94
200502	-1	1.67
200503	-1	1.87
200504	-1	1.55
200505	-1	1.14
200506	-1	0.96
200507	-1	0.92
200508	-1	0.76
200509	-1	0.58
200510	-1	0.68
200511	-1	0.54
200512	-1	0.31
200601	-1	0.14
200601	-1	0.14

Source: FDIC calculations based on Federal Reserve data (via Haver Analytics).

Chart 2

| Date (YYYYMM) | Net interest margins have become less sensitive to changes in the yield curve spread over the past 10 years. | |
	Median net interest margin for all insured institutions (percent)	Yield curve spread: 10-year Treasury yield minus effective federal funds rate (basis points)
198403	4.16	225.667
198406	4.4	264.333
198409	4.39	147.667
198412	4.25	247.667
198503	4.31	310.667
198506	4.49	289
198509	4.55	243.667
198512	4.44	165.667
198603	4.3	73
198606	4.26	68.333
198609	4.17	110
198612	4.11	99.667
198703	4.06	97.333
198706	4.14	169.333
198709	4.17	203.333
198712	4.16	220.667
198803	4.04	175.333
198806	4.1	175.333
198809	4.23	111.667
198812	4.22	48.667
198903	4.23	-23.333
198906	4.26	-95.333
198909	4.18	-97.667
198912	4.16	-70.667
199003	4.09	17.333
199006	4.18	43.333
199009	4.2	54.333
199012	4.2	65.333
199103	4.09	159
199106	4.2	226.667
199109	4.33	229.667
199112	4.31	253
199203	4.39	328

199206	4.52	360.667
199209	4.62	336
199212	4.63	370.667
199303	4.52	324
199306	4.58	299
199309	4.56	255.667
199312	4.48	261.667
199403	4.35	285.333
199406	4.5	314.333
199409	4.61	284.667
199412	4.61	267
199503	4.52	167.333
199506	4.48	60
199509	4.46	52.667
199512	4.46	17.333
199603	4.35	54.667
199606	4.43	147.667
199609	4.49	147.333
199612	4.48	106.333
199703	4.38	128.667
199706	4.48	117.333
199709	4.49	71
199712	4.45	40
199803	4.325	6.667
199806	4.35	9.667
199809	4.35	-33
199812	4.25	-19
199903	4.13	25
199906	4.23	79.333
199909	4.32	79
199912	4.33	83.333
200003	4.28	80.333
200006	4.34	-9.667
200009	4.28	-62.667
200012	4.2	-90.667
200103	4.06	-54.333
200106	4.05	94.333
200109	4.09	148.333
200112	4.12	263.667
200203	4.12	334.333
200206	4.25	335

200209	4.26	252
200212	4.16	256.333
200303	4	267
200306	3.99	237.333
200309	4	321.667
200312	4.02	329
200403	3.96	301.667
200406	3.99	359
200409	4.07	287
200412	4.09	222.333
200503	4.03	182.667
200506	4.1	121.667
200509	4.14	75.333

Source: FDIC

Chart 3

Date (YYYYMM)	Net interest margin for banks with assets under $100 million (percent)	Net interest margin for banks with assets between $100 million and $1 billion (percent)	Net interest margin for banks with assets between $1 billion and $10 billion (percent)	Net interest margin for banks with assets over $10 billion (percent)
Net interest margins for varying asset size groups are diverging after a decade of convergence.				
198403	4.3100	3.53	2.97	2.7
198406	4.5500	3.8	3.125	2.78
198409	4.5400	3.8	3.165	2.7
198412	4.4100	3.65	3.16	3.11
198503	4.4800	3.645	2.84	2.805
198506	4.6500	3.84	3.17	2.9
198509	4.7400	3.88	3.07	2.85
198512	4.6000	3.88	3.205	2.86
198603	4.4600	3.77	3.28	2.785
198606	4.4100	3.77	3.25	2.815
198609	4.3300	3.68	3.305	2.68
198612	4.2500	3.68	3.305	2.88
198703	4.1900	3.64	3.27	2.78
198706	4.2600	3.77	3.43	2.66
198709	4.3000	3.77	3.35	2.55
198712	4.2800	3.75	3.38	2.58
198803	4.1600	3.59	3.27	2.45
198806	4.2300	3.71	3.32	2.46
198809	4.3500	3.88	3.405	2.435
198812	4.3300	3.92	3.4	3.085
198903	4.3400	3.94	3.435	2.585
198906	4.3700	3.95	3.4	2.37
198909	4.3100	3.85	3.28	2.715
198912	4.2800	3.86	3.33	2.98
199003	4.2000	3.82	3.39	3.03
199006	4.2800	3.91	3.42	3.01
199009	4.3100	3.96	3.44	3.055
199012	4.3000	3.94	3.45	3.28

199103	4.1700	3.9	3.515	3.22
199106	4.2900	4	3.62	3.46
199109	4.4200	4.11	3.78	3.44
199112	4.3900	4.13	3.82	3.71
199203	4.4700	4.25	3.91	3.76
199206	4.5900	4.38	4.09	3.79
199209	4.7100	4.46	4.22	3.99
199212	4.6900	4.52	4.31	4.27
199303	4.5700	4.44	4.27	4.175
199306	4.6200	4.48	4.32	4.13
199309	4.6300	4.42	4.27	3.995
199312	4.5400	4.38	4.28	3.935
199403	4.3900	4.27	4.19	3.77
199406	4.5600	4.42	4.28	3.965
199409	4.6700	4.5	4.31	4.01
199412	4.6800	4.51	4.26	4.045
199503	4.6000	4.395	4.19	3.86
199506	4.5600	4.37	4.15	3.805
199509	4.5400	4.37	4.16	3.835
199512	4.5100	4.38	4.23	3.81
199603	4.3900	4.29	4.16	3.93
199606	4.4800	4.37	4.19	3.95
199609	4.5600	4.41	4.22	3.99
199612	4.5400	4.42	4.21	4.075
199703	4.4200	4.32	4.11	4.12
199706	4.5400	4.415	4.14	4.07
199709	4.5600	4.4	4.14	4.06
199712	4.5100	4.37	4.14	4.1
199803	4.3900	4.27	4.05	4.01
199806	4.4200	4.29	4.09	3.98
199809	4.4200	4.27	4.12	3.95
199812	4.3000	4.205	4.01	3.93
199903	4.1600	4.11	3.97	3.93
199906	4.2600	4.21	4.06	3.915
199909	4.3800	4.26	4.035	3.935
199912	4.3900	4.27	4.01	3.915
200003	4.3600	4.21	3.94	3.83
200006	4.4300	4.25	3.95	3.87
200009	4.3800	4.17	3.885	3.83
200012	4.3000	4.09	3.82	3.71
200103	4.1300	4	3.82	3.785

200106	4.1100	4.02	3.905	3.9
200109	4.1100	4.07	3.93	3.9
200112	4.1200	4.13	4.03	3.94
200203	4.1200	4.14	3.97	4.02
200206	4.2800	4.24	4.055	4.02
200209	4.3200	4.23	3.985	3.97
200212	4.2100	4.14	3.91	3.82
200303	4.0400	3.99	3.785	3.71
200306	4.0600	3.96	3.72	3.6
200309	4.0700	3.965	3.66	3.62
200312	4.1000	3.99	3.74	3.615
200403	4.0300	3.935	3.72	3.52
200406	4.0800	3.96	3.73	3.55
200409	4.1600	4.04	3.785	3.52
200412	4.1700	4.06	3.825	3.55
200503	4.0900	4.01	3.76	3.53
200506	4.1700	4.09	3.815	3.445
200509	4.2300	4.12	3.82	3.415

Source: FDIC

Chart 4

Date	Yield on assets for banks with assets less than $100 million (percent)	Yield on assets for banks with assets greater than $100 million (percent)	Yield on assets for banks with assets greater than $10 billion (percent)	Yield on liabilities for banks with assets less than $100 million (percent)	Yield on liabilities for banks with assets greater than $100 million (percent)	Yield on liabilities for banks with assets greater than $10 billion (percent)
The Cost of Funding Assets has Risen Faster for Large Banks In Recent Quarters, Pressuring Their Net Interest Margins.						
1984	11.6	11.2	11.0	7.4	7.7	8.7
	12.1	11.6	11.8	7.5	7.9	9.1
	12.3	12.0	12.4	7.9	8.3	10.0
	12.3	11.8	12.1	7.9	8.2	9.1
1985	11.7	11.2	11.2	7.2	7.5	8.0
	11.7	11.2	11.1	7.1	7.3	7.8
	11.5	11.0	10.7	6.8	7.0	7.3
	11.2	10.8	10.4	6.6	6.8	7.1
1986	10.9	10.5	10.4	6.4	6.7	7.1
	10.6	10.3	9.9	6.2	6.4	6.5
	10.3	10.0	9.6	6.0	6.2	6.2
	9.9	9.6	9.2	5.6	5.8	5.9
1987	9.5	9.3	9.0	5.3	5.5	6.0
	9.6	9.4	9.0	5.3	5.6	6.2
	9.6	9.5	9.3	5.3	5.7	6.5
	9.7	9.6	9.5	5.4	5.8	6.8
1988	9.5	9.4	9.3	5.4	5.8	6.6
	9.6	9.5	9.4	5.4	5.8	6.7
	9.9	9.8	9.8	5.6	6.0	7.1
	10.0	10.0	10.2	5.7	6.2	7.5
1989	10.1	10.2	10.3	5.8	6.4	7.8
	10.5	10.5	10.8	6.1	6.7	8.5
	10.5	10.5	10.8	6.2	6.8	8.3
	10.5	10.4	10.9	6.2	6.7	8.0
1990	10.2	10.2	10.5	6.0	6.4	7.4
	10.3	10.2	10.3	6.1	6.4	7.3
	10.4	10.3	10.3	6.1	6.4	7.2
	10.3	10.2	10.4	6.0	6.3	7.0
1991	9.9	9.9	9.8	5.7	5.9	6.2
	9.8	9.7	9.5	5.5	5.7	5.7

	9.8	9.6	9.3	5.4	5.5	5.5
	9.5	9.3	8.9	5.1	5.1	4.9
1992	8.9	8.8	8.2	4.4	4.5	4.1
	8.7	8.5	7.9	4.1	4.1	3.8
	8.5	8.3	7.6	3.8	3.8	3.4
	8.2	8.0	7.4	3.5	3.5	3.1
1993	7.8	7.7	7.1	3.2	3.2	2.9
	7.8	7.6	7.0	3.1	3.2	2.8
	7.7	7.5	6.7	3.1	3.1	2.8
	7.5	7.3	6.6	3.0	3.0	2.6
1994	7.3	7.1	6.5	2.8	2.8	2.6
	7.5	7.3	6.8	2.9	2.9	2.9
	7.7	7.5	7.1	3.0	3.1	3.2
	7.9	7.8	7.5	3.2	3.3	3.7
1995	8.0	7.9	7.9	3.4	3.6	4.3
	8.3	8.1	8.1	3.7	3.9	4.4
	8.4	8.2	8.0	3.9	4.0	4.4
	8.4	8.2	8.1	3.9	4.0	4.4
1996	8.2	8.1	7.9	3.8	3.8	4.1
	8.2	8.1	7.9	3.8	3.8	4.1
	8.3	8.2	7.9	3.8	3.8	4.0
	8.3	8.2	8.0	3.8	3.8	4.0
1997	8.1	8.0	7.9	3.7	3.8	3.9
	8.3	8.2	8.0	3.8	3.9	4.0
	8.4	8.3	8.0	3.9	3.9	4.1
	8.4	8.2	8.1	3.9	3.9	4.1
1998	8.1	8.0	7.9	3.8	3.9	4.1
	8.2	8.1	7.9	3.8	3.9	4.1
	8.2	8.1	7.8	3.9	3.9	4.1
	8.0	7.9	7.6	3.8	3.8	3.9
1999	7.7	7.6	7.4	3.6	3.6	3.7
	7.8	7.7	7.4	3.6	3.6	3.7
	7.9	7.8	7.6	3.6	3.6	3.9
	8.0	7.9	7.8	3.6	3.7	4.1
2000	8.0	7.9	8.0	3.7	3.8	4.2
	8.2	8.1	8.2	3.8	4.0	4.6
	8.4	8.3	8.4	4.1	4.3	4.8
	8.4	8.4	8.4	4.2	4.4	4.8
2001	8.2	8.1	8.1	4.1	4.2	4.4
	8.0	7.9	7.7	3.9	3.9	3.8
	7.7	7.6	7.3	3.7	3.6	3.4

	7.3	7.2	6.7	3.2	3.1	2.6
	6.8	6.7	6.2	2.7	2.7	2.2
2002	6.8	6.7	6.2	2.5	2.5	2.2
	6.7	6.6	6.1	2.4	2.4	2.2
	6.5	6.3	5.8	2.2	2.2	1.9
	6.1	6.0	5.4	2.0	2.0	1.7
2003	5.9	5.8	5.3	1.9	1.9	1.6
	5.8	5.7	5.1	1.7	1.7	1.5
	5.7	5.6	5.1	1.6	1.6	1.4
	5.6	5.5	5.0	1.5	1.6	1.4
2004	5.6	5.4	5.0	1.4	1.5	1.4
	5.7	5.6	5.0	1.5	1.6	1.5
	5.7	5.7	5.2	1.5	1.7	1.7
	5.7	5.7	5.3	1.6	1.8	1.9
2005	5.9	6.0	5.5	1.7	2.0	2.2
	6.1	6.2	5.7	1.9	2.2	2.4

Source: FDIC

Chart 5

Use of non-interest-bearing liabilities has helped to support net interest margins		
Year	Net interest margin on Interest-Bearing Liabilities (percent)	Net interest margin on Non-Interest-Bearing Liabilities (percent)
1997	3.45	1.17
1998	3.34	1.12
1999	3.37	1.03
2000	3.24	1.06
2001	3.47	0.89
2002	3.34	0.86
2003	3.22	0.73
2004	3.09	0.79
2005	2.96	0.90