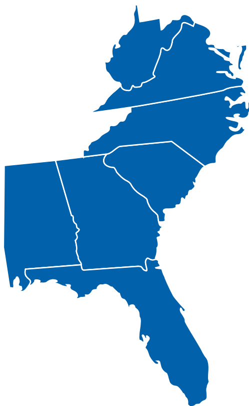
◆ Regional Outlook ◆

FEDERAL DEPOSIT INSURANCE CORPORATION THIRD QUARTER 1998

FDIC
ATLANTA
REGION



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In Focus This Quarter

◆ ***The Asian Economic Crisis: Implications for the U.S. Economy***—**The economic crisis in Asia is now more than one year old, yet its consequences are still reverberating throughout the global economy. There are growing indications that some sectors of the U.S. economy are beginning to experience slower growth directly attributable to problems in Asia. Consequently, lenders should be cognizant of their customers' exposure to global markets. Lending and strategic decisions predicated on an assumption of continued robust economic growth should be carefully scrutinized.** ***See page 3.***

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◆ ***CLOs Lure Another Major Bank Asset off the Balance Sheet***—**Securitization of corporate loans and bonds is in full swing, with 1997 issuance exceeding that of securities backed by credit card loans. Collateralized loan obligations (CLOs) and collateralized bond obligations, securities with deal- and issuer-specific risks, are potential bank investments that may grow in popularity if a current proposal to lower the risk weights for AAA-rated securities is enacted. Banks with an ample supply of low-margin commercial loans are expected to issue more CLOs to an increasingly demanding secondary commercial loan market. An institution's CLO strategy may have implications that should be considered when evaluating its capital adequacy trends.** ***See page 8.***

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◆ ***The Payment System: Emerging Issues***—**The payment system is the heart of the U.S. economic infrastructure, moving value at the rate of 90 times the U.S. gross domestic product each year. The banking industry, although historically central to this movement, now faces a tangle of new technologies, new exposures, and new competitors that challenges its hold on the payments business. Its regulators face a different dilemma—that of how much intervention, if any, these changes warrant and how best to prevent the systemic exposures that increasingly large and rapid flows of money can create. Together, the issues they face frame a payment system that is fast becoming a technical and political contest.** ***See page 14.***

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The ***Regional Outlook*** is published quarterly by the Division of Insurance of the Federal Deposit Insurance Corporation for the following eight geographic regions:

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The Asian Economic Crisis: Implications for the U.S. Economy

- **The impact of the Asian economic crisis on the U.S. economy has been increasingly evident, with some sectors experiencing slower growth as conditions in Asia continue to deteriorate.**

- **U.S. exports to Asia have decreased in recent months owing to falling demand for commodities, manufactured goods, and agricultural products.**

- **Slower U.S. growth resulting from reduced export sales and lower corporate profits could affect institutions throughout the nation.**

The economic crisis in Asia is now more than one year old, yet the consequences of the unprecedented slide in currency values are still reverberating throughout the global economy. There are growing indications that some sectors of the U.S. economy are beginning to experience slower growth directly attributable to problems in the Asian economies. It is difficult to assess how significant and long-lasting the effects of the crisis will be, but it is clear that earlier views that the crisis would pass quickly and be followed by renewed growth were too optimistic. The consensus among economists and analysts now is that the recovery will be measured in years, not months.

Causes of the Crisis

Most economists agree that the Asian economies[1] are in the midst of a steep and severe recession. For example, Indonesia's gross domestic product fell by more than 12 percent in the first half of 1998, a decline second only to the drop in economic activity in the Soviet Union following its collapse in the early 1990s. While Indonesia may be the most startling example of economic deterioration in Asia, the other Asian nations also have experienced weakened stock markets, falling real estate values, rising corporate bankruptcies, and growing problem loan portfolios among financial institutions. It is generally agreed (with the benefit of hindsight) that the conditions that precipitated these events included the following[2]:

- **Reduced Export Competitiveness:** Most of the Asian economies had effectively pegged their currencies to the U.S. dollar. Between mid-1995 and early 1997, the U.S. dollar increased in value by more than 42 percent against the Japanese yen and by 23 percent against the German mark. This increase significantly worsened the international competitiveness of many Asian firms relative to Japanese or European competitors in export markets, since the value of their currencies and the price of their exports rose along with the U.S. dollar. By late 1995, export growth among the Southeast Asia economies was slowing, and by mid-1996 it was near zero.

- **Excess Production Capacity:** Although Asian savings rates were among the highest in the world, domestic saving was not sufficient to fund the desired levels of investment in factories, roads, housing, and telecommunications. The resulting inflow of foreign capital funded rapid capacity expansion in key sectors such as autos, chemicals, and microchips. For example, capital inflows to Thailand totaled $1.9 billion in 1980 but rose to $15.2 billion by 1996. The increase in production capacity put downward pressure on prices and reduced earnings growth in key export sectors.[3]

- **Rapid Asset Price Appreciation:** Real estate, land, and share prices on the region's stock markets soared during the 1980s and early 1990s. In Indonesia, for example, the Jakarta Composite stock index

[1] Unless otherwise noted, "Asia" refers to the economies of China, Hong Kong, Indonesia, Japan, Malaysia, the Philippines, Singapore, South Korea, Taiwan, and Thailand.

[2] A comprehensive survey of recent events and links to other information sources is available at the *Asia Crisis Home Page,* www.stern.nyu.edu/~nroubini/asia/AsiaHomepage.html.

[3] A case in point is the growth of the auto industry. During the past several years, Korea invested heavily in new auto plants to satisfy both domestic and export demand. By 1999, Korean capacity is expected to reach 4.66 million light vehicles annually—2 million more than domestic demand. In Japan, excess capacity of 2.8 million vehicles is expected through 2002. Worldwide excess capacity in light vehicles is expected to reach more than 20 million units by 2002—more than the total 1997 production of General Motors, Ford, and Chrysler combined (*Wall Street Journal,* March 2, 1998). The result has been downward pressure on prices of domestically produced autos—down by 1.9 percent on the basis of the first-quarter 1998 producer price index—and imports, which have experienced price increases of less than 1 percent since mid-1996.

increased by nearly 53 percent in the two-year period ending in the first quarter of 1997.

- **Deteriorating Credit Quality:** Slower export growth and eroding competitiveness hampered Asian firms' ability to repay debt incurred to finance the growing levels of investment. Some Korean conglomerates were burdened with a debt load equal to 300 to 400 percent of equity. As much as two-thirds of this debt was short-term, with a maturity of less than 12 months. Additionally, the debt denominated in foreign currencies, such as the U.S. dollar, ballooned as local currency values dropped. With some firms struggling to repay mounting debt, banks began to experience a further deterioration in credit quality.

Some of the uncertainty about the strength and speed of the recovery in Asia is attributable to concerns about the faltering Japanese economy. As the second largest economy in the world and the engine of growth in the region, Japan must have a healthy economy if sustainable growth is to occur in the rest of Asia. With Japan currently in a deep recession and the outlook for its economy clouded by the halting pace of financial reform efforts, there is considerable uncertainty about how quickly economic and financial weaknesses throughout the rest of Asia can be repaired.

Impact on the U.S Economy

The Asian financial crisis could affect the U.S. economy through several avenues. Some firms and industries may be directly exposed, especially if they have operations in Asia. Banks may be exposed through changes in the financial condition of Asian borrowers. Other firms may be less directly exposed to economic conditions but will be affected by changes in relative prices and trade flows between the United States and Asia. The drop in Asian purchases of U.S. exports has hit agricultural products, commodities, and manufactured goods. As some recent corporate earnings announcements have shown, the crisis has been associated with profit growth that has failed to meet the market's expectations.

Banking

The U.S. banking industry has a smaller direct lending exposure to the Asian economies than either European or Japanese banks. As shown in Table 1, U.S. banks had outstanding loans of $22 billion at the end of 1997, which accounted for 8.5 percent of all international lending to Indonesia, Malaysia, the Philippines, South Korea, and Thailand. To the extent that exposures exist, however, large banks and not smaller regional or community banks account for most of the lending. While the overall direct lending exposure of the U.S. banking industry may be relatively small, the indirect exposure resulting from changing economic conditions in the United States as a result of the crisis could potentially affect small and large institutions in all areas of the country.

Agriculture

Key to understanding the impact on agriculture is the fact that in world markets, agricultural commodities are priced and traded in terms of U.S. dollars. The steep decline in value of Asia's currencies means that the price of imported agricultural commodities has rapidly risen. Over a longer period, higher import prices tend to stimulate production in the importing countries that can displace demand for imports. Thailand, for example, is positioned to increase production of poultry and sugar. Other world producers, such as Australia, whose currency also has fallen in value, are now more competitive suppliers of some agricultural products to the Asian market than the United States.

On the basis of analysis performed by the U.S. Department of Agriculture's (USDA's) Economic Research Services,[4] U.S. exports of red meat and poultry are expected to drop by 5 to 6 percent in fiscal 1998 and 1999 as a result of the Asian crisis. Exports of grains are projected to fall by at least 2 percent in fiscal 1999 as other world producers increase production in response to changing relative prices among major grain exporters. Overall, USDA expects agricultural exports to fall by 3 to 6 percent in fiscal 1998 and 1999, compared with the level of exports had the Asian crisis not occurred.

Commodities

Asian countries have become increasingly important commodity consumers in recent years. As a result, com-

[4] "World Agriculture and Trade," *Agricultural Outlook,* pp. 10–11.

Table 1

International Claims by Nationality of Reporting Bank End December 1997									
Total International Claims (million U.S. $)		U.S.		Japan		Europe*		Other	
		Claims	Percent	Claims	Percent	Claims	Percent	Claims	Percent
Indonesia	58,388	4,898	8.4	22,018	37.7	15,044	25.8	16,428	28.1
Malaysia	27,528	1,786	6.5	8,551	31.1	12,997	47.2	4,194	15.2
Philippines	19,732	3,224	16.3	2,624	13.3	9,317	47.2	4,567	23.1
South Korea	94,180	9,533	10.1	20,278	21.5	29,614	31.4	34,755	36.9
Thailand	58,835	2,533	4.3	33,180	56.4	14,782	25.1	8,340	14.2
Total	**258,663**	**21,974**	**8.5**	**86,651**	**33.5**	**81,754**	**31.6**	**68,284**	**26.4**

* Includes France, Germany, Netherlands, and United Kingdom
Source: Bank for International Settlements

modity markets have been affected by falling demand for basic materials and fuels in Asia. The abrupt halt of construction activity in the region has reduced Asian imports of metals and metal products. Consequently, world copper and nickel prices fell more than 36 percent during the year ending June 1998. Asian developing countries also had stepped up their demand for petroleum products, accounting for two-thirds of the increase in world petroleum consumption between 1992 and 1996. As economic activity in Asia slowed, oil demand softened and world inventories expanded, causing prices to tumble from $20 per barrel in July 1997 to less than $14 per barrel in June 1998. To the benefit of U.S. consumers, the drop in oil prices has reduced the prices of gasoline and other refined petroleum products, but it has cut into profits of oil producers. While there are few indications of widespread financial problems in the industry, smaller and less geographically diversified producers may be exposed to adverse price and inventory changes.

Manufacturing

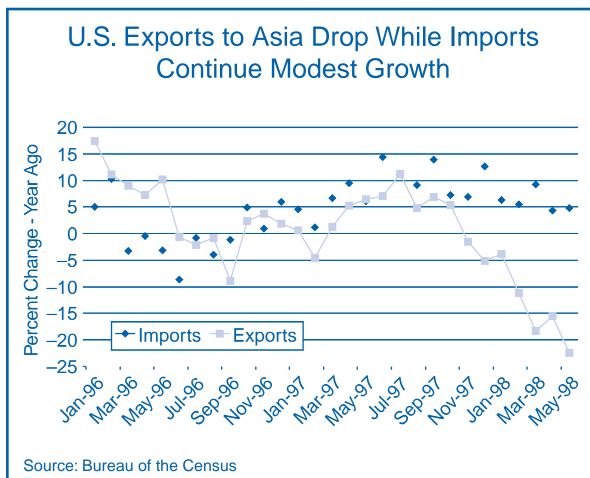
Asia accounts for a large and growing share of U.S. trade in manufactured goods. Between 1990 and 1996, U.S. exports of manufactured goods to Asia increased from $75 billion to more than $140 billion, accounting for nearly one-third of the increase in total U.S. exports of manufactured goods. For the U.S. economy as a whole, machinery, food products, and chemicals are the most exposed to a drop in Asia's demand for U.S. exports. Together, these industries account for nearly 70 percent of U.S. exports to Asia.

Between 1990 and 1996, U.S. imports of manufactured goods from Asia rose from $176 billion to more than $285 billion. Increased imports from China accounted for about one-third of the gain. U.S. imports from Asia are dominated by machinery and manufactured goods, including electronics and semiconductors, which together account for 93 percent of imports.

Asia's demand for U.S. exports will continue to weaken following the dramatic increase in import prices resulting from the drop in currency values. The latest trade data show that the dollar volume of U.S. goods exports to Asia (including both manufactured goods and other commodities) fell by 22.5 percent in May 1998 compared with one year earlier (Chart 1).

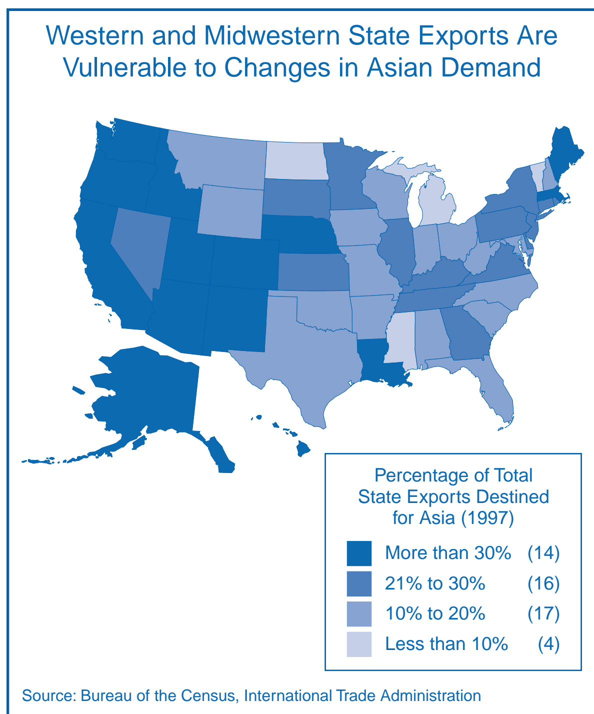
Changes in the volume of exports at the national level do not adequately describe the variation in the export exposure of different regions of the country. Chart 2 (next page) shows the percentage of state-level exports

Chart 1



Source: Bureau of the Census

CHART 2



that are destined for Asia.[5] Clearly, Western states are most exposed to changes in the demand for U.S. exports, especially electronics, transportation equipment, and industrial machinery. A significant share of exports from the Midwest also is destined for Asia, including chemicals and machinery such as construction equipment.[6]

In the initial stages of the crisis, the consensus view suggested that the United States would be overwhelmed by cheap imports from Asia, as Asian countries exported their way to economic recovery. Although there has been an increase in U.S. imports from Asia, the growth has been well below expectations. In May 1998, goods imports were up by just 4.8 percent over the previous year. The reason that U.S. imports of Asian goods have not been greater is due in part to the severity of the economic downturn and the weakness of Asia's financial institutions. Many Asian manufacturers are dependent on components imported from neighboring countries or purchased on world markets. With the drop in currency values, all imported goods, including finished goods and intermediate goods that are used in the manufacturing sector, have become more costly. At the same time, Asia's weak financial systems have come under increasing pressure as the economic slump deepens. Many banks cannot, or will not, lend. Consequently, Asian firms cannot secure the capital to acquire imported inputs or to finance the sale of exports abroad. As the "credit crunch" abates, imports from Asia should rebound, placing greater pressure on U.S. manufacturers.

Corporate Profits

Profits of U.S. producers also will be affected by falling prices for import-competing goods and plummeting Asian demand for some U.S. exports. Although U.S. producers of import-competing goods will be under increasing competitive pressure, firms that use imported components from Asia will benefit from an effective reduction in costs. U.S. exporters may see disappointing Asian market profits offset by continuing strong sales in the U.S. and European markets. For these reasons, the impact of the crisis on corporate profits must be viewed in the context of gains and losses caused by changing relative prices of a firm's products and inputs.

A number of recent earnings announcements have failed to meet analysts' expectations. According to IBES International,[7] the crisis has contributed to a reduction of profit growth, although most of the slowdown is attributable to both falling prices and weak demand for semiconductors and oil. Operating profits of all companies tracked in the Standard & Poor's 500 stock index increased by 4.4 percent in the first quarter of 1998, the smallest increase since 1991. Excluding the energy and technology sectors, profits of the S&P 500 firms increased by 8.6 percent in the first quarter. On the basis of these results, the impact of the crisis on corporate profits appears to be highly concentrated among firms in a few industries.

Summary and Implications

The consequences of the Asian economic crisis continue to unfold. The slowdown in growth in most Asian economies has already reduced U.S. export shipments and put downward pressure on prices of commodities and agricultural products. How long this trend will con-

[5] The state-level export data are from the Export Locator series published by the Bureau of the Census. These data tabulate the value of exports as determined by the location of the exporter, which may differ from the location of the producer. Although these data are an imperfect measure of state-level export performance, they are still of value in assessing regional exposures and remain the most complete data available.
[6] A state-by-state analysis has been prepared by the U.S. Treasury and the U.S. Department of Commerce.

[7] As quoted in the *Wall Street Journal,* June 22, 1998, p. C1.

tinue is uncertain, but most analysts have dismissed the chances of a speedy recovery in Asia. Although most economists are not anticipating a recession in the United States in the foreseeable future, the indirect impact of the Asian crisis will be felt to some extent across most regions of the country.

Lenders should be cognizant of their customers' exposure to a continued drop in demand for exports or to further deterioration in the pricing environment. More generally, slower U.S. growth could affect even those borrowers that have little or no direct exposure to export markets. What is clear for insured institutions is that at this stage of the economic expansion and with a number of uncertainties about the global economic outlook, lending and strategic decisions predicated on an assumption of continued robust economic growth should be carefully scrutinized.

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Paul C. Bishop, Economist

TABLE 2

ATLANTA REGION: MERCHANDISE EXPORTS TO ASIA—1997

INCLUDES CHINA, HONG KONG, INDONESIA, JAPAN, MALAYSIA, THE PHILIPPINES, SINGAPORE, SOUTH KOREA, TAIWAN, AND THAILAND

INDUSTRY SECTOR	VOLUME ($ MILLIONS)	EXPORT GROWTH 1993-97	PERCENT OF EXPORTS TO ASIA BY INDUSTRY*	EXPORT EXPOSURE TO ASIA**
TOTAL EXPORTS TO ASIA	11,579.4	47%	100%	17%
TOP FIVE EXPORT INDUSTRIES				
CHEMICAL PRODUCTS	1,636.5	81%	14%	22%
ELECTRIC & ELECTRONIC EQUIPMENT	1,598.8	61%	14%	16%
INDUSTRIAL MACHINERY & COMPUTERS	1,482.6	84%	13%	13%
TOBACCO PRODUCTS	1,363.7	9%	12%	35%
AGRICULTURAL & LIVESTOCK PRODUCTS	734.0	7%	6%	34%
TOTAL OF TOP FIVE EXPORT INDUSTRIES	6,815.6	47%	59%	19%

* PERCENT OF REGION'S TOTAL EXPORTS TO ASIA FROM EACH OF THE TOP FIVE EXPORT INDUSTRIES.
** PERCENT OF REGION'S TOTAL WORLD EXPORTS FOR EACH INDUSTRY DESTINED FOR ASIA.
SOURCE: INTERNATIONAL TRADE ADMINISTRATION

CLOs Lure Another Major Bank Asset off the Balance Sheet

- **Securitization of corporate loans and bonds is in full swing, with 1997 issuance exceeding that of securities backed by credit card loans.**
- **Collateralized loan obligation (CLO) and collateralized bond obligation (CBO) issuance has grown dramatically since 1996. Both CLOs and CBOs are potential bank investments that may grow in popularity if a current proposal to lower the risk weights for AAA-rated securities is enacted.**
- **These bonds may offer a higher yield than other AAA-rated securities, but they also may carry both deal- and issuer-specific risks that warrant closer scrutiny.**
- **Banks with an ample supply of low-margin commercial loans are expected to issue more CLOs to an increasingly demanding secondary commercial loan market.**
- **Securitizing investment-grade commercial loans has implications for capital adequacy.**

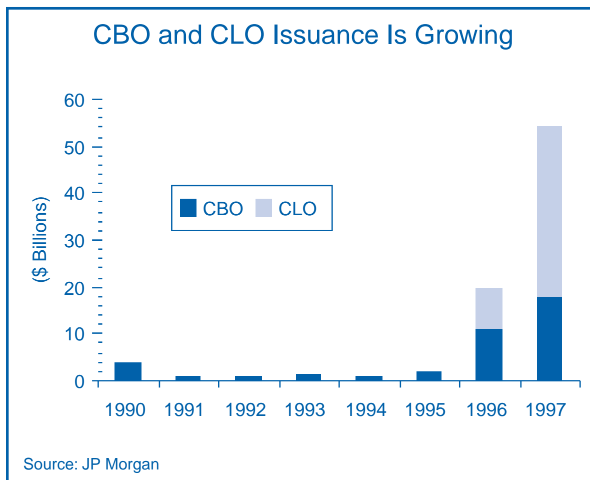
CBOs and CLOs are fixed-income securities that share many similarities with other asset-backed securities. In a CLO or CBO, commercial loans or bonds are pooled and securitized, and participation certificates in the underlying assets are sold to investors. The first CLO and CBO transactions occurred in the late 1980s, but issuance was slow until last year. During 1997, the estimated volume of corporate bonds and commercial loans securitized was $54 billion, more than double the amount securitized in 1996. In fact, the combined issuance of CBOs and CLOs in 1997 was more than the amount of credit card loans securitized during the year. The amount of securitized commercial loans and corporate bonds is expected to continue to grow this year, with an increasing number of deals backed by commercial loans[1] (see Chart 1).

CBOs and CLOs: A Natural Development in the Asset-Backed Securities (ABS) Market

The growth of the CLO market can be explained by several supply and demand factors. On the demand side, strong investor appetite for ABS has produced tremendous growth in the securitization of consumer loan segments such as credit card, auto, and home equity loans. The increasing comfort level of the capital markets with these asset classes and the various structures used to securitize them has facilitated the ABS market's expansion into nonconsumer loans, including corporate debt obligations and bank commercial loans. CBO and CLO structures represent a natural progression from the securitization of a pool of consumer loans to the securitization of a diversified package of corporate bonds or bank loans.

Increased standardization of terms among commercial lenders and more information flow on returns, defaults, and recoveries also have made commercial loans and corporate debt more desirable to institutional investors and an asset class viable for securitization. In addition, CLOs provide a way for investors, including banks, to own a credit-enhanced interest in a diversified pool of loans without directly owning the individual loans. Investors are increasingly considering collateralized bond and loan products as higher yielding alternatives to other ABS.

CHART 1



[1] *CBOs/CLOs: An Expanding Securitization Product,* p. 1, JP Morgan, September 1997.

Foreign and, to a lesser extent, domestic banks have been large purchasers of CLOs and CBOs. Bank investment in CLOs and CBOs primarily has been in the most senior, highest investment-rated tranches. Together, foreign and domestic banks are estimated to have purchased almost one-half of the highest rated classes of CLO and CBO securities issued in 1997. Insurance companies dominated the purchase of the middle or mezzanine class of CLOs and CBOs.[2]

Last year the Federal Financial Institutions Examination Council proposed lowering the risk weighting for AAA-rated ABS from 100 percent to 20 percent. Bank investment in AAA-rated ABS products, including CLOs and CBOs, could increase substantially if the proposal is approved.

Lower Capital Requirements, Higher Return Ratios Attract Banks to CLO Market

On the supply side, issuers of CLOs backed by *investment*-grade loans are motivated by regulatory capital treatment, return on capital, and relationship management. While the CLOs originated in the late 1980s were designed to purge the lender's balance sheet of lower quality commercial loans, the recent bank-issued CLOs have been secured by higher credit quality, lower margin commercial and industrial loans.

A bank that is capital constrained may view the CLO structure as an alternative to issuing additional equity. But more often, banks are motivated to securitize investment-grade commercial loans because by doing so they effectively subject themselves to the market's capital requirements for such loans instead of their regulator's. Tight competition has compressed the margin that banks earn on investment-grade loans to the point that more institutions are considering investment-grade lending to be an inefficient use of capital. As margins have declined, the CLO market has helped relationship managers rationalize lower pricing from the perspective of return on capital. *Since investment-grade and non-investment-grade-performing commercial loans have the same risk weightings for regulatory capital purposes, removing the higher quality, lower yielding assets from the balance sheet tends to leave existing bank capital supporting higher return activities.*[3] *In this way, a bank can improve certain profitability measures, but possibly with a higher risk profile.*

Table 1 (next page) illustrates the effects of a CLO on a bank's capital and return ratios. In order to compare the on- and off-balance sheet transactions, the costs of the CLO and the associated reserve requirement are analogized to the on-balance sheet funding costs and capital requirement if the assets remained on the balance sheet. The assumptions reflect the spreads and reserve requirement of a typical transaction. While the execution of the CLO costs more than the on-balance sheet financing of the loans, the risk-adjusted return on capital (RAROC) is greater with the CLO. The reserve requirement is minimized by the tiering of tranches in the securitization, which provides credit enhancement to the senior classes. The reserve fund, if retained by the issuing bank, represents recourse to the bank from the sold assets and requires capital at 100 percent under "low-level" recourse.

CLOs also may be used to facilitate corporate borrowing relationships. For example, banks that want to maintain relationships with corporate borrowers but are restrained by concentration limitations, either by borrower or by industry, may use CLOs to alleviate concentrations without disrupting borrower relationships.

Large commercial banks with significant holdings of investment-quality commercial loans are likely candidates to issue CLOs. CLO issuance by investment banks could grow as these institutions secure a stronger foothold in the commercial loan market. In 1997, foreign banks were the primary issuers of CLOs, but more U.S. banks are expected to issue CLOs in the future. Japanese and Asian banks may increase their CLO activity as they come under pressure to improve capital ratios and remove distressed loans from their balance sheets.

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[2] *CBOs & CLOs—An Attractive Investment Class,* p. 5, Merrill Lynch & Co., Inc., December 1997.

[3] Pursuant to the Basle Accord, commercial loans generally receive a 100 percent risk weighting regardless of the credit rating of the loan. Proponents of CLOs have argued that banks can improve their risk-adjusted return on capital by removing the higher quality, lower earning commercial loans from the balance sheet.

Table 1

CLOs Can Facilitate a Higher RAROC on Investment-Grade Assets	
Assumptions:	
Amount of Loans in CLO:	$1 billion
Loan Portfolio Yield:	Libor + 50 bpts
Bank Funding Costs:	Libor – 10 bpts
CLO Funding Costs:	Libor + 24 bpts
Bank Retains 1% Reserve Fund:	$10 million
Before CLO	
Yield Less Funding Cost	(L+50) less (L–10) = 60 basis points
Net Spread Earned	.006 × $1 billion = $6 million
Risk-Based Capital Requirement	(8% on $1 billion) = $80 million
RAROC	$6 million/$80 million = 7.5%
After CLO	
Yield Less Funding Cost	(L+50) less (L+24) = 26 basis points
Net Spread Earned	.0026 × $1 billion = $2.6 million
Risk-Based Capital Requirement	(100% of Reserve Fund) = $10 million
RAROC	**$2.6 million/$10 million = 26%**

Source: Bear, Stearns & Co. Inc.

Arbitrage Opportunities Motivate Most Securitization of Subinvestment-Grade Debt

Issuance of CLOs backed by *subinvestment*-grade loans and most CBOs, which commonly are backed by a mixture of bonds with a subinvestment-grade weighted average, typically is motivated by the potential to capitalize on wide spreads between investment and subinvestment-grade debt. The securities backed by subinvestment-grade collateral, often referred to as "arbitrage" CLOs and CBOs, contain higher yielding, riskier securities such as high-yield debt, distressed bonds, highly leveraged loans, and emerging market debt. By assembling a diversified pool of higher yielding investments, asset managers can limit aggregate event risk and create a security with a lower required yield than the underlying collateral. Securitizations can include a combination of loans and bonds and are sometimes referred to as collateralized debt obligations or CDOs.

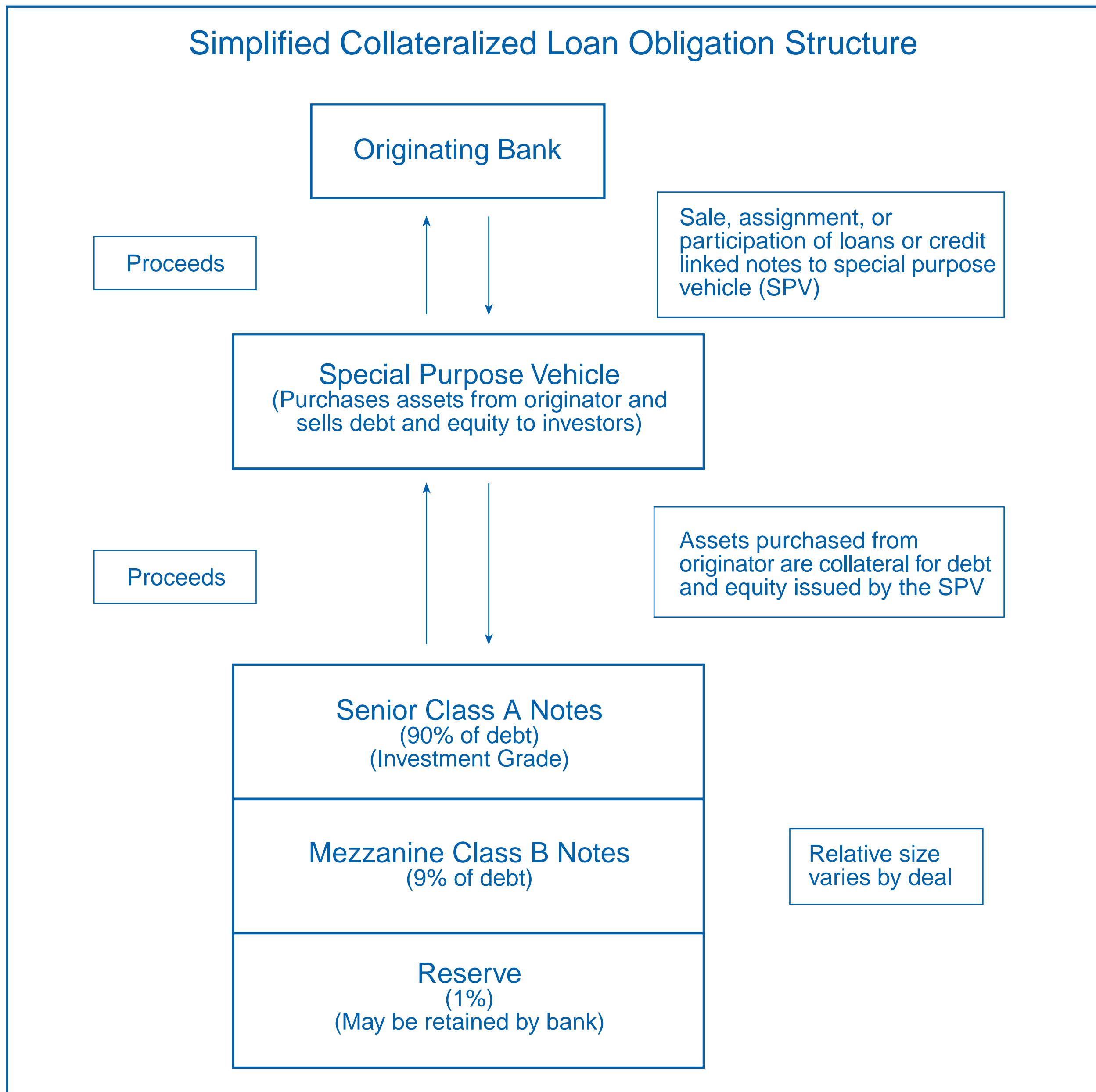
A Closer Look at CLO Structures

While the structures of CLOs and CBOs are similar, banks' involvement as issuers of CLOs, and the forces driving this issuance, elevate the importance of considering CLO structures. Chart 2 presents the basic structure of a CLO. Although specifics may vary, most CLOs use a stand-alone special purpose vehicle (SPV) or trust to purchase a diversified pool of assets from a bank originator or issuer. The purchase of the assets by the SPV is funded through the sale of debt securities to investors. The structure of the SPV may include one or more tranches of debt that are secured by the pool of assets owned by the SPV. The classes of debt are distinguished by their priority of claims on the cash flow from the collateral, with the most subordinated pieces functioning as an equity investment in the pool.

The senior tranche is usually the largest, has the greatest amount of credit protection, and earns the highest credit ratings in the CLO structure. *The rating of the senior class typically is higher than the average rating of the underlying pool of assets due to the tiering of claims among the debt classes and credit enhancement in the CLO.* The junior tranches of debt may be below investment grade or not rated. The reserve or "equity" portion may be retained by the issuing entity as a form of credit enhancement or sold to third-party investors who want a potentially higher return investment.

CLO collateral has included both funded and unfunded loan commitments, loan participations, and different types of credit default swaps. Loan assignments also may be transferred through a CLO but are less commonly included because of bank issuers' desire to main-

CHART 2



tain borrower relationships. The issuer may transfer the actual loan, the cash flow from the loan, or the default risk to investors.

CLOs typically rely on an asset manager or servicer to "manage" or protect the investors' interest in the collateral. The investment style or role of the asset manager may change depending on the purpose of the CLO. Securitizations that use an asset manager to actively manage the performance and market value of the collateral are referred to as "market arbitrage" or "market value" transactions. In these deals, the asset manager can trade assets into and out of the securitized pool in order to maximize the market value of the securitized portfolio. In contrast, most bank-issued CLOs are designed as "cash flow" transactions, in which the asset manager's role is more as a servicer than as a portfolio trader. These structures rely primarily on the ability of the collateral to make stable cash flow payments over a predetermined period and emphasize the credit quality of the collateral and the predictability of interest and principal payments rather than liquidity and market performance, as in market value transactions.

An Introduction to Delinked and Linked CLO Structures

The variables in structuring a CLO are many. The relative size of the senior and subordinated tranches, the form of credit enhancement, the ability of the asset manager or servicer to adjust the asset pool, and the method and degree to which ownership of the underlying loans is conveyed to investors vary among CLOs. Despite the variations, two basic structures have emerged: "delinked" structures and "linked" structures. The primary difference between these two is the extent to which the SPV "owns" the securitized assets. An issuer may consider many factors when determining the type of structure to use, including the ability or desire of the issuer to transfer the loans without notifying the borrower, the credit quality of the loans, the investment rating of the bank issuer, and the desired capital treatment of the securitized loan.

In a delinked structure, the collateral is transferred from the issuer to the SPV. Delinked structures are generally treated as "true sales" for accounting purposes, and the loans in the CLO are removed from the issuer's balance sheet. Delinked CLOs are structured to insulate the investor from the credit quality problems or insolvency of the issuer. Ratings on delinked CLOs are predicated on the projected performance of the collateral and the credit enhancement structure rather than the credit quality of the issuer. Some delinked CLOs are similar to structures used in credit card securitizations that capitalize on the flexibility of a revolving master trust. The master trust structure is advantageous because it allows for the securitization of different types of assets, such as fixed or floating rate or revolving or term loans.

In linked transactions, also known as credit linked notes, the issuer retains ownership of the underlying collateral, and the *cash flow generated by the collateral pool* is conveyed or sold to the SPV. All or part of the credit risk from the underlying assets is transferred to the CLO investor using credit derivatives. As in delinked CLO structures, credit protection is provided through the layering or tranching of the debt sold and other credit enhancements.

Investors in linked CLOs are not completely insulated from the credit risk of the issuer. Because the issuer retains ownership of the underlying loans, a default or bankruptcy by the issuer could affect the transmission of cash flow to the CLO investors. As a result, investors in linked CLOs bear both the credit risk of the securitized loan pool and, to some degree, the risk that the issuer may become insolvent. *Because of this dual exposure, ratings on linked structures are typically capped by the credit rating of the issuer.*

The accounting and regulatory capital treatments of delinked and linked CLOs also differ. Linked structures generally do not qualify for sale treatment under generally accepted accounting principles because the assets remain under the control of the issuer. Issuers of linked CLOs may be granted some regulatory capital relief under the Basle Accord if the cash received from the securitization is assigned as collateral for the underlying loans. The Basle Accord, which governs capital adequacy requirements for Bank for International Settlements member countries, reduces the risk weighting on commercial loans that are secured by cash or certain types of risk-free marketable securities such as Treasury bills.[4] While linked CLOs may provide some form of capital incentive for foreign banks under the Basle Accord, linked structures offer little relief to U.S. banks because U.S. banks must maintain minimum leverage capital ratios in addition to risk-based capital ratios. Since the securitized loans count as assets of the bank issuer in a linked structure, the leverage ratio (roughly, book equity to book assets) is not reduced. Consequently, the linked CLO structure has been more popular among foreign banks.

The Role of Investment Rating Agencies

Although the approach may vary among rating agencies, the criteria used to determine the investment rating for CLOs are similar. Rating agencies evaluate the ability of the securitization vehicle to make interest and principal payments to holders of the debt. This analysis requires an evaluation of the credit quality of the underlying collateral pool, including the projected cash flow

[4] Under the Basle Accord and the U.S. risked-based capital guidelines, assets collateralized by cash or Treasury securities generally receive a preferential risk-weighting that may range from 0 to 20 percent. For background information regarding the risk weightings for collateralized transactions applicable to federally regulated institutions, see Federal Deposit Insurance Corporation Financial Institution Letter number 64–96 dated August 22, 1996.

generated by the pool, the credit enhancement, and any additional protection provided to the investors based on the structure of the securitization. The rating agencies set limits on the amount of industry and borrower concentration in a pool and statistically evaluate the effect of diversification among loans when estimating potential defaults and losses from the securitized assets over the life of the transaction. If the underlying collateral is not already rated—most commercial loans are not—the rating agency will grade the underlying loans and assign a rating to the security on the basis of the credit quality of the loans and the underwriting criteria used by the lender. Estimates of default probabilities, timing of default, and recoveries in the event of default are assigned to the loans and vary by collateral type and credit grade. These estimates are generally based on historical default studies authored by the various rating agencies.

Implications for Insured Institutions

The advent of CLOs poses new opportunities and risks to banks. The ability to transfer all or part of a commercial loan's credit risk to investors may have several consequences. When issuers of CLOs securitize their highest grade assets, they are effectively lowering the weighted average credit quality of their retained assets. An institution's loan loss reserving policies and capital adequacy should take into account the implications of its CLO strategy.

While the issuance of CLOs may be confined to larger banks that have considerable commercial loan portfolios, smaller banks or other types of institutions that desire a greater exposure to this type of lending may consider investing in CLOs. These instruments offer banks the opportunity to invest in a diversified pool of commercial loans. Because of credit enhancement features and diversification advantages, the most senior debt issued by the CLOs can earn a higher investment rating than the average rating on individual loans in the pool. Despite the investment rating, banks that invest in CLOs should be aware that CLO structures are less standardized than other ABS investments, and therefore, performance and underlying risk will be both issuer and deal specific.

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Allen Puwalski, Senior Financial Analyst

The Payment System: Emerging Issues

- **Essential to the transfer of value in the U.S. economy, the once-arcane and bank-centered payment system is undergoing considerable change as new technologies bring new opportunities, new exposures, and new competitors into the payments business.**

- **For most banks, the major issues lie in small-value payments, where they struggle for advantage in adapting new technologies into new products and services while protecting their traditional payments business from technologically adept nonbank competitors.**

- **For regulators and a handful of the largest banks, large-value payments present the most serious challenges, as technology has enabled increasing payment velocity and volume but also has created the potential for systemic failures.**

The payment system is the heart of the U.S. economic infrastructure, moving an estimated $670 trillion annually among consumers, businesses, financial institutions, and governments.[1] Despite this volume—an amount equal to roughly 90 times the U.S. gross domestic product—the payment system remains transparent to most users because of its dependability in moving value safely. Historically, banks have been essential to this movement, reaping, according to the ***Bank Administration Institute,*** an estimated $117 billion each year in revenues both as payment agents and as the holders of the funds from which those payments are made.

Broadly speaking, the payment system encompasses the numerous payment products, players, and the infrastructure that together transmit value throughout the economy. More specifically, it can be defined as a collection of individual systems constructed around specific payment products. Credit cards, for example, represent a payment system. So do debit cards, checks, foreign exchange, and even cash. This product-based definition is a relevant one for many bankers, since it centers on the products and services that generate revenue rather than on the less glamorous "back office" functions that are measured instead by their cost. A second definition segments the payment system by payment size. Using this definition, the payments world is divided into systems that carry *small-value* or *retail* payments and those that carry *large-value* or *interbank* payments. This latter classification is oriented more toward infrastructure than product but is convenient from a regulatory perspective because the seriousness of the risk posed varies considerably by payment size.

However defined, the payment system today is a source of new opportunities and exposures—a result of a host of new technologies that the "information revolution" has spawned. These technologies create different issues for banks and regulators. For banks, the issues involve adapting the technologies into new products and services while protecting their payments business from nontraditional competitors that specialize in its creation and use. For regulators, the issues involve managing the risks—principally systemic risk—that accompany the large increases in payment volume and velocity enabled by technology. Taken together, these issues frame a payment system that can be both a political and a technological battleground, with significant incentives for participants to shape payment products and channels in a way that favors their own objectives.

Small-Value Payments: A Technological Brawl

Nowhere has the battle to shape the payment system been more contentious than in the small-value segment, where emerging information technology can best be leveraged into new fee-based retail products. There are two battles here. The first involves *maintaining the monopoly over the payments infrastructure* that connects each bank with the Federal Reserve and, by extension, with every other depository institution in the United States.[2] While this infrastructure is interbank—that is, it is dedicated to settling accounts between institutions and does not directly extend to their customers—the ability to aggregate and settle individual retail payments through it has enabled the banking industry to maintain its centrality to the nation's monetary flows.

[1] Estimate for 1996 from the National Automated Clearing House Association; www.nacha.org/resources/marketing/direct-payment/us-payments-96.gif.

[2] Depository institutions were granted exclusive access to this infrastructure upon its creation by the Federal Reserve Act of 1913.

The second battle involves exploiting new technologies either to attract new customers or to serve existing ones more profitably. This battle is both highly visible and highly technical and underscores the potential of the passing of information to eclipse the passing of value as the most critical profit opportunity in payments. The best example of this potential is *bill presentment*, the process of posting vendor invoices—such as credit card or utility statements—on the Internet to facilitate electronic payment. The crucial question concerns where the customer transaction data will lie. If they lie on vendors' sites or on the sites of nonbanks that concentrate such data, those entities will effectively "own" the customer by owning the information needed to cross-sell or otherwise add value during the billing process. Owners of customer-specific data also can tailor new services—a process that can develop loyalty as well as related sales. Losing this battle would be doubly costly for banks because, regardless of where the data reside, electronic payments will eliminate most of the float in the payment process, to the benefit of vendors and largely at the expense of banks.

Another battle is building between banks and nonbanks with respect to *digital cash* and *stored value* applications. These applications are directed at the micropayment sector—that is, payments that are normally considered too small for credit cards. Whether they reside on a computer or a smart card, these applications substitute electronic data for actual cash, with the amount stored on each card covered dollar for dollar by balances on account with an issuer. The struggle is for the right to issue this value, and the ***American Bankers Association*** has contended that regulated depository institutions alone should be permitted to do so.[3] The battle here is for more than just fees, for the interest on the balances that back this electronic value could provide issuers with substantial new sources of income.

With some new payment technologies, the distinction between opportunity and risk can blur. As the Internet enables the distance between shopper and shopkeeper to increase, the need to authenticate unseen customers, merchants, and banks increases as well. At the same time, the open nature of the Internet requires that the privacy and integrity of transaction information be protected. The building blocks to accomplish this are neither simple nor easily interwoven—successfully combining cryptographic protocols, specialized security hardware, and existing information systems is a dif-

[3] *The Role of Banks in the Payments System of the Future,* www.aba.com.

Emerging Issues in Small-Value Payments

Maintaining the payment system monopoly. Access to Federal Reserve payment services has historically been limited to depository institutions. Maintaining that monopoly—and thus maintaining its centrality to current and future payment products and services—is an important issue to the banking industry.

Electronic bill presentment is the process of presenting bills and receiving payments electronically. Internet bill presentment may be one of the most hotly contested services, because the owner of the site where invoices are posted could cross-sell to customers as well.

Digital cash and stored value are applications in which electronic data substitute for cash. Such applications can run on either smart cards or personal computers. An important issue is who holds the balances that back electronic value, because, unlike with paper cash, issuers may be able to earn interest on the digital balances held by consumers.

Securing online transactions. Ensuring the integrity, privacy, and authenticity of electronic transactions is widely desired by those engaged in electronic commerce. With larger payments, desirability will become necessity. Current implementations use combinations of encryption algorithms and specialized hardware.

Banks as certificate authorities (CAs). Authenticating Internet payers and payees may require a complex public key infrastructure in which trusted organizations supply decryption keys to authenticate the counterparties to a transaction. Some banks are already acting as CAs. Others are weighing the benefits and largely uncertain exposures of providing such a service.

Electronic Funds Transfer '99 (EFT 99). On January 2, 1999, the U.S. government will be required to make benefit and vendor payments electronically. This mandate raises issues of how to provide service to the "unbanked," how to provide service internationally, and for vendors, how to integrate remittance data with the payment itself.

Development of financial electronic data interchange (EDI) standards. For bank commercial customers to benefit from electronic payments, banks must be able to handle remittance information—information that accompanies payments and identifies sender and transaction detail. Standardizing such data is an important step in enabling banks to receive them and pass them on to their customers.

Point of sale check truncation. Checks are costly to handle and time-consuming to collect. Check truncation reduces cost and eliminates float by converting the check into an electronic transaction at the point of sale. Although banks will have fewer checks to handle under check truncation, they will lose float and the return on investment in check-handling equipment.

ficult matter in itself if the whole is not to be weaker than the individual parts.

The VISA and MasterCard Secure Electronic Transaction (SET) protocols, designed to protect Internet credit card transactions, illustrate the complexity that banks and their customers will need to navigate in *securing online transactions*. Under SET, all banks and merchants will use digital certificates to authenticate themselves to consumers and each other for each Internet transaction.[4] These certificates are electronic messages that contain a decryption key for the sender that is itself authenticated by a trusted third party. The infrastructure for storing, distributing, and vouching for these keys, known as a Public Key Infrastructure (PKI), will contain several tiers of certificate authorities (CAs) and will be difficult and costly to implement. Banks not only will use these certificates, but many are considering becoming—or have already become—CAs themselves. While *banks acting as certificate authorities* may represent a logical progression in banking services, there is little evidence of a homogeneous legal infrastructure or legal precedent sufficient to guide digital signature disputes. These voids leave unanswerable the question of whether the expected gains from providing such services will compensate for the potentially long-tailed liability from doing so.

A major stimulus for electronic payments could come on January 2, 1999, when the U.S. government is required by law to convert its vendor and benefit payments from paper checks to electronic transfers—the so-called *Electronic Funds Transfer '99 (EFT 99)* program. Three separate challenges arise from this mandate. The first is that the "unbanked"—those segments of the population that are socially, economically, or geographically distanced from a financially bank-centric world—must eventually be provided with a cost-effective means to receive, store, and spend their electronic value.[5] The second challenge is that the EFT mandate applies internationally as well as domestically. Given the need for each international payment to settle in two currencies and countries, the ability to provide efficient cross-border EFT will vary considerably from country to country.[6]

[4] Depending upon card brand and SET version, consumer certificates may be required as well.

[5] Because of resistance from bankers and benefit recipients, compliance waivers are envisioned that will make the program largely voluntary until the details of the special electronic transfer accounts (ETA) are worked out.

[6] www.fms.treas.gov/eft.

Perhaps more challenging to many financial institutions is that electronic payments to vendors, unlike those to individuals, will require electronic remittance data to accompany the payment itself. This information goes beyond simple routing instructions and includes the information—such as purchase order or invoice numbers—necessary for the vendor to apply the payment correctly. According to a study by ***Booz-Allen & Hamilton,*** only slightly more than 5 percent of financial institutions were able to receive and forward such remittance information as of early 1997.[7] Developing this capacity will therefore be an industrywide challenge. Once again, there is an opportunity disguised as a cost. The development and implementation of *financial electronic data interchange (financial EDI)* standards will enable financial institutions to retain control of—and add value to—business-to-business transactions when commercial payments migrate to the Internet.

The U.S. government is not alone in seeking an end to costly paper-based payments. Vendors too are pressing for the elimination of the slow check presentment process wherein checks must physically be moved from vendor to vendor bank to issuer bank before funds can be transferred. *Point of sale check truncation* shortens this process by converting the check into an electronic payment at the point of sale, leaving the customer with an executed check and the vendor with a transaction that will settle like a debit card—and in doing so eliminates much of the potential for check fraud. While this process is beginning to displace physical presentment, the outlook for banks is mixed. As the volume of checks that must be physically handled decreases, so too will the income from float and the returns from past investments in check-handling capacity.

Large-Value Payments: Making the World a 'Good and Final' Place

Unlike small-value payments, the issues surrounding large-value payments are not strategic ones for banks, and less technological wizardry pervades them. Instead, the common factor is the systemic risk posed by payment failures. For this reason, regulators—particularly the Federal Reserve and the world's other central banks—take very seriously the payments "plumbing" that is otherwise obscure even to many bankers. In an

[7] *Remittance Data Study,* Booz-Allen & Hamilton; www.fms.treas.gov/eft/remit.html.

electronic and intangible world where a bank's accumulated exposures can routinely exceed its equity, the overriding objective for payment system designers, users, and regulators is "good and final" payment—a term referring to funds that are both irreversible and fully collected.

Recognition is building concerning the payment system's *vulnerability* and just how critical it is to the U.S. economy. An October 1997 report issued by the ***President's Commission on Critical Infrastructure Protection (PCCIP)*** warned that "the nation's core payment systems…seem to present a serious physical vulnerability within the financial system."[8] The source of that vulnerability, in the eyes of the commission, stemmed not so much from a lack of security as from the critical importance of those systems to settling financial transactions throughout the economy and the lack of available alternatives if they failed. As such, it was feared that the payment infrastructure provides an enticing target for cyber-terrorists and information warriors and that such threats will only grow in the future.

Concentration refers to the fact that while banks are central to payments and all enjoy equal access to Federal Reserve payment services, some banks are clearly more central than others. According to March 1998 Call Report data, a mere 25 banks hold nearly two-thirds of the U.S. banking industry's transaction accounts.[9] Should one of these large banks suddenly fail, its inability to fund settlements could result in a loss of payment system liquidity and disruption of domestic and foreign financial systems alike. While this concentration is not new, what *is* new is the considerable increase in concentration that the new megamergers promise.[10] How and whether to inoculate the payment system from the weight of these super-institutions will become an issue for the regulatory community.

The criticality of a nation's payment system is not confined within its own borders. Because of globalization and the increasing velocity of payments, threats to one country's system become threats to those of other countries as well. There are a number of these emerging cross-border concerns. The most immediate and visible is the *Year 2000* or *Y2K problem*. Because banks and the payment networks that join them are heavily computerized, the latent points of vulnerability to software and hardware failures have grown factorially with the number of interconnected internal and external systems. In this context, the concern is that any banks that have failed to correct their Y2K exposures will transmit that failure via the payment system to other institutions throughout the world, delaying or even arresting settlements in the process. This concern is heightened because, in both Asia and Europe, bank resources needed to fix Y2K are being consumed instead by more immediate problems. In Asia, it is surviving the decay in currencies and credits. In Europe, it is *the Euro,* which rates as an issue in itself—demanding the modification

Emerging Issues in Large-Value Payments

Payment system vulnerability. According to the PCCIP, the nation's core payment systems may present a serious physical vulnerability within the financial system.

Payments concentration. Payment services are concentrated in a relatively few large banks, and that concentration is growing as megamergers are creating a smaller number of superbanks.

Y2K. The Year 2000 problem threatens to disrupt payments by transmitting computer problems via the payment system from banks that have not fixed the problem to banks that have.

The Euro. Bank and interbank systems in Europe and abroad must be modified to accept the Euro. In addition, the resources required to implement the Euro must be diverted from resolving Y2K problems.

Foreign exchange settlement risk. Foreign exchange transaction exposures can be many times a bank's capital. The failure of a major creditor to pay could drain essential liquidity from international markets.

Achieving finality in gross payment systems. Making a given country's domestic payments irrevocable and immediate is a major step in avoiding the international spillover of internal financial crises.

Collateralizing net payment systems. According to the BIS, systems that do not permit immediate final settlement must be collateralized to ensure the eventual satisfaction of member positions in the event of a participant's failure. Like finality, collateralizing helps prevent the internationalization of a domestic failure.

[8] www.pccip.gov/report_index.html, p. A39.

[9] Transaction accounts, in essence, are those accounts from which third-party payments can be made. The data used here are based only on transaction accounts held on behalf of other public and private financial institutions here and abroad—accounts from which interbank transfers are made.

[10] As of March 31, 1998, the top three U.S. bank holding companies held approximately 25 percent of all reported interbank transaction deposits. The mergers announced through June 30, 1998, would increase that concentration to over 34 percent.

of bank and interbank payment systems throughout the world in anticipation of that currency's January 1, 1999, launch.

Although less well known to the general public, *foreign exchange settlement risk* remains of considerable concern to the Bank for International Settlements (BIS) and its member central banks. This exposure arises because cross-border payments, unlike domestic payments, have no single central bank to guarantee settlement, leaving U.S. banks exposed to their foreign counterparties and correspondents—sometimes for several days—for more than $244 billion in daily trades.[11] Potential solutions to this problem include netting—offsetting risks so that only the differences are due—and simultaneous settlement. An ongoing effort by several of the world's largest banks to provide simultaneous cross-border settlement, a project known as the Continuous Linked Settlement Bank, will require considerable international cooperation since it will effectively span the central banks in each country whose currency it settles.

Efforts by individual countries to solidify their payments infrastructure are ongoing as well. *Achieving finality* in payments—a term meaning that a completed payment is irrevocable—is the most prevalent, and recognizes that payments must be irreversible to establish the liquidity for those that follow. One way of speeding up finality is with real time gross settlement (RTGS) systems. "Real time" means that there is no delay in settlement. "Gross settlement" means that transactions are settled in the full amount for which the original payment instructions were entered. FedWire, the U.S. Federal Reserve's large-value payment system, is an RTGS system. Many other countries also have them, and still more are developing or planning them. Complementary to RTGS systems are net or provisional settlement systems, which total up the accumulated debits and credits for each participant over the course of some period—usually one day, offset them against each other, and settle at the end of the period. The New York Clearing House's Clearing House Interbank Payment System is one such system. Although their use leads to smaller, or *netted,* settlement amounts for each participant and substantially lower liquidity demands on the payment system as a whole, payments in such systems are not final until the last creditor pays. Thus, there is a daily threat of recalculation and a potentially fatal change in mem-

[11] *Settlement Risk in Foreign Exchange Transactions,* March 1996, and *Central Bank Survey of Foreign Exchange and Derivatives Market Activity,* May 1996; Bank for International Settlements; www.bis.org/publ.

Sources of Additional Payment System Information

Electronic Bill Presentment

Checkfree . . . . .www.checkfree.com/ebill
Microsoft-First Data Corp . . . . .www.msfdc.com

Digital Cash and Stored Value

Cybercash . . . . .www.cybercash.com
Digicash . . . . .www.digicash.com
Mondex . . . . .www.mondex.com
VISACash . . . . .www.visa.com

Securing Online Transactions

Certicom . . . . .www.certicom.com
Entrust . . . . .www.entrust.com
RSA . . . . .www.rsa.com
SETCO . . . . .www.setco.org

Certificate Authorities

Certco . . . . .www.certco.com
Digital Signature Trust . . .www.digsigtrust.com
GTE Cybertrust . . . . .www.cybertrust.gte.com
Verisign . . . . .www.verisign.com

Electronic Funds Transfer '99, Financial EDI, and POS Check Truncation

National Automated Clearing House Association . . . . .www.nacha.org
U.S. Treasury Financial Management Service . .www.fms.treas.gov/eft

Payment System Vulnerability

President's Commission on Critical Infrastructure Protection . . . . .www.pccip.gov

The Euro, Foreign Exchange Settlement Risk, Payments Finality, and Collateralization

Bank for International Settlements (BIS) . . . .www.bis.org/publ
Federal Reserve Board of Governors . . . . .www.ny.frb.org
New York Clearing House Association . . .www.chips.org
U.S. Federal Reserve . . . .www.bog.frb.fed.us

bers' liquidity positions if a major creditor bank fails. For such systems, the BIS is encouraging member *collateralization* levels sufficient to cover at least one, and preferably two, of each system's largest net creditor banks at any one time.[12] While these are not new issues in developed nations, the increasing extent to which financially underdeveloped and underregulated countries are involved in global payments confers new importance on the development of finality and collateralization in payment systems worldwide.

Differing Perceptions, Common Threat

Banks are united neither in their perceptions of these issues nor in their desire for regulation to address them. With respect to small-value payments, large and small banks have disagreed over whether the Federal Reserve should withdraw from providing retail payment services—a debate that ended in favor of the small bank faction earlier this year when the Fed announced that it would remain an active and, according to some large banks at least, a subsidized competitor in clearing and settlement. There also has been disagreement, again along lines of size, over whether the issuance of new products such as stored value cards should be limited to regulated depository institutions. In large-value payments, the differences are due more to relevancy than competition. Few small banks will feel compelled to address foreign exchange exposures or the vulnerabilities of the national and international payments infrastructure.

Whatever their individual perceptions of the issues surrounding the payment system, all banks are susceptible to its interruption. Likewise, they are strategically vulnerable—individually and as an industry—if they fail to preserve their role as a trusted gateway for the settlement of their customers' obligations. This is perhaps the most critical of all payments issues facing banks, for while their daily operations may depend on their continued success in maintaining the payment system's dependability, nothing short of their payments franchise may rest on their ability to market this success to their customers as a feature essential to the entire range of current—and future—payment services.

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[12] *Report of the Committee on Interbank Netting Schemes of the Central Banks of the Group of Ten Countries* (Lamfalussy report), November 1990; BIS; www.bis.org/publ.

Strong Growth Continues in the Atlanta Region, but Excesses May Be Emerging

- **Growth throughout much of the Atlanta Region remained strong through the first quarter of 1998.**
- **Job growth in all states except Alabama and West Virginia has increased.**
- **Tight labor markets may be the most immediate threat to continued growth in some areas.**
- **Paper and allied products manufacturing illustrates how certain industries in the Atlanta Region are at risk from the Asian crisis.**

Regional Roundup

The Atlanta Region's economic expansion continues at a pace above the national average. For the past five quarters, year-over-year job growth in the Region has remained just above 3 percent. Gains are being led by growth in **Florida** and a resurgent **Georgia. South Carolina**'s pace of economic growth has accelerated as well. **North Carolina,** while experiencing growth above the national average, has seen its rate of expansion slow over the past three quarters. In contrast, **Virginia**'s performance has remained solid, with sustained year-over-year job growth of just under 3 percent over the past several quarters. **West Virginia**'s economy continues to expand inconsistently; rates of job growth vary and are typically below the national average. **Alabama** is one state of the Region where economic performance has eroded since early 1997. In the first quarter of 1998, year-over-year job growth in the state fell to 1.3 percent. While generally strong growth and plentiful employment have characterized the Atlanta Region's economy, future growth may be restricted by a number of factors, including tightening job markets, emerging real estate bubbles, and the potential cumulative effects of the Asian crisis.

Continued high levels of corporate relocation and expansion have fueled much of the Atlanta Region's economy in recent quarters, applying downward pressure to jobless rates in many counties. During the first quarter of 1998, seasonally adjusted unemployment rates were below the national average of 4.7 percent in all states except West Virginia (see Chart 1). Some areas, such as **Fairfax City,** Virginia, have seen record low jobless rates of less than 1 percent. The tightest labor markets remain in urban areas and along interstate highways. Even in West Virginia, where labor market conditions remain looser than elsewhere in the Region, the 6.2 percent rate of unemployment in the first quarter 1998 was the lowest in nearly 20 years. However, because of the ongoing urban-rural growth dichotomy (see ***Atlanta Regional Outlook,*** second quarter 1997), many rural areas continue to see high levels of unemployment, especially in the wake of further layoffs in the critical textiles and apparel industries. Other areas, such as **Miami,** Florida, continue to see higher levels of unemployment because of immigration.

Paradoxically, although they are usually an indicator of economic health, tightening labor markets ultimately may discourage further corporate relocation and expansion of existing industries when they lead to a lack of qualified labor and the threat of accelerating wage growth. Moreover, the recent sustained growth in the Region's labor forces, which had helped prevent further declines in unemployment rates, may be reversing itself in some states, such as Alabama and the Carolinas. The risk of slower growth resulting from tighter labor mar-

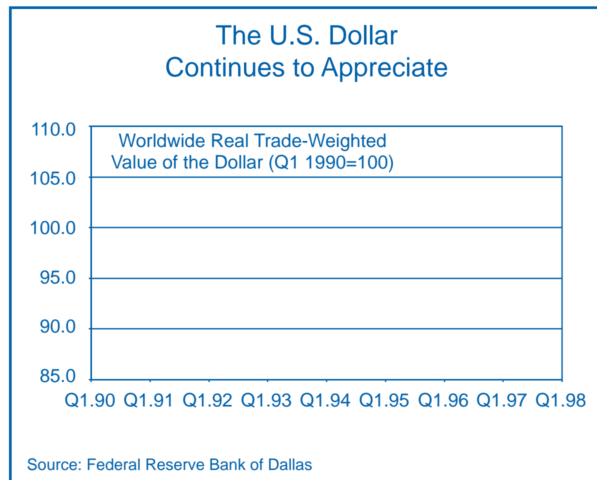
CHART 1

kets means that lending activity based on assumptions of continued rapid expansion may need to be reexamined.

Another product of the Atlanta Region's strong levels of corporate relocation and expansion in recent years has been the resulting increase in commercial and residential development. In some metropolitan areas (such as **Atlanta, Charlotte, Norfolk,** Northern Virginia, Miami, and **West Palm Beach**), there is growing concern that development in certain types of real estate markets may be outpacing demand, risking the emergence of real estate bubbles. (Look for a ***Bank Trends*** article on Atlanta real estate markets later this year.) Construction activity also has been fueled by tourist-related building, especially in the **Orlando** area. Lending for speculative construction may be on the rise in the Atlanta Region. If local economies slow or real estate bubbles burst, these loans may pose a higher level of risk.

The Asian crisis persists in complicating the outlook for the Atlanta Region as well as the nation. Although exposure in the Region may not be as great or as obvious as it is in other areas of the nation, such as the San Francisco Region, its impact is beginning to be felt in certain manufacturing segments. A case in point is the Atlanta Region's pulp and paper industry (see below for a detailed discussion of this industry's exposure). Looking forward, falling exports to Asia caused by weakening demand may not be the only area affected by the crisis, as the strong U.S. dollar (see Chart 2) encourages imports and makes U.S. exports less competitive in other world markets. As new industries (e.g., semiconductors and automobiles) have emerged in the Atlanta Region in recent years, the Region's exposure to national and global shocks will likely increase. Lenders should be aware that volatility in the economy—and, thus, in credit quality—may arise from events occurring outside the Region.

CHART 2



Paper and Allied Products Industry Overview

The U.S. paper and allied products industry finally seems to be emerging from one of the most volatile cycles in history after suffering the effects of undervalued timber, overcapacity, and global competition. However, under growing international pressures, the industry's future is still unclear. The paper and allied products (pulp) industry, Standard Industrial Code (SIC) 26, comprises 17 manufacturing industries. These industries process wood, recovered paper and paperboard, other cellulose fiber sources, and certain plastic and metal films into numerous end-use products. The industries can be divided into three major commodity groups: primary product producers (produce pulp, paper, and paperboard), paperboard container and box producers, and nonpackaging converted paper and paperboard products.[1]

The United States is the highest volume supplier of paper and allied products in the world. Since most of the industry's products are consumer oriented, production is affected primarily by the health of the U.S. economy. While U.S. domestic markets consume about 90 percent of the industry's output, international shipments have accounted for 60 percent of the growth over the past decade. Paper and paperboard exports represent nearly one-half of exports for the industry, followed by converted paper and paperboard products and market wood pulp[2] (bleached softwood and hardwood pulp).

While the lumber and wood industries have grown considerably throughout the past several years thanks to a healthy economy, the paper and allied products industry has been essentially in a recession throughout the decade. From 1991 to 1996, domestic sales grew by just 1.5 to 2 percent annually, causing the industry to refocus its marketing efforts toward world markets. In

[1] The third group includes tape, labels and packaging films, envelopes, stationery, and other office supplies made of paper; pressed and molded pulp goods; some wall coverings and gift-wrap paper; and plastic and paper bags.

[2] Market wood pulp is defined as a variety of chemical and mechanical paper-grade pulps, special alpha and dissolving pulps, and pulp byproducts including turpentine, tall oil, and other cooking, liquor-based byproducts.

1995, paper and paperboard producers were at 90 to 94 percent capacity, but in 1996, they were only at 88 to 89 percent capacity. Industry earnings declined because of lower domestic and foreign demand, new capacity coming online, high producer and consumer inventories, and falling prices. Declining prices and lower earnings resulted in the closing of some high-cost pulp and paper production facilities, and these closures caused many capital expansion projects to be delayed or canceled. After a lengthy shedding of inventory, the U.S. paper industry is now expecting strong demand. Analysts are forecasting that the industry will respond by increasing production by approximately 2 percent in 1998 to a record 96.2 million tons.

Global Risks

The paper and allied products industry is highly competitive both globally and domestically. The primary world exporters of paper and allied products based on market share are the United States, Canada, Finland, and Sweden. While the United States is among the top exporters of paper and allied products, it is also a large importer, particularly of market pulp (see Table 1). Although the United States produces nearly twice as much pulp as it uses domestically, it imports certain woods having special properties and grades. Its most common imports are NBSK (Northern Bleached Software Kraft) and eucalyptus pulp, which come from Canada and Brazil, respectively. Southern pine and hardwood pulps are popular U.S. exports.

As the currency crisis in Southeast Asia continues, the paper and allied products industry may suffer a setback. Exports of pulp and paper to Asia already have deteriorated in response to weaker currencies relative to the U.S. dollar and reduced consumption. These factors, coupled with low-cost paper mills in Indonesia, Thailand, and Korea, will lessen the need for exports to these Southeast Asian countries. Moreover, recent currency fluctuations have made it more expensive for companies to import into Asia. A report by ***Morgan Stanley Dean Witter*** indicates that companies likely will be forced to slash their growth plans and capital budgets because of the industry's inability to overcome the collapse of earnings and cash flows in late 1995 and 1996, the difficult conditions experienced in 1997, and the effects of the Asian crisis in 1997–1998. Conversely, the report argues that profits in North America and Europe could actually improve because Asia's capacity to expand could be halted by the lack of credit. It is still unclear how the current developments in Asia will affect paper product exports.

Other Industry Risks

In addition to global risks, other factors are jolting the paper and allied products industry. For one, the industry has been undergoing considerable restructuring and consolidation in recent years. These initiatives have been necessary to allow the equity markets to value the operating returns of the timber companies, which have more cyclical earnings, separately from those of the

Table 1

Exports Remain an Important Market for the Paper and Allied Products (SIC 26) Industry (millions of dollars, except as noted)

	1996	1997[1]	1998[2]	95–96	96–97	97–98	89–96[3]
Industry Data							
Value of Shipments	164,869	168,331	176,917	–4.5	2.1	5.1	3.2
Value of Shipments ($92)	138,305	140,795	144,456	–2.2	1.8	2.6	1.0
Product Data							
Value of Shipments	159,320	162,978	171,290	–4.5	2.3	5.1	3.3
Value of Shipments ($92)	133,296	135,421	138,943	–2.2	1.6	2.6	1.1
Trade Data							
Exports	14,002	14,772	15,880	–6.3	5.5	7.5	8.0
Imports	14,784	14,193	14,974	–11.8	–4.0	5.5	3.1

[1] Estimate
[2] Forecast
[3] Compound annual rate
Sources: U.S. Department of Commerce: Bureau of the Census, International Trade Administration (U.S. Trade and Industry Outlook '98 on CD-ROM)

paper manufacturing companies. Additionally, the industry needs to reduce the number of years it takes to produce a mature pulpwood tree if it is to compete in global markets. It currently takes about 28 years to grow pulpwood trees in the United States, but Brazil has reduced the time to about seven years. The Environmental Protection Agency (EPA) has placed rigid standards on the industry in both the Clean Air Act and the Clean Water Act policies, which are extremely expensive and may further restrict the U.S. industry's ability to compete in global markets. Finally, the increasing trend toward recycling has required pulp and paper companies to change their processes to produce a new variety of recycled grades.

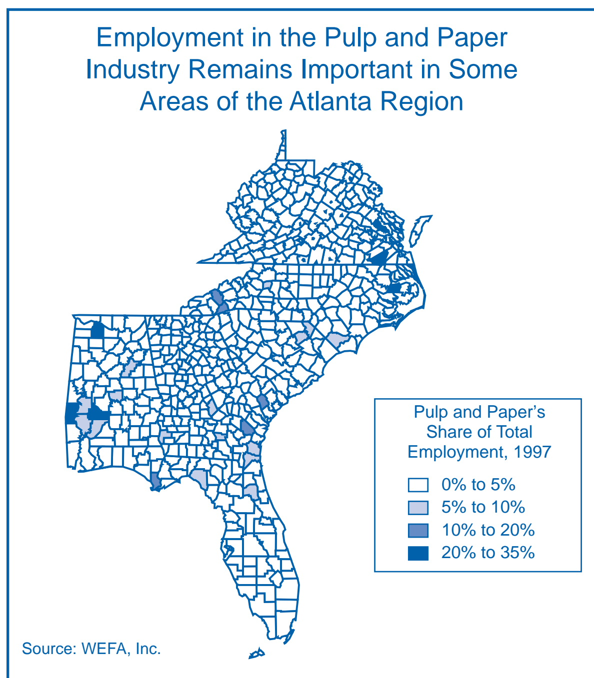
Regional Perspective

The domestic and global pulp and paper industry has a significant presence in the Atlanta Region (see Chart 3). Alabama and Georgia have the greatest exposure in the global marketplace. In 1996, 24 percent, or $178.9 million, of Alabama's paper product exports and 13 percent, or $228.7 million, of Georgia's paper product exports were directed to Asia. While these states have the greatest global exposure in the Atlanta Region, other states in the Region have some industry presence and, thus, a degree of domestic exposure.

Paper and paperboard mills are the largest SIC 26 employers in the Atlanta Region. The highest employment concentrations are in Alabama, which has 15,800 employees, and Georgia, which has 14,000 employees. Since 1989, this segment has experienced year-to-year employment declines in almost all paper and paperboard commodities, including newsprint, printing and writing paper, packaging paper, and folding boxboard. In the **Mobile,** Alabama, area, one company has announced the closing of a paper pulp mill that will result in 450 job losses in 1999. Exports of paper and paperboard products had been on the rise since 1996; however, the increase in exports was primarily directed toward Asia and Europe. Asia's recent problems may well drive this sector down further, causing job losses for areas with high exposure in the paper and paperboard mills. South Carolina and North Carolina have some exposure in the paperboard container and box sectors of the paper and allied products industry; however, each of these states has just over 6,000 workers in these sectors. Similarly, South Carolina has just under 5,000 workers in the sector of miscellaneous converted paper products.

Several major pulp and paper corporations, such as Georgia-Pacific, have either announced plans for segmenting timber operations from manufacturing operations or are considering the possibility in an effort to increase cash flows and improve performance. Virginia-based James River Corporation has increased its profitability by divesting itself of many of its operations.

CHART 3



Financial Structure

The paper industry is the most capital intensive of all manufacturing industries in the nation. To remain competitive, paper companies must reinvest most of their profits to purchase more efficient equipment. The larger companies tend to make very large investments in high-speed machines to increase economies of scale and to produce paper at the lowest cost. Typically, major investments are made in the middle of an economic recovery, while profits are increasing. However, these investments may take several years to complete and may not become operational until after the economic expansion has ended, when consumer and business consumption of paper products may be decreasing. There is the

temptation to run operations at full capacity regardless of demand, which can create price volatility and further challenge a plant's ability to recoup its investments. As paper prices declined in the late 1980s and early 1990s, many companies found themselves in this position. The pulp industry is facing similar challenges in the need for major investments in plant biology and other high-tech genetic research, as well as in the ever-present EPA restrictions.

Implications: Although the pulp and paper industry employs only 132,500 people (0.62 percent of total employment) throughout the entire Atlanta Region, it remains critical to the local economy in several rural areas. Continued strengthening of the U.S. dollar and greater competitiveness may result in further layoffs among local manufacturers. Weakening general economic conditions resulting from layoffs could adversely affect the creditworthiness of consumers and businesses and could threaten community banks whose assets are concentrated in affected areas (see ***"The Difficulties of the Pulp and Paper Industry Have Not Yet Hurt Insured Institutions"*** in the ***Regional Banking*** article).

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Current Regional Banking Conditions

- **Atlanta Region commercial banks performed well in the first quarter, although the aggregate return was reduced by substantial merger-related charges at one of the Region's largest banks.**

- **While a flatter yield curve has narrowed thrift net interest margins nationwide, high overhead costs have kept returns for Atlanta Region thrifts below the national average.**

- **Mergers, acquisitions, and intercompany reorganizations have reduced the number of insured institutions in the Region.**

- **Although difficulties in the pulp and paper industry have not yet hurt insured institutions' performance, some rural institutions could be adversely affected by additional deterioration in this sector.**

Merger Activity and Credit Card Operations Influence First-Quarter Bank Performance

Atlanta Region commercial banks performed well in the first quarter of 1998, although the aggregate return on assets (ROA) was reduced by substantial merger-related charges at the Region's fourth largest bank. The first-quarter ROA of 1.13 percent was down 17 basis points from the comparable 1997 quarter and trailed the national average by 13 basis points. However, when the merger-affected results of the aforementioned institution, which represent more than 5 percent of the Region's assets, are excluded, the ROA increases to 1.35 percent and is slightly above the national return on an adjusted basis. Large banks continued to outperform small banks in the quarter (see Chart 1), as their ability to generate higher fee income more than offset a comparatively lower net interest margin. In addition, the returns of small banks (those with assets under $100 million) reflect a number of unprofitable or marginally profitable new institutions, particularly in **Florida, Georgia,** and **North Carolina** (see ***"Consolidation Pared the Ranks of Insured Institutions in 1997"***). Reported asset quality remained strong in the period, as delinquencies and charge-offs continued well below national levels. The aggregate past-due ratio remained unchanged from the first quarter of 1997 at 1.94 percent of loans, while the charge-off rate reached a 10-quarter low of 0.38 percent (annualized). Notably, the Region's ratio of loan loss reserves to gross loans hit a three-year low in the first quarter, and although the decline is consistent with an industrywide trend, the ratio was below the national average at quarter end.

Commercial banks in the Atlanta Region continue to hold larger loan portfolios, as a percentage of assets, than their national counterparts. In addition, Atlanta Region banks tend to emphasize real estate loans more than their out-of-region peers and hold a lower percentage of commercial and consumer loans. Two factors help to explain the Region's higher real estate and total loan concentrations. First, lending opportunities in general, and opportunities to fund real estate-related projects in particular, have been greater in this Region than in most other Regions throughout the 1990s as a result of stronger economic growth in the Southeast. The Region's commercial bank loan growth rate has exceeded the national rate in nine of the last eleven quarters. Second, in the 1990s, commercial banking organizations in the Atlanta Region have acquired most of the large thrifts headquartered in the Region, thereby assuming the higher real estate lending exposures commonly found at thrifts. As of year-end 1997, no thrift with assets of more than $5 billion was headquartered in the Atlanta Region, unlike every other FDIC Region except the Memphis Region.

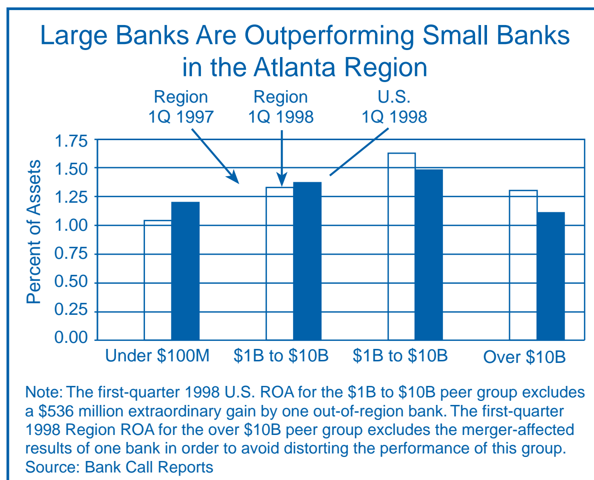
On the liability side, borrowings have been increasing at a faster rate than the national average. Borrowings supported nearly 23 percent of the Region's commercial bank assets at quarter end, compared with 17 percent nationwide. The difference was most prevalent in large banks (those with assets over $10 billion), but Regional borrowings were at least modestly above the national average at all banks except those with assets less than $100 million. Competitive and other structural forces are driving the use of borrowings, as loan growth is out-

stripping deposit growth. Increased borrowings have not had an adverse effect on funding costs to date; the average cost of funds remains well below the national level.

Credit card banks, headquartered primarily in Georgia and **Virginia,** outperformed their national peers in both earnings and credit quality in the first quarter. The fact that most of these institutions fall in the $1 billion to $10 billion asset-size category boosted first-quarter returns for banks in this group (see Chart 1). Credit quality trends remained negative, however; credit card delinquency and loss measures were above year-ago levels in the first quarter of 1998.

Thrift institutions in the Atlanta Region reported a first-quarter ROA of 0.84 percent, down slightly from the first quarter of 1997 and below the national average. A flatter yield curve was largely responsible for the year-over-year decline in thrift returns, as asset yields fell while funding costs edged higher. The net interest margin remained well above the national average, however, and ROA underperformance can be attributed to an overhead expense ratio that exceeded the national level by more than 100 basis points. This sizable difference in overhead spending relative to assets has existed for several quarters and may be explained partially by the fact that the Region's thrifts tend to be smaller than the national average in terms of asset size and, consequently, have a significantly higher ratio of employees to assets. Thrift asset quality remained strong. Delinquencies and charge-offs were below year-ago levels and in line with national averages, while reserve coverage of noncurrent loans was above the national level and rising. Thrifts continue to be well capitalized; the aggregate leverage ratio has risen steadily since the first quarter of 1997 and was 129 basis points above the national average at quarter end.

CHART 1



Large Banks Are Outperforming Small Banks in the Atlanta Region

Note: The first-quarter 1998 U.S. ROA for the $1B to $10B peer group excludes a $536 million extraordinary gain by one out-of-region bank. The first-quarter 1998 Region ROA for the over $10B peer group excludes the merger-affected results of one bank in order to avoid distorting the performance of this group.
Source: Bank Call Reports

Consolidation Pared the Ranks of Insured Institutions in 1997

Mergers, acquisitions, and intercompany reorganizations reduced the number of insured institutions in the Region by 4.5 percent, or 66 institutions, during 1997. As Table 1 shows, the number of insured institutions declined in all states except North Carolina, with Florida having the largest absolute (33 institutions) and **West Virginia** the largest relative (11.5 percent) decline. The number of commercial banks declined by 3.5 percent, and the number of thrifts and savings banks declined by more than 9 percent. The opening of new insured institutions offset some of the effects of consolidation; in 1997, 41 new insured institutions began operations (see Table 2). Nearly one-fourth of the new entities were headquartered in North Carolina, where the number of openings (10) during 1997 approximated 9 percent of the number of institutions operating at year-end 1996. At year-end 1997, 11 institutions had received deposit insurance approval but had not yet opened.

Another structural change is the secular increase in the number of branches and total assets controlled by bank holding companies and the concomitant decline in the number of independent institutions. As Table 3 shows, independent insured institutions declined by 49 institutions, or 8.75 percent. The number of branches and assets insured institutions control also declined. Conversely, holding companies increased their branches by 1,202, or 9.6 percent, and assets by $142.6 billion, or 21.2 percent. Most of the increase in branches and assets occurred in multi-bank holding companies (MBHC). Although out-of-state acquisitions contributed to the rise, most of the increase resulted from legislation, as the interstate branching provision of the Riegle-Neal Act of 1994 became effective June 1, 1997. The branching provision also contributed to the reduction in the number of MBHCs. Many companies went from being MBHCs to one-bank holding companies through an internal reorganization that converted their separately chartered banks to branches. Overall, despite the reduction in the number of organizations headquartered in the Region, the remaining organizations continue to increase their assets and branches.

Table 1

The Number of Insured Institutions Has Declined in the Atlanta Region	1996	1997	Change
Banks	1,228	1,185	–3.5%
Thrifts	240	217	–9.6%
Alabama	197	187	–5.1%
Florida	346	313	–9.5%
Georgia	389	385	–1.0%
North Carolina	116	119	2.6%
South Carolina	113	111	–1.8%
Virginia	185	179	–3.2%
West Virginia	122	108	–11.5%
Total	1,468	1,402	–4.5%

Source: Bank and Thrift Structure Data

Table 2

The Region Has Seen an Increase in New Insured Institutions	1996	1997
Banks	31	38
Thrifts	4	3
Alabama	0	1
Florida	8	11
Georgia	5	12
North Carolina	4	10
South Carolina	9	5
Virginia	6	2
West Virginia	3	0
Total	35	41

Source: Bank and Thrift Structure Data

The Difficulties of the Pulp and Paper Industry Have Not Yet Hurt Insured Institutions

The pulp and paper industry, which has struggled this decade, plays a role in the Region's economy (see ***Regional Economy***). Although the amount of direct lending by insured institutions in the Region to the pulp and paper industry is not believed to be sizable, a number of rural economies in the Region depend on the performance of this industry. Consequently, some insured institutions could be adversely affected by any plant shutdowns or contractions in employment.

Currently, there are 13 rural counties in which employment in the pulp and paper industries represents 10 percent or more of the county's total employment. As Chart 2 (next page) shows, 18 insured institutions have significant operations in these counties, with most concentrated in Virginia (8) and **Alabama** (5). Significant operations are defined as having 25 percent or more of an institution's deposits emanating from these counties. Most are commercial banks, but the total includes one traditional savings and loan and one FDIC-supervised savings bank. The performance of these insured institutions has been strong since 1991, as Table 4 demonstrates. The weighted-average capital ratio is well above similar-sized institutions; however, it has been declining since 1995 because of strong asset growth. In particular, robust growth in commercial and industrial (C&I) loans has played a large role in the lower capital ratio. Moreover, it has pushed the loans-to-deposits ratio higher, and there has been a notable increase in the concentration of C&I loans as measured against capital. Loan performance has been positive since 1991, but the steady improvement since the last recession was interrupted in 1996 as noncurrent loans and charge-offs more than doubled over the prior year's levels. The reversal of loan performance in 1996 may be just a hiccup, as strong year-over-year performance occurred in 1997. At these institutions, C&I loans have underperformed the overall loan portfolio, particularly during the last recession in 1991. The strength of the C&I loans

Table 3

The Number of Independent Institutions in the Atlanta Region Has Declined

	Multibank Holding Company				One-Bank Holding Company			Independent Institutions		
Year	Number	Number Insured Institutions	Branches	Assets ($Billions)	Number Insured Institutions	Branches	Assets ($Billions)	Number Insured Institutions	Branches	Assets ($Billions)
1997	126	395	10,112	666.9	496	3,618	148.8	511	1,965	80.9
1996	141	422	9,287	555.9	486	3,241	117.2	560	2,131	84.5
Change	(15)	(27)	825	111.0	10	377	31.6	(49)	(166)	(3.6)

Source: Bank and Thrift Call Reports, Bank and Thrift Structure Data

Table 4

Performance at Institutions with Sizable Operations in Rural Counties Has Remained Strong with an Employment Concentration in the Pulp and Paper Industries*

Year	Number of Institutions	Average Size (Millions)	Capital Ratio	C&I Loans to Capital	Non-current Loans	Non-current C&I Loans	Loan Charge-offs	C&I Loan Charge-offs	Loans to Deposits	C&I Loan Growth	Return on Assets
1991	18	64.1	12.19	47.7	2.88	7.01	0.32	1.57	66.1	—	1.23
1992	18	70.3	12.36	44.3	1.71	4.35	0.39	1.87	63.7	1.87	1.51
1993	18	76.0	12.57	47.1	1.67	4.03	0.14	0.89	65.2	17.83	1.58
1994	18	80.5	12.39	48.6	1.33	2.02	0.11	0.28	67.7	8.94	1.47
1995	18	89.3	12.64	46.3	1.20	1.36	0.12	0.97	65.7	5.37	1.40
1996	18	99.9	11.72	53.3	1.17	3.52	0.25	1.17	68.1	16.04	1.30
1997	18	116.7	11.43	66.1	0.96	1.94	0.17	0.18	74.2	19.66	1.48

*Defined as counties where employment in the pulp and paper industries is 10 percent or more of total employment.
Sizable operations are defined as having 25 percent or more of an institution's deposits emanating from these counties.
Source: Bank and Thrift Call Reports, Bank and Thrift Summary of Deposits Report, WEFA, Inc.

that have been extended during the past two years may be uncertain, as some of these loans may be to new businesses that have not been through a full economic cycle. Moreover, the recent rapid pace of C&I loan growth may be inconsistent with the underlying economic conditions of these rural counties, particularly given the weakness in the pulp and paper industry, which is a large driver of economic performance in these areas. Some institutions may be extending loans beyond their traditional market area to achieve these growth rates. For these reasons, it may be prudent to focus on C&I loan quality, even if there is no economic downturn.

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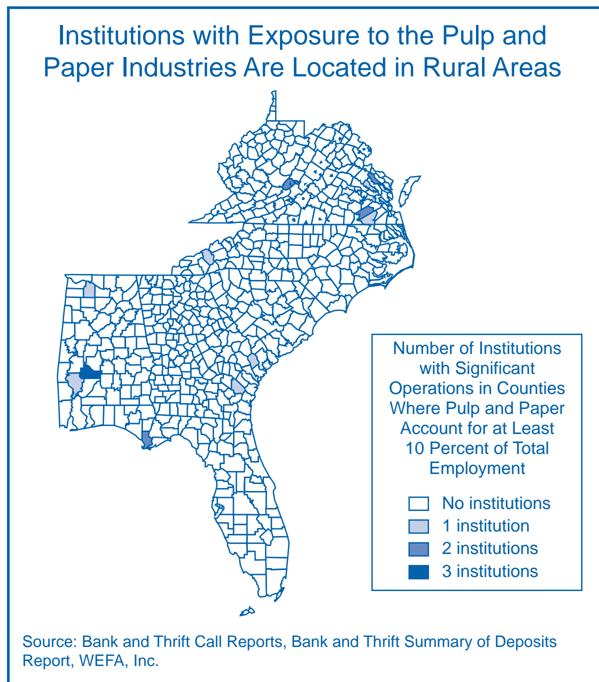
Chart 2

Institutions with Exposure to the Pulp and Paper Industries Are Located in Rural Areas



Source: Bank and Thrift Call Reports, Bank and Thrift Summary of Deposits Report, WEFA, Inc.

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