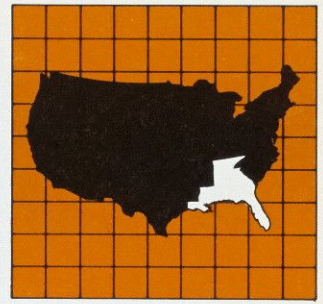


# Economic Review



FEDERAL RESERVE BANK OF ATLANTA

MARCH 1983

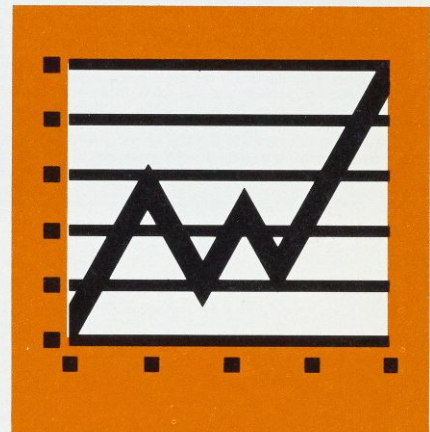
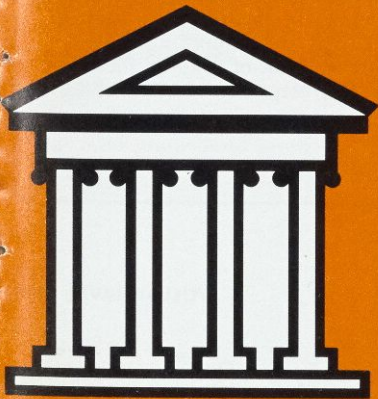
**RISK** Deposit Insurance Dilemmas

**LOCAL ECONOMIES** A New Measure

**IRAs** Surveying the Competition

**DEBIT CARDS** At the Crossroads

**AIR CARGO** Deregulation's Effects



# Economic Review



FEDERAL RESERVE BANK OF ATLANTA

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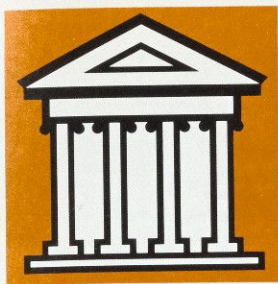
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# Deposit Insurance and Bank Failures

While a business failure is painful to those whose dreams and hard work are wiped out, most people recognize failure as a necessary aspect of success. This relationship is well summed up in the aphorism, "nothing ventured, nothing gained and nothing lost." Just as important is the healthy measure of restraint provided by the prospect of failure. The possibility and cost of failure can help avert unprofitable ventures and unfortunate errors by providing a powerful incentive for the decision maker to accept the necessity of making painful choices.

Why, then, is bank failure considered to be so terrible that federal deposit insurance is required? In many important respects, a bank failure is less costly than the failure of many other enterprises. The products provided by one bank are similar to those provided by many other institutions. Checking and savings account services usually are available at scores of institutions, including other banks, savings and loan associations, credit unions and stock brokerage firms—even non-local institutions. Mortgages and consumer loans are available from an even greater number of sources, including depository institutions, mortgage companies, consumer loan companies, merchants, and individuals. Business loans are available from local and, for larger companies, non-local

banks and thrifts, insurance companies, factors, and other businesses.

While a bank's customers lose their business relationship with a bank and its knowledge of them, the loss is less than when most other suppliers fail. For example, the failure of a machinery manufacturer could make spare parts, repair and replacement services unavailable. A distributor's failure might require the development of new channels of supply and sources of information about products and reliability. Often the failed enterprise is unique. In contrast, one bank and its products are very much like another. Only for people in one-bank towns might the failure of the sole bank present a serious problem—and then only until the services are offered by another institution.

Because banks are so similar, their employees' skills are transferrable to other financial institutions. The teller in one bank needs little training to work in another. A lending officer can even benefit from a failure if she can bring her customers with her to another bank. In contrast, employees of many other enterprises often have specialized skills of little value except to their company. The only bank employees who really lose from a failure are the top officers. Not only might they be blamed for the bank's collapse,

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With bank troubles again in the news, deposit insurance is receiving its closest scrutiny since the Depression years. This analysis questions whether a new approach to insuring deposits might be in order—with depository institutions able to choose between several public insuring agencies or even turning to private insuring organizations.

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but they will forego the value of the relationships they have established. But, if fear of failure is to be beneficial, this is all to the good.

The shareholders of a failed bank, like its officers, bear costs. But, again, this can prove healthy, for the essence of a private-property, free-enterprise system is that residual owners reap the losses as well as the benefits from their investments. In any event, bank shareholders are in no different position from shareholders of other enterprises. Indeed, when one considers that a bank's fixed assets can be transferred to many other enterprises (including successor banks) at less cost than can the assets of many failed enterprises, a bank's owners face less risk with respect to a failure than most other owners.<sup>1</sup>

This leaves only the creditors, and here is where banks differ importantly from other enterprises. But first the similarities should be mentioned. Creditors are investors with rights over other investors. Debt instruments usually specify the amounts to be paid and the time of payment to their holders, with precedent over the equity holders. But, as with equity holders, creditors accept the risk of non-repayment, which is reflected in their contracts (debt obligations) with the equity holders. Debt holders, like other investors, put up their funds and take their chances. The possibility of failure gives them reason to monitor an enterprise's activities and to insist on a return no worse than they could get for similarly risky investments. In this regard, a bank is a safer investment than many others because its activities are relatively easy to control and comprehend and are subjected to audit. Indeed, losses to creditors (depositors) were not great before the Great Depression. Between 1900 and 1920, deposits in the 1,789 banks that suspended operations averaged 0.10 percent of total deposits each year. Over the 1921-1929 period, 5,712 banks were suspended (an annual percentage of 2.30 of the number active); deposits in these banks averaged 0.42 percent of total

deposits per year. But, after the affairs of the suspended banks were cleared up, the annual losses borne by depositors as a group were only 0.15 percent (Benston (1973), Table II, p. 12).

## The Difference Between Banks and Other Enterprises

The important difference is in the demand deposits form of credit. Demand deposits and savings deposits that actually can be withdrawn on demand are much more than investments in banks. These are assets that permit depositors to effect transactions at relatively low cost while providing a means of making investments in the amounts and for the periods desired. Because deposits and withdrawals tend to offset each other, bankers learned hundreds of years ago that they could invest a large proportion of these funds in longer maturity, usually higher yielding assets. This combination of instant possible withdrawal for individual depositors and relative stability of the total of funds invested by depositors as a group gives rise to both profitability and risk in banking.

Unlike bank demand depositors, creditors of other enterprises cannot withdraw their investments when they wish. If a bondholder of an ordinary corporation believes the corporation may be unable to repay the debt as promised, the most that person can do is sell the bond before the purchaser learns the bad news. The bondholder cannot get the corporation to repay the bond until it is legally due. But a depositor who fears a bank failure can withdraw funds in person or by writing a check. A rapid withdrawal of funds by depositors may force the bank to sell assets at distress prices or to borrow at high rates. That may produce losses that exceed the stockholders' investment and have to be absorbed by remaining depositors or other debt holders. Therefore, depositors are well-advised to remove their funds if the probability of loss exceeds the cost of making another banking arrangement plus interest that would be foregone as a consequence of the withdrawal. That is why a run on

<sup>1</sup>See Tussig (1967) for a further discussion.

**“A rapid withdrawal of funds by depositors...may produce losses that...have to be absorbed by remaining depositors or other debt holders.... That is why a run on a bank...is very difficult to stop....”**

a bank by panicked depositors is very difficult to stop before the bank is forced to suspend withdrawals and possibly fail.

Were it not for three factors, losses from bank runs should not be considered of greater social concern than losses from other business failures. The first factor is the importance of public faith in a safe system for transferring funds. If people feared bank failures, the argument goes, they would be unwilling to accept checks in payment for goods and services, which would increase transactions costs to the detriment of society. But checks are widely and readily accepted despite the risk that the payor may not have funds on deposit when the check is presented to the bank for payment. Though a bank failure represented an additional risk, checks were widely and increasingly used as money before the advent of federal deposit insurance, even in the 1920s when over 600 banks a year suspended operations. Prior to establishment of the Federal Reserve in 1913, notes issued by individual banks were widely used as money, despite the risk that the issuing banks could fail before the notes were redeemed. Consequently, this is not a convincing argument for having a different public policy towards bank failures than towards other business failures.

The second argument for special treatment of banks relates to the depositors' costs of determining and dealing with the riskiness of their investments. Bank deposits, particularly demand deposits, often cannot be diversified efficiently among several banks. If this could be done, depositors could reduce their risk of the expected losses from bank failures generally (which was only 0.15 percent per year even during the 1920s). But such diversification would be costly to many depositors. Rather than having each depositor assessing and monitoring the operations of banks and the riskiness of their portfolios, it seems more cost-effective for a government agency to supervise the banks. But the same argument applies to many (perhaps most) other enterprises. Investors in these enterprises also must assess the risks and returns expected from their investments; in this regard, banks are likely to be easier

to analyze than are other firms. But where small deposits are involved, the depositors' costs in assessing and diversifying risk probably exceed expected benefits. Therefore, social policy could be directed toward making riskless investments and depository services available to people with relatively little to invest. But this protection could be provided by bank-purchased private insurance, rather than a government agency, much as other enterprises and individuals insure their customers and themselves against risks.

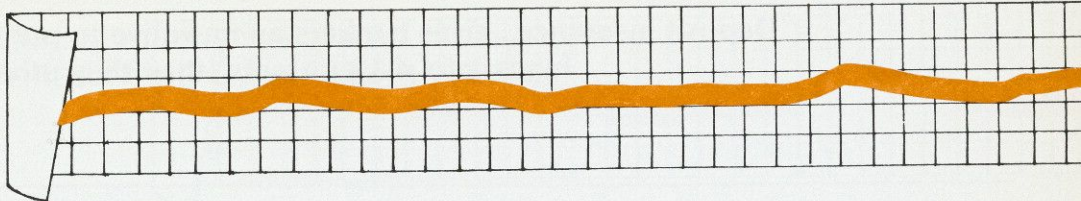
### Bank Runs

The third argument, preventing multiple bank runs, is the only really strong one for considering bank deposits differently from other investments and services. Demand depositors have a great incentive to remove their funds as soon as they believe a bank **might** fail. Hence, rumors about a bank's financial condition or the failure of similar banks might touch off runs on well-managed banks. Their failures, in turn, reduce the monetary base as people exchange fractional-reserve bank deposits for 100 percent reserve currency, resulting in a multiple contraction of the money supply and the failure of more banks and other businesses. This is what happened, in part, in the 1930s.<sup>2</sup>

While the Federal Reserve can step in to stop this chain-reaction by making reserves available to banks to replace those withdrawn, it did not do so in the 1930s. Between 1930 and 1933, 9,096 commercial banks were suspended, representing an annual average of 11.3 percent of all banks and 4.1 percent of the deposits. The average annual loss to depositors in these banks averaged 0.81 percent. While this was less than a third of the yield on investments (the yield on prime commercial papers ranged from 3.59 percent in 1930 to 1.73 percent in 1933), it probably

<sup>2</sup>The Federal Reserve's present policy of reserve-path targeting, however, makes it likely that reserves would not be permitted to decline as they did in the 1930s. Indeed, it makes intervention automatic.

<sup>3</sup>Though these failures no doubt hurt the economy, most scholars agree the banks were primarily the victims rather than the cause of the Great Depression. Warburton (1966) carefully studied the relationship between bank failures by county during the Depression. He concludes: "there was a



was large for affected depositors who did not hold diversified portfolios.<sup>3</sup>

Bank runs also played an important role in previous financial collapses before the 1930s. "Black Thursday" 1873 saw the failure of Jay Cooke's banking house and the first closing of the New York Stock Exchange. It was followed (perhaps causally) by six years of depression. The failure in 1884 of the Marine National Bank and of former President Ulysses Grant's firm, Grant & Ward, sparked runs and the consequent failure of numerous banks and brokerage houses. The Panic of 1893 was touched off by the 1890 failure of the London banking firm of Baring Brothers, which specialized in financing U.S. enterprises. Baring's European creditors demanded that Americans pay their debts in gold. As a consequence, the base money supply was depleted, a multiple contraction resulted, and 1891 saw a mini-panic. During the following 1893 panic, more than 600 banks and 13 of every 1,000 businesses failed in perhaps the nation's second deepest depression (after the depression of 1837) before 1930. The New York Clearing House suspended convertibility to specie, which ended the run. J. P. Morgan also helped by negotiating a sale in Europe of a \$100 million U.S. bond issue. Panic struck again in 1907 when New York City and several corporations were unable to sell high-yielding bond issues. The Knickerbocker Trust Company failed (largely as a consequence of speculation with depositors' funds) and several major banks experienced severe runs. Again, the New York Clearing House suspended convertibility to specie and J. P. Morgan later helped increase reserves with European loans and U.S. Treasury deposits.

Creation of the Federal Reserve in 1913 was supposed to rid the country of these recurring collapses. As the lender of last resort, with great

resources and the power of the printing press, it should have been able to better the Clearing House's and Morgan's record. But, when the Bank of the United States collapsed in 1930, the Fed did not prevent the failure of over a third of the banks during the next several years. Establishment of the Federal Deposit Insurance Corporation (FDIC) in 1933, though, appears to have done the job. Though 488 commercial and mutual savings banks were suspended from 1934 through 1942, most of these were leftovers from the pre-FDIC period. From 1943 through 1982, an average of only seven banks a year were closed or merged with FDIC assistance. Most importantly, bank runs appear to be a thing of the past. However, the losses incurred by large depositors when the Penn Square Bank in Oklahoma City was liquidated rather than merged into a solvent bank by the FDIC and the reported shaky condition of some very large banks with loans extended to such borrowers as Brazil, Mexico or International Harvester have provoked some concern about the possibility of runs by uninsured depositors.

Depositors in savings and loan associations, credit unions and a few mutual savings banks also are protected by government insurance agencies—the Federal Savings and Loan Insurance Corporation (FSLIC) and the National Credit Union Share Insurance Fund (NCUSIF). In recent years, unexpectedly increasing interest rates together with the specialization of savings and loans in long-term, fixed-interest assets (mortgages) have resulted in a relatively large number of failures and forced mergers. The increasing number of "troubled institutions" has renewed interest in the present deposit insurance system. This interest is expressed in the Garn-St Germain Depository Institutions Act of 1982, which calls for a study of deposit insurance and a report to the Congress by this April.

massive contraction of deposits nationally during the early 1930s relative to the rate of growth during the 1920s, of which less than one-fourth was accounted for by deposits in suspended banks. This indicated that the Depression of the 1930s could not be explained by the impact of balances of payment resulting from adverse conditions in particular industries or areas, but was due to, or at least associated with, some potent force operating on a national scale." (p. 2).

## The Benefits From Deposit Insurance

Deposit insurance has the salutary effect of obviating bank runs by assuring insured depositors

## “Deposit insurance...gives bankers an incentive to put the depositors’ funds into riskier assets [than they otherwise would].”

(currently, those with less than \$100,000 in an account) that their funds are safe. It also spares most depositors the cost of learning about the operation of banks. But, as a consequence, deposit insurance frees banks from the discipline and cost of those depositors’ concerns. Bankers need not pay depositors a premium (in interest, “free” services, or other concessions) to compensate them for the risk of investing in the bank. Thus bank profits are increased if the reduction in their cost of deposits is greater than the cost of the deposit insurance. Such is the case for smaller banks, and was particularly so in the 1930s when the FDIC was established. Initially, FDIC insurance covered depositor accounts up to \$2,500. It was raised to \$5,000 in 1934, \$10,000 in 1950, \$15,000 in 1966, \$20,000 in 1969, \$40,000 in 1974 and \$100,000 in 1980.

Federal insurance thus covered most of the depositors (and deposits) of small banks. It was particularly valuable to them because the public had reason to fear for the safety of their funds in small banks; 93 percent of the banks suspended in 1930-1931 had total loans and investments under \$2 million, and 70 percent were under \$500,000. From the beginning, the FDIC insurance premium has been assessed as a small percentage of **total** deposits, whether or not insured. Thus the large banks, which experienced much lower failure rates and which served many customers with deposit accounts exceeding \$5,000 in the 1930s, have subsidized the small banks. But in return they benefited from banking legislation through the prohibition of interest on demand deposits. Golembe has estimated that in the early 1930s, the costs of deposit insurance to the large banks were offset almost exactly by savings from the interest prohibition (Golembe, 1975, p. 7). The small banks also avoided competition

because national banks were denied the right to branch (except as permitted by state law).<sup>4</sup>

Savings and loan associations did not experience the massive number of suspensions that plagued commercial banks in the early 1930s; only 526 of the S&Ls active as of January 1930 (4.4 percent) were suspended from 1930 through 1933. The FSLIC was established by the National Housing Act of 1934 as a means of supporting the housing industry. That purpose dominated government policy towards S&Ls until, perhaps, the last few years when the institutions’ survival became an important concern.

### Problems With Deposit Insurance

If deposit insurance removes the concern of most depositors for the safety of their funds, it gives bankers an incentive to put the depositors’ funds into riskier assets unless the FDIC or FSLIC prevents them from doing so. If a bank encounters trouble, the FDIC and FSLIC pay off the depositors; if profits are made, the shareholders get them. True, in the event of failure the bank’s shareholders lose their investments (including the value of the bank charter) first. But they can lose no more. Consequently, unless the FDIC or FSLIC imposes a risk-related insurance premium, an effective minimum capital (stockholders’ investment) requirement or other risk-related costs and controls, the banks’ expected gains from additional risk-taking will continue to exceed the expected losses.<sup>5</sup>

U. S. history prior to the FDIC bears this out and also provides lessons that should be heeded. Deposit guarantee systems were established in New York (1828), Vermont (1831), Indiana (1834), Ohio (1845) and Iowa (1858).<sup>6</sup> The New York and Vermont systems were state run, the others

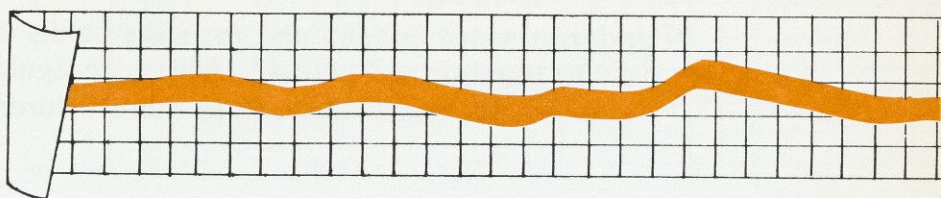
<sup>4</sup>See Benston (1982) for a description of the offsetting economic advantages garnered by suppliers of financial services from 1930s federal legislation.

<sup>5</sup>This conclusion is demonstrated analytically and rigorously in a number of papers, including Sharpe (1978), Koehn and Santonero (1980) and Hanweck (1982). Also see Flannery (1982) for a clear and concise explication and numerical example.

<sup>6</sup>See Federal Deposit Insurance Corporation (1952, 1953 and 1956) and Edwards (1933) for descriptions from which the following narrative was drawn.

<sup>7</sup>However, it should be noted that the New York State system was phased out as bank charters were granted and renewed under the free (entry) banking law. As banks left the insurance system, the premiums rose considerably.





were based on mutual agreements among participating banks. They operated successfully, largely because they empowered system officials to monitor operations of the participating banks and to control excessive risk-taking.<sup>7</sup> Yet a second wave of deposit guarantee plans for state banks proved less successful. With one exception (Mississippi), the plans did not include effective supervision and they failed. These included the compulsory plans of Oklahoma (1908), Nebraska (1909), and South Dakota (1916) and the voluntary plans of Kansas (1909), Texas (1910), and Washington (1917). Since depositors were told that their money was safe, there was a great incentive for unscrupulous operators to take excessive risks; the record shows greater failure rates of guaranteed banks than among similar non-guaranteed banks operating in the same areas. The Mississippi plan (1915), which included supervision and bank examinations, continued until 1930. Thus, effective supervision appears to be a necessary aspect of deposit insurance.

FSLIC deposit insurance appears to be intentionally related to risk-taking by insured savings and loan associations. Though technically the mutual associations' liabilities are shares, in actuality they are (except for time certificates) deposits withdrawable on demand by the "shareholders." Hence, were S&L deposits not insured, depositors would have reason to be concerned about the associations' concentration in long-term, local, fixed-interest mortgages. Should the market value of real estate securing the mortgages collapse, or should interest rates unexpectedly surge, the market value of an association's assets could be reduced to less than its liabilities. Fearful depositors would have the same incentive to remove their funds as would depositors in commercial banks. Thus FSLIC insurance prevents

runs on S&Ls and permits them to hold a poorly diversified portfolio, consisting mainly of mortgages.<sup>8</sup>

## Past and Present Methods of Coping with the Problems

### Restrictions on Entry and Encouragement of Mergers

The FDIC and the other regulatory agencies initially dealt with the problem of bank failures by restricting bank charters. In the 1920s, an average of 361 banks a year was chartered. But from 1935 through 1944, an average of only 53 banks was chartered annually. Understandably, few banks were chartered during World War II. But the expansionary period of 1945 through 1959 saw an annual average of only 94 newly chartered banks. Peltzman (1963, p. 48) estimated that, had the relatively unrepresed chartering policies of the 1920s continued during the 1936 through 1962 period, about 4,500 new banks would have been chartered rather than the 2,272 that were permitted. Partly as a consequence of this restrictive policy, very few banks failed, but fewer banks were established to serve the public.

Not until James Saxon became Comptroller of the Currency was this policy changed. In just four years, 1962 through 1965, he approved charters for 514 national banks, twice the number chartered in the previous 12 years. Contrary to the predictions of Saxon's detractors, neither the newly chartered banks nor their competitors failed in greater proportions than other banks. States also increased the number of bank charters issued to 124 per year over the 1962-65 period—an increase from the annual average of 86 over the previous four years. Though there have been relatively more bank failures in recent years, the number is still small and appears unrelated to the more liberal post-1960s chartering policy.

The regulatory authorities also have encouraged mergers among banks as a means of reducing the probability of failure. Until the Bank Merger Act of 1960 required the regulatory agencies and

<sup>8</sup>Federal authorities also have supported S&Ls' concentration in mortgages by imposing ceilings on deposit interest by giving them greatly reduced taxes based on their investment in mortgages, by developing a national market in mortgages with the Federal Home Loan Mortgage Corporation and by establishing Federal Home Loan Banks that lend money to S&Ls raised with government-guaranteed securities.

**“[Under previous constraints] the risks banks undertook were relatively easy to monitor and control. [Under deregulation] the possibility that greater risks will result in more failures must be considered....”**

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encouraged the Justice Department to evaluate and challenge mergers, their impact on competition was not considered important; safety was the primary concern.

State-enacted legal restrictions on branching have had a negative effect on bank solvency. Almost all of the banks suspended in the 1920s and 1930s were unit banks: only 10 banks with more than two branches outside their home city failed during this period. It is difficult to separate the effects of regional economic depressions and small size from unit banking as causes of the suspension of over 9,000 such banks. Still, it seems clear that the legal prohibition against banks diversifying their locations—and consequently their assets and liabilities—impaired their ability to survive liquidity or local economic crises.

In any event, reducing the number of banks—and thus competition among banks—by controlling entry and encouraging mergers is no longer a viable policy, and not just because of cost to the public. Many unchartered enterprises now offer banking services to the public: these include brokerage firms, money market funds, and specialized lenders including mortgage companies, finance companies, retail stores, factors, and insurance companies. While interstate deposit branching still is prohibited, most large banks maintain loan and customer service offices in cities around the country, as well as affiliates that specialize in such products as mortgage and personal cash loans. Smaller banks can diversify their portfolios by purchasing loans from other banks and by investing in money market instruments, such as U.S. Treasury and state and municipal obligations. Thus, reducing bank failures by controlling entry and exit appears to be neither necessary nor even possible.

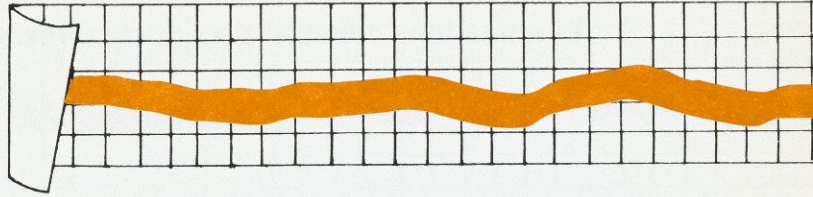
The opposite policy has been applied to federal savings and loan associations, with new federal S&Ls encouraged as a means of supporting housing. Between 1933 and 1941, the number of federally chartered associations increased by 162 a year. During World War II, few federal charters were granted. But from 1946 through 1970, federally chartered S&Ls increased by 25 annually.

The recent financial problems of many S&Ls, though, do not appear attributable to excessive chartering. Rather, they are related to traditional restrictions on the portfolios they could hold and services they could offer to the public. The thrift institutions' solvency was never in doubt as long as real estate values increased, interest rates did not surge unexpectedly, and interest rate ceilings on deposits were effective in keeping their costs down but not in encouraging excessive disintermediation. The provisions of the Depository Institutions Deregulation and Monetary Control Act of 1980 and the Garn-St Germain Act of 1982, which permitted thrift institutions to offer most banking services and market rates of interest, came too late for many institutions to diversify their assets and liabilities successfully.

The Federal Home Loan Bank Board's policy change since the late 1970s that removed constraints on branching by federally-chartered S&Ls permitted the institutions to serve the public more effectively. Yet it was timed unfortunately from the standpoint of maintaining solvency. Branching is a means of offering depositors a return on their funds in the form of convenience. But it is often more efficient to offer them direct cash payments through interest and a wider range of services (especially checking and consumer loans). Hence, since the S&Ls can now offer these services to consumers, many branches established earlier are likely to have become financial drains on the associations. Thus, incomplete deregulation inadvertently exacerbated the S&Ls' solvency problems.

### **Restrictions on Products and Prices**

The debacle of the 1930s gave rise to the Banking Act of 1933. This act prohibited commercial banks from underwriting and dealing in corporate securities, prohibited the payment of interest on demand deposits, and imposed a ceiling on savings and time deposits interest rates (Regulation Q). Banks and thrift institutions also were constrained over the years from competing directly and from engaging in non-traditional banking activities. One consequence of these constraints was that the risks banks undertook



were relatively easy to monitor and control. Another was that, in the 1970s, as nominal interest rates increased and as fund transfer technologies became more efficient, unregulated institutions successfully bid for many of the regulated institutions' depositors. Banks and thrifts also attempted to enter new areas through subsidiaries, one-bank holding company affiliates, and legal expansion of powers. While the result has been greater returns and more choice for consumers, the risks undertaken by depository institutions also are likely to have increased. Nevertheless, re-regulation hardly seems possible or desirable. The possibility that the greater risks will result in more failures, then, must be considered and dealt with.

### Equity (Capital) Requirements

Since the stockholders of a bank or S&L absorb losses first, a sufficiently high equity investment would inhibit them strongly from taking risks. Indeed, as long as a deposit insuring agency can step in and liquidate an institution by merger or dissolution before the value of its assets declines to less than its insured deposits, the agency assumes no risk. (Fraud, of course, can create the deceptive appearance of positive equity; therefore audits, for fraud are particularly important.) Consequently, the supervising authorities have viewed capital adequacy requirements as a means of reducing the possibility of failures.

However, the authorities' effectiveness in enforcing edicts is open to question. Mayne (1972) studied 364 randomly sampled Fourth Federal Reserve District banks to determine whether the supervisory agencies had asked them to provide additional capital over the period 1961-1968. Of the 73 percent that replied, 30 percent (81 banks) said that these requests were made, some repeatedly. But of these, only 43 percent fully complied with the authorities' requests, 27 percent partially complied, and 30 percent did

not comply at all. Mayne concluded: "The agencies do differ in their capital prescriptions, but ... these prescriptions have only a limited effect on bank capital positions because of banker resistance to supervisory pressure for more capital" (p. 47). Peltzman (1970, p. 16), who analyzed statewide aggregate data, also found that banks do not "respond to any of the regulators' standards of capital adequacy." But Mingo (1975), who used more recent individual bank data, reports that banks given lower examiner ratings subsequently tend to increase their capital.

These divergent findings may be due to the different periods or samples studied. They also may be the result of uncertainty about how much capital is adequate. Not only are the accounting numbers used to measure capital inadequate estimates of economic values, but there is reason to believe that a balance sheet ratio is not a sufficient indicator of risk.<sup>9</sup> Indeed, an extensive review by Lyon (1969, p. 31) led her to conclude that "the literature is voluminous but consists primarily of the prevailing opinion at any given time stated as a fact by its proponents, without benefit of analytical analysis."

In any event, the data indicate that the ratio of book capital to deposits of smaller (under \$100 million in assets) banks has increased 10 percent over the 1970s from 7.6 percent in 1970 to 8.5 percent in 1980. Assuming that these accounting-based numbers reflect economic values consistently over the time period, this increase could have been the result of pressures by the regulatory authorities. Or the banks voluntarily could have increased equity relative to deposits, perhaps because the stockholders (who often are bank officers or relatives) wanted to reduce their personal income taxes by not paying dividends or officers' salaries. However, the equity/deposits percentage for very large (over \$5 billion in assets) banks decreased by 13 percent over the 1970s, from 5.3 percent to 4.1 percent.

<sup>9</sup>See Vojta (1973), who argues that the present and future expected profitability of a bank should be taken into account. While several studies found lower capital ratios at banks that failed compared to solvent banks of similar sizes, it is unclear whether impending failures reduced their capital

or whether low capital resulted in their failures. (See Cotter (1966) for a study of West Coast banks that failed between 1921 and 1933, and Benston (1975) for an analysis of banks that failed between 1959 and 1971.)

## **“Examinations constitute a principal means of reducing failures of banks and thrift institutions.”**

(Over the complete range of bank sizes, the larger banks tended to have lower ratios and, over time, those ratios decreased more for the larger banks.) Again assuming that these numbers are meaningful, it would appear that the authorities have less ability to control the capital investments of large banks. One reason is suggested below.

Until about 1980, when the S&L capital problem became overwhelming, the FHLBB had somewhat greater influence in getting thrifts to maintain their book capital, primarily because many associations' capital/deposit ratios became so low that they feared cancellation of FSLIC insurance. Edward Kane (1981) points out that FSLIC insurance represents a valuable asset to most associations, since it is priced below what would be the market rate. Mutual associations, as a practical matter, cannot raise equity capital except in the form of retained earnings. Hence, Kane shows, "insured S&Ls kept their net worth from falling below the level required to stay eligible for FSLIC insurance...by not realizing capital losses on their mortgage portfolios" (p. 90), even though this would have reduced their tax liability.

### **Field Examinations and Supervision**

Examinations constitute a principal means of reducing failures of banks and thrift institutions. National banks are examined by the Office of the Comptroller of the Currency at least twice every three years. State-chartered Federal Reserve member banks are examined by the Fed at least once a year, and other state-chartered FDIC-insured banks are examined by the FDIC and often also by state banking departments at least once a year. The Federal Home Loan Bank Board examines FSLIC-insured S&Ls annually. State-chartered S&Ls also are examined by some state banking departments.

The examiners look at the documentation and collateral for most large loans and a sample of small loans and they check the institutions' compliance with federal and state laws. Loans are classified into loss, doubtful and substandard categories. The institutions' managers and management procedures and policies also are evaluated.

If an institution is found wanting, it is characterized as a "problem" or "serious problem" and subjected to closer scrutiny and more frequent examinations.

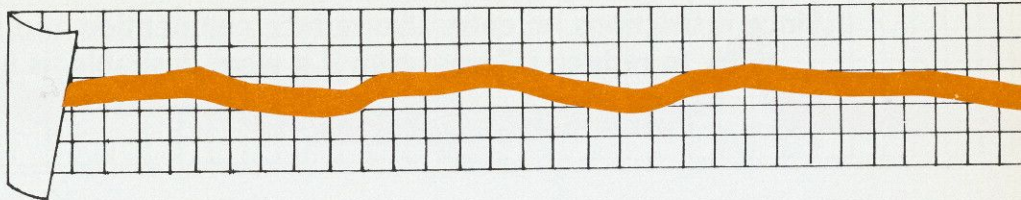
Although it seems clear that examinations of some sort are a necessary aspect of deposit insurance (given its built-in incentive towards risk-taking), there is reason to question the usefulness of examinations for preventing many failures. The examiners' ability to uncover serious problems of fraud and insider dealings appears to be far from perfect, judging from FDIC reports and published research. Among the 56 bank failures that occurred between January 1959 and April 1971, fully 59 percent were rated as "no problem" at the examination just prior to their failures.<sup>10</sup> The principal reasons given for the 56 failures are: fraud and irregularities, 66 percent; brokered funds and loan losses, 27 percent; and inept management, 7 percent.<sup>11</sup>

A more recent study by Sinkey (1977) uses a different set of classifications but draws similar conclusions. He finds that, of 84 failures between 1960 and mid-1976, some 54 percent resulted from improper insider loans or out-of-territory loans involving brokered funds, 30 percent from embezzlement or manipulation, and 17 percent from managerial weakness in loan administration (p. 27). In an earlier failure study by the FDIC, Hill (1975) found similar proportions. It cannot be ascertained, however, whether this record is close to the best possible, in the sense that the cost of preventing more failures would have exceeded the benefit. Also, the more recent record has not been studied.

The effectiveness of the FSLIC's examiners has been studied only with respect to the relatively large number of S&Ls in Illinois that required the FSLIC's financial assistance from 1963 through 1968. These 19 losses represent 75 percent of the total losses suffered by the FSLIC over the period. Bartell (1969, p. 353), stated that he

<sup>10</sup>Benston (1975), Table XIII, p. 43.

<sup>11</sup>Benston (1975), Table XI, Table XI, p. 40.



identified nine associations where failure could be attributed primarily to management deficiencies or errors of judgment. In these cases the management apparently believed that the actions which later caused failure were taken in the best interests of the association and its savers. In the second category were 10 associations where fraud, influence, defalcation, or some other criminal intent was the principal cause of failure. In all of these cases, one or more of the officers, directors, and/or major stockholders was indicted for misapplying association funds, and in most cases convictions have been obtained.

With respect to the examinations, Bartell concludes that they were well done; if anything, they were too thorough (p. 418). But, he states, "In contrast with the generally high quality of examinations, supervisory performance in the handling of failed associations leaves much to be desired" (p. 419).

Supervision of financial institutions is functionally related to, though not necessarily dependent on, field examination. To a limited extent the supervisors can specify the portfolios of assets and the nature of the liabilities that insured financial institutions can hold. Supervisors enforce a limitation on loans to any one borrower and they restrict loans to officers, directors and shareholders. They can also restrict the types of loans and investments that can be made. Field examinations to ensure that the regulations are observed would appear to be necessary, particularly where activities conducted at less than arm's length can occur. But the supervisors also can use statistical models and computers to analyze data reported by the institutions for signs of possible problems. Such systems have been used by every federal agency and several state agencies since the mid-1970s.<sup>12</sup> But, as Flannery

and Guttentag (1980) conclude from their analysis of the early warning systems, these systems have not been validated; hence, we do not know how well or even whether they are effective for predicting failure. In fact, the systems appear to be used primarily as a more efficient means for the examiners to look at and structure data for their reports.

The supervisory authorities also must decide when to require an institution to discontinue a criticized practice (such as acquiring brokered deposits or making high-risk loans), dismiss an inept or possibly dishonest officer, obtain more capital from shareholders, terminate insurance,<sup>13</sup> or close or arrange for a merger with another institution. Before the Financial Institutions Supervisory Act of 1966 gave federal supervisors authority to issue cease-and-desist orders, the principal legal sanctions available were cancellation of insurance and seizure of an institution for liquidation or reorganization. Since 1942, the principal procedure used to handle failing banks has been a sale of the bank to an institution that assumes liability for both insured and non-insured deposits.<sup>14</sup> Payoffs limited to insured depositors generally have involved only small institutions located in unit banking states that do not permit another bank to acquire and operate the failed institution as a branch. Recently, in the case of Oklahoma's Penn Square Bank, the poor and questionable condition of the bank's assets precluded its sale. Because they are government agencies, the FDIC, FSLIC, and NCUIF have the power to close an institution before the market value of its assets is less than its insured deposits, which can prevent losses to the insuring agencies except in cases involving rapid deterioration or fraud. But they may also be subjected to political pressure and to the reluctance of a supervisory agency to admit that one of "its" institutions has to be closed.<sup>15</sup>

<sup>12</sup>See paper on "Early Warning Systems for Problem Financial Institutions," in Altman and Sametz (1977, pp. 3-68) and Flannery and Guttentag (1980) for descriptions and critiques of these systems.

<sup>13</sup>If insurance is terminated, the institution's existing accounts continue to be insured for two years.

<sup>14</sup>See Barnett, Horvitz, and Silverberg 1977, pp. 308-317 for a good discussion of the advantages and disadvantages of the alternative procedures.

<sup>15</sup>Bartell (1969, pp. 419-421) documents the effect of prior congressional criticism of S&L closures on the reluctance of the FHLBB to follow the recommendations of its examiners expeditiously.

**“[Since restrictions on entry also reduce competition and service], restricting entry to reduce failures, even if it were desirable, is no longer feasible.”**

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Some critics have argued that divided authority among regulators also has reduced the effectiveness of supervision. While the FDIC and FSLIC have responsibility for insuring the deposits of state-chartered institutions, only the state authorities have the power to close the institutions. (Bartell reports that this was an important problem for the FSLIC with respect to the failing Illinois associations.) Holding companies are regulated by the Federal Reserve but their affiliated banks are chartered by the states and/or the Comptroller of the Currency. Shull (1980) finds in his analysis of holding company failures that, “the extent of actual conflict among federal banking agencies in holding company supervision, while difficult to quantify, is important, time consuming, and diverting in problem cases” (Vol I, p. 119).

### **A Changing Environment for Deposit Insurance**

Restrictions on entry and the encouragement of mergers have been effective in reducing failures, but at the cost of reduced competition and, therefore, less service to consumers and fewer opportunities for potential bankers. In any event, changes in technology, fueled by inflation-induced high nominal interest rates, have encouraged other, non-regulated suppliers of financial services to enter the market. Their entry no longer can be restricted. Hence, restricting entry to reduce failures, even if it were desirable, is no longer feasible.

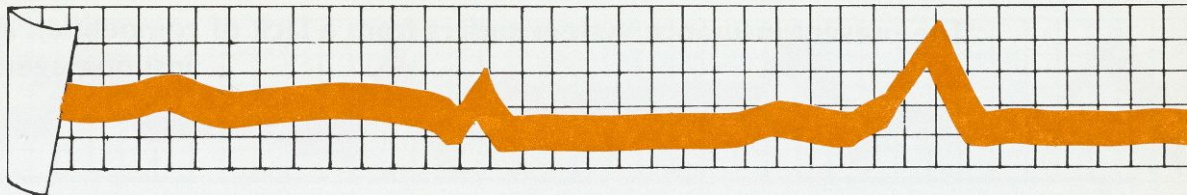
Capital adequacy requirements are desirable. But, to be effective, they must be tailored to the asset portfolio and deposit distribution of each institution. If too much equity is required, insured depository institutions will be disadvantaged and resources allocated inefficiently. If too little capital is required, institutions will be encouraged to take greater risks and the costs to the insurance agency are likely to exceed the fees it levies. Furthermore, capital adequacy is a very blunt requirement. It is expensive for financial institutions to raise capital (in addition to retained earnings) in relatively small amounts. Closely

held, usually smaller institutions, are likely to find floating equity quite difficult. Majority shareholders may lack the resources or may not wish to concentrate their wealth further, and outside investors frequently are unwilling to take minority positions except at a considerable discount. Mutual institutions also might find it expensive to market debentures.

Deposit insurance rates that vary with the riskiness of an institution's assets and liabilities have been suggested for years as a preferable means of dealing with the problem. However, the deposit insurance agencies still charge the same percentage to all institutions, partly because it is difficult to set variable premiums. (Indeed, none of those recommending this change have specified how the premiums should be determined.) But the same information is required for an equity requirement. Another reason for the resistance to change is that regulatory agencies believe the present system of field examinations and equity requirements, roughly determined and enforced though they may be, are adequate.

Finally, the present system may be politically desirable, balancing smaller institutions' benefits from having the premiums applied to all (including uninsured) deposits against large banks' benefits from an incomplete control of the risks they take. The residual risk ostensibly is borne by the deposit insurance agencies. But since the government is expected to stand behind the agencies, the general public is accepting the residual risk.

Field examinations have two major shortcomings. One is that they are expensive. Teams of examiners spend days to weeks at each bank, going over records in considerable detail. Not only do the insurance agencies and the institutions they charge for these services incur considerable costs, but the institutions bear such costs as disrupted operations and the expense of preparing and presenting requested data. The second shortcoming is the difficulty of prompt detection of problems precipitated by fraud or changes in an institution's economic environment. These are difficult to detect through periodic inspections of an institution's loan portfolio, management systems, and regulatory compliance.



A related problem involves our system of regulation. Supervisors may not be able to control potential problem banks as well when the banks are regulated by several agencies as when they are regulated by a single agency. For many commercial banks, especially the large ones, the chartering agencies (the Comptroller or the states) and the Federal Reserve have regulatory responsibility as well as the FDIC. This divided authority may permit some banks to take greater risks than an insurance agency acting alone would have permitted. But then, the temptation for an insurance agency to reduce risk at the expense of innovation must be recognized.

## Proposed Solutions

My analysis has concluded that mandatory deposit insurance is justified because deposits that are withdrawable on demand create the possibility of bank runs, which can visit considerable costs upon banks, their customers and others. The government has been charged with insuring deposits in part as a response to Depression-era political pressures by small banks, the home building industry and some depositors, and in part because the government has the power to enforce its orders on banks and cannot, itself, go bankrupt. Another reason for government intervention in insurance is that the government's control over bank reserves gives it the power to cause and the power to prevent massive numbers of bank failures.

The basic problem with government-provided mandatory deposit insurance is that it provides the insured institutions an incentive to take excessive risks. Consequently, the institutions must be examined and supervised. But there is danger that this process is conducted less efficiently and effectively because the responsible

agencies are monopoly suppliers of the insurance to each group of institutions.

The following changes in current procedures, I believe, would help reduce the costs of achieving the benefits from mandatory deposit insurance.<sup>16</sup>

1. **All** deposits withdrawable on demand, such as checking accounts, NOW accounts, money market deposit accounts, and passbook savings accounts, should be insured by a responsible insurer. The only exceptions would occur where deposited funds are invested in assets that have almost no probability of being worth less than the deposit liability (such as money market funds that are invested in a well-diversified portfolio of short-term government obligations or bank certificates of deposit). All demand-type deposits should be insured for two reasons. One is that runs on uninsured balances can force bank failures or a massive infusion of resources by the authorities to prevent a failure (as was done for the Franklin National Bank in New York). The second reason is that **de jure** deposit insurance is preferable to **de facto** insurance. The public generally believes that large banks will not be permitted to fail, but that smaller banks may fail. Since deposit insurance premiums are imposed on deposits of all insured banks, this **de facto** difference is inequitable.

2. Time-dated deposits (such as CDs, whether negotiable or not) need not be insured, as long as the holder can withdraw funds from the financial institution only at the time stated. (Obligations that permit withdrawal of funds with an interest rate penalty would be classified as funds withdrawable on demand.) Consequently, runs cannot occur with such deposits. In this respect, time deposits are no different from the debt obligations of other companies.<sup>17</sup> Of course, an institution may purchase insurance coverage for these obligations if it wishes. The advantage of this

<sup>16</sup>Also see Barnett, Horvitz and Silverberg (1977) and Scott and Mayer (1971) for analyses of suggested changes, some of which mirror the ones presented here.

<sup>17</sup>Though some time-dated obligations are payable almost immediately, institutions (and the insurance agency) have incentives to ensure that the amount due at any time is not excessive.

## **“The present insurance system suffers from a lack of competition among insuring agencies.”**

proposal is that holders of time deposits would monitor the issuing institution. Furthermore, the interest rate paid on the deposits could provide the demand deposit insurance agency with the market's assessment of the riskiness of the institution.

3. Commercial and mutual savings banks are regulated by several agencies, which can lead to conflicting authority and a failure to act in a timely fashion. The agency with the principal interest in supervising financial institutions should be the one that must bear the cost of their failure—the insuring agency.<sup>18</sup> Consequently, it should have the sole authority and responsibility for supervising the financial institutions it insures.

4. The present insurance system suffers from a lack of competition among insuring agencies. As a consequence, examination procedures may be too costly and poorly focused. Because they are monopoly suppliers of deposit insurance, the present agencies have less incentive to adopt more efficient and better directed procedures, such as risk-variable insurance premiums, tests of the predictive ability of statistical models, and research on optimally diversified portfolios. Because the regulatory agencies also are subjected to severe political criticism if “their” banks fail, they may be too restrictive in some instances. They should be faced with equating the marginal costs and benefits from failures and failure-reducing measures as are other insurance providers. Consequently, the following changes should be considered:

a. The Office of the Comptroller of the Currency (OCC) should become a deposit insurance agency, initially providing insurance (and supervision) to national banks. The Federal Reserve's Division of Supervision and Regulation should also provide insurance to the member banks it examines.

These changes would continue the present examination staffs as they are presently constituted, which would minimize the cost of change. The present FDIC insurance fund could be divided among the three agencies in proportion to the total demand deposits held by the banks they insure.

b. Any deposit insured institution should then be allowed to purchase insurance at the OCC, FDIC, Fed, FSLIC or NCUSIF. Thus there would be five potential competitors. Of course, an agency need not accept applications made to it. Each agency could offer its “customers” whatever terms it wished, much as does any insurance company, so long as the terms are offered equally to all clients that present equivalent risk. An agency should, however, give at least one year's public notice before cancelling the insurance on deposit balances. It also could require an insured bank to authorize the agency to seize its assets, given designated circumstances.

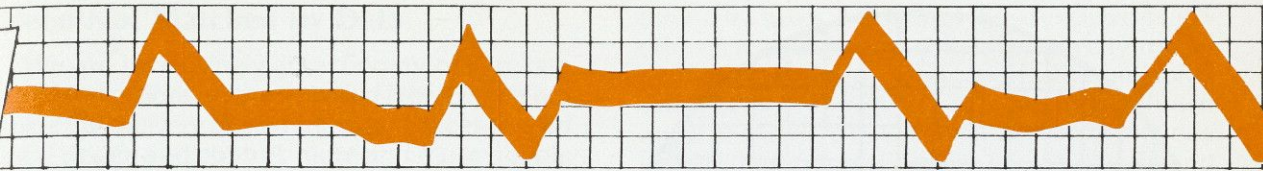
c. Any demand depository institution could obtain insurance from non-government insurers, including other banks,<sup>19</sup> if the insurer were accepted by the chartering agency. The non-government insurer could initiate clauses into its contract with the institution that would give the insurer rights similar to (or even greater than) those held by the government agencies. These might include restrictive covenants as to dividends, specified diversification of assets, minimum equity requirements, audits by CPAs or the insurance company's examiners, pre-agreement to cease practices or to remove officers, and seizure and sale of assets after a stated “danger” point is reached.

5. The preceding proposals do not cover the difficulties of insuring deposits in the face of unpredictable problems in the financial system as a whole, problems not controllable by individual institutions. In our fractional reserve banking

<sup>18</sup>See Benston (1963) for the analysis on which this conclusion is based.  
<sup>19</sup>The agency that insures the deposits of a bank offering deposit insurance to

other banks can adjust its premium accordingly or take other actions to control the risk.





system, a substantial decline in bank reserves for any reason can cause wide-scale banking failures. Such declines in reserves also are very difficult (perhaps impossible) to predict and, thus, deposit insurance premiums cannot be set actuarially. Therefore, to make non-government supplied

insurance feasible, the insurers should in some way be relieved of the cost of failures caused by substantial systemwide declines in bank reserves.

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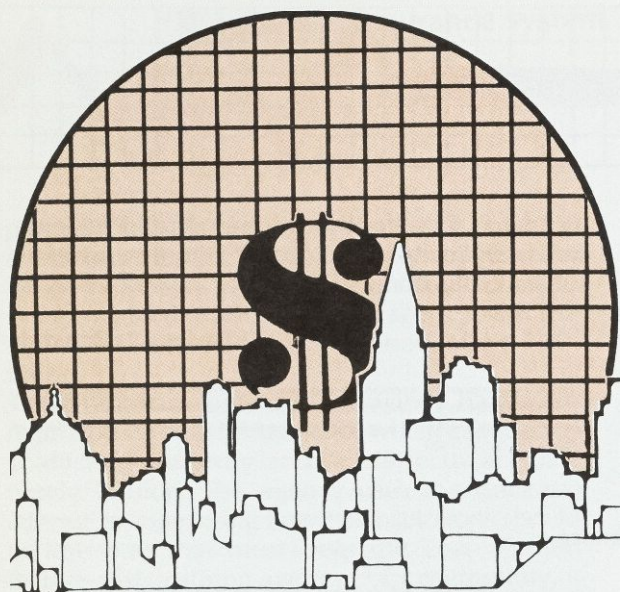
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## Measuring Local Economies with a New Yardstick — Transactions Deposits

The Monetary Control Act of 1980 made available new data on transactions accounts at the local level. A new Atlanta Fed analysis covering 43 southeastern cities suggests that the data offer an appealing alternative for measuring local economic activity.

Recent federal legislation apparently has handed researchers a promising new way to track economic activity in the Southeast's cities.

The Monetary Control Act of 1980 required not only Federal Reserve member banks but nearly all depository institutions to report their transactions-deposit totals to the Fed each week, thus providing current and valuable information about the rate at which the stock of money is growing. Because of the widely and strongly held presumption that a proportional relationship exists between money and income, we looked to see whether transactions deposits accurately mirror local economic activity.

In testing our theory by studying 184 banks in 46 cities across the country over a 10-year period, we found highly significant correlations between transactions-deposit growth and economic activity in seven years. One year yielded findings of marginal significance and two years showed no significant correlation. Those years

without noticeable links between transactions deposits and income fell during recessions, which leads us to urge caution in applying the transactions-deposit measure in recession periods.

We then applied the transactions-deposit measure to 43 southeastern cities from January 1982 to January 1983 and divided those communities into quartiles based on our measurement's indication of their relative economic activity.

Comparison of the 1982 measures for southeastern cities against our grass-roots knowledge of the region, however, suggests two anomalies. First, Alabama cities, where the recession hit the Southeast earliest and hardest, ranked higher in the transactions-deposit measurement than we would have expected. Second, we noticed that college towns also ranked lower than expected.

So again, caution should be exercised in applying the transactions-deposit measure in these situations.

## Need Not Matched by Data

We are increasingly an economy of separate cities and regions. As the so-called New Federalism shifts the delivery of government services toward local design and control, more and more people are becoming interested in local economies. Unfortunately, they quickly find that the availability of economic data does not match their interest. Several decades of effort and expense by government statisticians have produced an enormous amount of national economic data, but when we turn to look for good data on local economies, the cupboard is relatively bare.

Each set of available local data seems to have some peculiar drawback. Personal income is probably the best overall measure of local economic activity, but it typically does not become available on a local basis until about two years after the income is received.

Employment totals (for nonfarm jobs) and unemployment rates are available much more quickly, typically within two months of the period being measured, and are therefore the most satisfactory local data overall. But even here there are problems. These data are collected by the various states, and collection procedures and standards vary from state to state. Substantial revisions are commonplace.

Unemployment rates are interesting measures of local job markets, but they basically reflect the balance of supply and demand, rather than the rate of economic activity. Just as with the national unemployment rate, local rates are affected by the decisions of "discouraged" workers to stop seeking new jobs. Current data on employment, while timely in itself, tends to tell us where a city's economy has been, rather than where it is or where it is going. This is because employers characteristically are reluctant to discharge employees when activity softens, and slow to resume new hiring until they are certain recovery is genuine and until employees already on the payroll are completely busy.<sup>1</sup>

A few other measures of local economic activity sometimes are reported and discussed, but they are less useful than the employment data. Sales tax collections are intriguing, but they measure only retail transactions—and not all of those, since most states exclude various items from

their sales taxes. Because of these exclusions, it is difficult to use sales tax collections for city-to-city comparisons. Bank debits, basically the dollar value of checks processed, have never shown much relationship to economic activity. Telephone installations tend to reflect housing starts and mobility rather than overall economic activity. So aside from the monthly employment figures, we have no really satisfactory measure of local economic activity.

## New Deposit Data

At the end of 1980, a new source of data began to offer the prospect of an additional local measure. The Monetary Control Act of 1980 required all but the smallest issuers of checkable banking deposits to hold reserves with the Federal Reserve against those deposits. To facilitate the reserve accounting process and to assure the timely inclusion of virtually every financial institution's deposits in national measures of the money stock, the institutions were required to report their deposit totals to the Fed every week. Previously, only commercial banks that were members of the Federal Reserve had been required to report.

This is high-quality data. Its inclusion in the national money stock and the need for quick and accurate calculation of required reserves impel both reporting institutions and the Federal Reserve Banks to subject these data to an unusual amount of scrutiny and care. Reports from individual institutions, for example, are quickly subjected to comparisons with previous reports and with other data from the same institution. When such procedures give rise to questions about the numbers, the institution is called immediately to resolve them.

This is especially interesting, from the standpoint of local economic measurement, because it offers timely and high-quality information about the transactions deposits of each financial institution. On a national or macroeconomic basis, transactions deposits are a major component of the money stock. The stability of the relationship between the money stock and nominal income is well established, to the point that orthodox monetary theory is based substantially on it.

Theoretically, the idea that each additional dollar of nominal income requires a proportional increase in money makes as much sense on the local, state or regional level as it does nationally.

<sup>1</sup>See Bobbie H. McCrackin, "Southeastern Employment After the Recession," Federal Reserve Bank of Atlanta *Economic Review*, December 1982, p. 53.



Yet the relationship has attracted little empirical attention at the subnational level. This is partly because until recently reasonable measures of monetary deposits were available only from semiannual call reports, and partly because monetary economists have been preoccupied with national questions.<sup>2</sup>

Because of this strong presumption of a proportional relationship between money and income, the new data on transactions deposits offer an appealing and obvious alternative for measuring local economic activity.

## Constructing the Measure

In implementing this basic idea, we made several adjustments and choices to try to "design our way around" several additional problems. These problems and adjustments are as follows:

- (1) Recognizing that different cities exhibit different seasonal economic patterns, we measured the change in each city's transactions deposits relative to the same month in the previous year.
- (2) Recognizing that some transactions deposits, especially at large banks, reflect economic activity that is regional or national rather than local,<sup>3</sup> we selected the transactions deposits reported by four to six smaller banks selected from each city.
- (3) Recognizing that the most interesting part of each city's economic activity is the element which is unique to that city rather than the part it shares with other cities as components of national economic patterns, we chose to rank each city in relation to other cities in the Southeast.
- (4) Further recognizing that small differences between each city and the cities just above and below it were likely to be overemphasized upon publication, we decided to group the 43

cities into quartiles, and to list them alphabetically within each group.

Several other problems that did not particularly concern us are worth mentioning briefly. First, money should include the public's currency holdings as well as transactions deposits. But as long as the mix of transactions deposits and currency does not change in different ways from city to city, the grouping of cities according to year-to-year changes in transactions deposits should not be seriously affected.

Second, the movement of funds out of non-interest-bearing checking accounts and ordinary NOW accounts into the new MMDA and super-NOW deposits presents a more serious problem. Our telephone surveys about this situation during the time period in question (December 1982 and January 1983) suggest that funds entering the new accounts have come almost entirely from outside the offering institution (such as from money market mutual funds) or from higher-interest time deposits at the same institution. Because of this, we excluded time deposits from our measurement of transactions accounts. We did that even though broader measures of national money, such as M2, include such deposits, and even though many would argue that M2 has exhibited a tighter national relationship to nominal income in recent months than has M1.<sup>4</sup> Even so, our results may be distorted by movements out of demand deposits or NOW accounts, especially in Florida cities, where competition is particularly intense.

## Historical Tests

To check the validity of the relationship between transactions deposits and income historically, we used semi-annual call report data for 184 banks in 46 cities across the nation in each of the years 1970 to 1980. From each city we

<sup>2</sup>For an exception, see Robert E. Keleher and Charles J. Haulk, "Money-Income Causality of the State-Regional Level," Working Paper, Federal Reserve Bank of Atlanta, November 1979. This paper argues that at the state and regional level, changes in income precede changes in money, rather than vice versa. It is based on annual data.

<sup>3</sup>The Atlanta Federal Reserve Bank Check Study, Volume 1, p. 76. This study pinpoints banks having \$100 million and less, of deposits as doing business primarily in local markets. We increased this bank size to account for inflation since 1979.

sampled transactions deposits at independent banks with \$400 million of total deposits or less as of December 31, 1980. For the income figure we used personal income as defined and reported by the Commerce Department for individual cities.

As with our proposed measure, we took percent changes for both variables from one year to the next for each city. As a result, we were left with year-over-year growth rates for transactions deposits and income, which we analyzed using the "Kendall" correlation measure.<sup>5</sup>

The results were encouraging, with an important warning. Our 46-city, 10-period validation produced highly significant correlations for seven years, marginal significance for one and no significant correlation for two years.<sup>6</sup>

The local money-income relationship did not prove statistically significant for the periods 1972-73 and 1975-76. These were roughly the leading and trailing edges of the mid-1970s recession. These particular results urge caution in applying the transactions-deposit measure in recession periods such as 1982.

### An Additional Note of Caution

To implement the process, we used January 1983 over January 1982 transactions account data for 43 southeastern cities. In particular, recognizing the experimental nature of the whole approach, we divided the ranking into quartiles in a conscious effort not to overshoot the implications of the historical Kendall test coefficients or to attach undue importance to the detailed measurements.

We also realized the critical nature of the sample of banks to be used in each city. The sample banks in each city were selected in

consultation with the managers of the Atlanta Fed's branch banks responsible for each city. These men are in daily contact with the banks in their jurisdictions and know the personalities of each. Their help enabled us to simplify and strengthen the samples. We also checked to be sure that no city's transactions-deposit growth rate was dominated by data from one or two banks.

In computing year-over-year percent changes for the current ranking, we averaged three previous weeks with the current one to smooth any fluctuations. We did the same for the year-ago period. Our quartiles reflect changes between January 1982 and January 1983.

### Proof of the Pudding

These measurements produced the four groups of southeastern cities shown in Table 1. The proof of the pudding is whether these actual listings make sense in terms of other information we have about the Southeast. How do our measurements conflict or coincide, for example, with the state-by-state analysis published in the February 1983 Atlanta Fed **Economic Review**?

In general, the results are consistent and encouraging. Nevertheless, there are two rather distinct anomalies, which warrant caution and comment.

First, every city in Alabama emerged with a higher ranking, according to our deposit-growth measurement, than seems reasonable on the basis of what we know about the economy. Huntsville and Montgomery emerged in the first quartile. Florence showed up in the second quartile, even though the manufacturing concentration in the area has brought severe recession and driven the unemployment rate there to

<sup>5</sup>M1 includes currency held by the public, travelers checks not issued by banks, commercial bank demand deposits, negotiable orders of withdrawal (NOWs), automatic transfer service accounts (ATS), credit union share drafts and demand deposits at mutual savings banks. M2 adds to M1 small time deposits at all depository institutions, overnight repurchase agreements, Overnight Eurodollars and balances of money market mutual funds.

<sup>6</sup>Kendall correlation has two properties we found desirable in this application. It does not require that variables be normally distributed about their means.

And it discards the actual values of the variables and operates instead on the ordinal rankings of the values of each variable. The properties were important because we did not know the actual distribution of the two variables and because using the rank orders instead of the actual values introduced an element of conservatism into the analysis.

<sup>7</sup>We defined "statistically significant" as those correlations having a 10 percent, or less, chance of being an error.



**43 Cities in the Sixth District States<sup>1</sup>  
Ranked in Quartiles  
By Local Economic Activity**

**First Quartile (Highest)**

Ft. Myers, FL  
Huntsville, AL  
Jacksonville, FL  
Macon, GA  
Melbourne/Merritt Island, FL  
Memphis, TN  
Miami, FL  
Montgomery, AL  
Orlando, FL  
Sarasota, FL

**Second Quartile**

Albany, GA  
Atlanta, GA  
Baton Rouge, LA  
Bradenton, FL  
Clarksville, TN  
Florence, AL  
Ft. Lauderdale, FL  
Johnson City/Kingsport, TN  
Mobile, AL  
Nashville, TN

**Third Quartile**

Athens, GA  
Augusta, GA  
Biloxi/Gulfport, MS  
Birmingham, AL  
Columbus, GA  
Gadsden, AL  
Gainesville, FL  
Knoxville, TN  
Panama City, FL  
Pascagoula, MS  
Tampa/St. Petersburg, FL

**Fourth Quartile (Lowest)**

Alexandria, LA  
Anniston, AL  
Chattanooga, TN  
Jackson, MS  
Lafayette, LA  
Lake Charles, LA  
New Orleans, LA  
Pensacola, FL  
Savannah, GA  
Shreveport, LA  
Tallahassee, FL  
Tuscaloosa, AL

<sup>1</sup>Daytona Beach, Ft. Walton Beach, Ocala, West Palm Beach and Monroe, Louisiana were excluded because too few banks met the sample qualifications.

almost 20 percent. Huntsville and Montgomery, along with Tuscaloosa, have fared the best of Alabama's cities, but have not been strong in 1982 relative to most of the rest of the Southeast. In the second quartile, similarly, it is surprising to see Anniston and Mobile, along with the Pascagoula-Moss Point area across the line in southeastern Mississippi. We are unable to explain this anomaly, but it nevertheless stands out and suggests caution in interpreting these groupings for Alabama.

The recession hit Alabama first and hardest. Comparing the high Alabama rankings with the low historical validations in the recession years 1972-73 and 1975-76 suggests the Alabama rankings are recession-related. Still, this is not entirely satisfying, since Montgomery shares the

Alabama "premium" while Chattanooga, which resembles North Alabama in economic structure and recession severity, does not.

The other anomaly is that cities whose economies are dominated by large universities, such as Athens, Georgia; Gainesville and Tallahassee, Florida; Knoxville, Tennessee; and Tuscaloosa, Alabama, all fell lower in the distribution than we would have expected from our knowledge of southeastern economic activity. One obvious implication is that persons in the college community, particularly students, are more likely to have their funds in demand deposits or NOW accounts, and that transactions balance levels have been held down because students' families in other cities have been adversely affected by recessions there, rather than in the university cities.

Aside from these two patterns, the quartiles appear sensible in terms of our knowledge about the relative pace of economic activity in the Southeast.

The movement of financial institutions toward offering transactions accounts at market rates of interest, such as the super NOWs, will make the method of ranking cities described in this paper more effective. The ranking breaks down when, for example, depositors, on a large scale, draw down transactions accounts at the leading edge of a recovery to invest the money at interest. This will happen less frequently as greater numbers of depositors have their transactions balances in accounts offering market rates of interest. The trend is strongly in this direction.

What does all this mean? Basically that this transactions-deposit measure of city-to-city economic activity appears to hold up fairly well under the tests of theoretical plausibility, validation with back data, and coherence with our knowledge of the southeastern economy.

As more data become available for analysis, we will be able to subject our approach to the additional testing and refinement that the results of this article appear to warrant.

—William N. Cox  
and Joel R. Parker



# The Evolution of IRA Competition

Nearly a year after depository institutions were authorized to introduce individual retirement accounts, southeastern institutions are offering a broader range of plans and smaller banks are offering a more competitive selection of IRAs. An Atlanta Fed survey of the IRA experience in the Southeast provides insight into how banks and S&Ls will compete against each other—and against nondepository competitors—in a deregulated environment of the future.

New individual retirement account regulations that became effective in January 1982 allowed virtually unregulated competition for IRA funds among depository institutions, insurance companies and securities dealers. This type of unregulated competition has spread with the lifting of interest rate limits on certificates of deposit with maturities of 3 1/2 years or more in May 1982, and on certificates with 7-to-31 day maturities in January 1983 and the introduction of money market deposit accounts and super NOW accounts in late 1982 and early 1983. It will spread further as the Depository Institutions Deregulation Committee (DIDC) moves to remove interest rate limits before authority for such limits expires in March 1986. Developing IRA competition, thus, provides an opportunity to study the way institutions have reacted to opportunities for new unregulated competition. That, in turn, should indicate how they may react as deregulation progresses.

In January 1982 the Federal Reserve Bank of Atlanta surveyed 121 financial institutions operating in the Sixth Federal Reserve District about their original pricing of IRAs and the features of their accounts.<sup>1</sup> In order to track the evolution of IRA competition, we surveyed the

same commercial banks, savings and loan associations (S&Ls), credit unions, insurance companies and securities dealers in mid-November of 1982 with questions similar to those we asked the previous January.

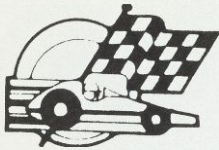
Their responses indicate that compared to January 1982:

1. More small institutions have begun to offer IRA plans.
2. Most institutions now offer a greater variety of plans.
3. Most of the larger institutions (and a few of the smaller ones) now offer payroll-deduction IRA plans.
4. Rates paid on accounts of the same maturity are more nearly equal among institutions of the same type and among different types of institutions.

They also indicate that:

1. Most institutions continue to offer rates that generally are competitive with those on alternative instruments.
2. Larger institutions offer slightly higher rates and a wider variety of plans than smaller ones.
3. S&Ls continue to offer somewhat higher rates than other institutions.
4. Securities firms continue to offer much greater flexibility in their IRA accounts.
5. Maintenance and service charges on IRAs are still common among insurance and securities firms but quite uncommon at depository institutions.

<sup>1</sup>"IRAs in the Southeast: A Laboratory for Deregulation" *Economic Review*, Federal Reserve Bank of Atlanta, Vol. 67 (May 1982), pp. 4-12.



*"National securities firms generally at least matched large banks in the number of plans offered and outstripped them in the variety of investment choice within each plan ...."*

## Background for IRA Competition

The new IRA competition in January 1982 was fueled by the expansion of both the number of people eligible to hold IRAs and the amount of income that could be sheltered from federal income taxes in an IRA. The DIDC's decision not to require a rate ceiling on IRAs also stimulated the competition.

The expansion of both eligible population and the maximum shelterable income was authorized by the Economic Recovery Tax Act of 1981. Until 1982 only individuals not covered by a qualified private or government pension plan were eligible to establish IRAs. The maximum amount of income that an individual could shelter from federal income taxes in an IRA in one year was \$1,500 or 15 percent of earned income, whichever was less. A couple could shelter \$3,000 or 15 percent of earned income if both were employed, or \$1,750 or 15 percent of income if only one spouse was employed. Beginning in January 1982, eligibility was expanded to include anyone with earned income. Maximum sheltered income was raised to the lesser of 100 percent of earned income or \$2,000 for an individual, 100 percent of earned income or \$4,000 for a couple who both earn income and 100 percent of earned income or \$2,250 for a couple with only one person earning income.

According to Treasury Department estimates, these changes expanded the number of people eligible to invest in IRAs from 35 million to 75 - to - 85 million. If each additional eligible person were to invest the \$2,000 limit, in just one year it would create an additional pool of IRA funds worth \$80 to \$100 billion. Such a pool provides the makings for an attractive market, particularly when price competition is unlimited.

This expanded market was opened to rate competition from depository institutions when the DIDC authorized commercial banks and thrift institutions to offer IRAs without interest rate, minimum deposit or service charge limitations. The major limitation imposed on these institutions was a minimum 18-month maturity. The

DIDC allowed depository institutions to engage in rate competition among themselves and with the insurance companies and securities dealers that also entered the IRA market enthusiastically.

In 1982 depository financial institutions moved aggressively to offer IRAs but the potential pool of IRA funds was, in reality, not totally allocated to those accounts. The number of offering commercial banks increased from 5,077 on December 31, 1981 to 9,645 on January 31, 1982. By June 30, 1982, fully 11,547 banks were offering fixed-rate IRAs and 8,240 banks were offering variable-rate IRAs. Similar increases were recorded by mutual savings banks. Funds in no-ceiling IRA accounts at commercial and mutual savings banks and S&Ls increased from \$600 million at the end of December 1981 to \$22.2 billion as of December 1982 (Table 1). Commercial banks attracted 50 percent of the increase, savings and loans got 42 percent and mutual savings banks the remaining 8 percent.

The IRA market is potentially large, and IRA accounts seem likely to stay in individual institutions where they are opened. The market is thus an attractive one for institutions that can offer the accounts. Our original survey of January 1982 provided evidence on the original offering rates and characteristics of IRAs in the expanded market created by the 1981 tax act. In our resurvey we sought to determine how rates and service charges had changed in the face of both generally falling interest rates and local competition, how other IRA characteristics had changed, how the variety of accounts had changed and whether more institutions had been drawn into the competition.

To develop evidence on these points we went back to the same 121 banks, savings and loan associations, credit unions, insurance companies and securities dealers that we had surveyed before. This group was chosen to represent the largest depository institutions of each type as well as smaller institutions in the states comprising the Sixth District—an area that covers all or part of Alabama, Florida, Georgia, Louisiana, Mississippi and Tennessee. The survey also includes 41



**Table 1. IRA/Keough Accounts Outstanding at Depository Institutions**  
(billions \$)

End of Period	All Institutions		Commercial Banks		Mutual Savings Banks		Savings & Loan Associations	
	Total	No Ceiling	Total	No Ceiling	Total	No Ceiling	Total	No Ceiling
1981 December	25.4 <sup>e</sup>	.6	7.4 <sup>e</sup>	.2	4.8 <sup>e</sup>	.03	13.2 <sup>e</sup>	.4
1982 March	33.1	7.9	11.7	3.9	5.4	.5	16.1	3.5
1982 June	N.A.	14.6	14.9	7.8	5.8	1.1	N.A.	5.8
1982 September	41.1	17.9	16.2	9.2	6.1	1.4	18.8	7.5
1982 December	N.A.	22.2	18.1	11.2	6.3	1.7	N.A.	9.3

e - estimated on the basis of incomplete data

N.A. - not available

Sources: Commercial and Mutual Savings Banks—Federal Reserve Board, "Money Stock Measures and Liquid Assets"

Savings and Loan Associations—Federal Home Loan Bank Board, *Journal* and staff, (total outstanding), "Savings and Loan Activity," (no ceiling accounts outstanding).

nondepository institutions—including both national and regional insurance companies and securities dealers.

## Number of Institutions Offering IRAs

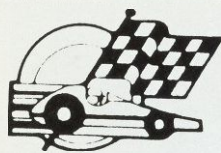
As was the case in January 1982, all large banks, S&Ls, national insurance companies and securities firms that we surveyed offered at least one IRA in November. The only large credit union not offering IRAs previously had instituted a plan by November. Most large institutions offered several plans. The median number of plans for large banks was four, and for large S&Ls it was three. The larger credit unions and national insurance companies generally offered fewer plans; national securities firms generally at least matched large banks in the number of plans offered and outstripped them in the variety of investment choice within each plan and the ability to move balances among plans. In January 1982, most larger institutions had offered fewer plans. For example the commercial bank with the most plans (12) in November had offered only six plans the previous January. Several larger banks and S&Ls surveyed in November also mentioned that customers might use other, non-IRA accounts, as IRAs in special situations—an option not uncovered in the earlier survey.

More small institutions offered IRAs in November than the previous January, and smaller institutions generally increased the number of accounts offered. The number of smaller commercial banks offering IRAs rose from 11 to 17, small S&Ls from 16 to 17 and small credit unions from one to three. An additional regional insurance company began offering an IRA, but three small regional securities firms dropped the instrument. (Table 2 shows the number of firms offering IRAs and the number of accounts offered).

## Principal Features of The Plans

In November 1982 the 18-month variable-rate IRA was still the most-offered account for banks and S&Ls. This account was offered by 74 percent of the institutions that offered an IRA. Eighteen and 30-month fixed-rate accounts also were offered by almost as great a proportion of these institutions. Variable and fixed-rate accounts with longer maturities were less popular, with frequency of offerings declining with maturity.

Indexes used in determining rates on the variable-rate plans were still somewhat varied. The most common indexes were: 1) current rates on the offering institutions' six-month money market certificate, or 2) its 30-month small savers certificate, 3) rates on one or another short-term Treasury security, or 4) a management decision, based on short-term market rates. Rates on



*"Our study indicates that S&Ls continue to offer somewhat higher interest rates than banks."*

Treasury securities were the index used most often.

Early variation in rates offered by institutions has diminished considerably, as we predicted in our earlier report. The rate differential between large and small institutions was not as great as in our previous survey. Although larger institutions generally offered more plans, they offered only slightly higher rates than smaller institutions on IRAs with the same maturities (Table 3). For example, the median rate paid by large banks on the 18-month variable-rate IRA was .15 percentage points higher than that paid by smaller banks in November as compared with .28 points in January 1982. The large banks' median rate on 18-month fixed-rate IRAs was only .06 percentage points higher than that offered by smaller banks versus 1.13 percentage points difference earlier.

Rate variance had declined among S&Ls also. The median rate offered by larger S&Ls on the 18-month variable-rate plan was .11 percentage points above that offered by smaller ones. Large

S&Ls' median rate on 18-month fixed-rate IRAs was only .03 percentage points higher than that paid by smaller S&Ls. Rate differences had been much greater in January 1982. Rate variance was also smaller between S&Ls and commercial banks. Median rates paid by large and small S&Ls on 18-month variable-rate plans were .13 and .18 percentage points higher than those paid by large and small commercial banks, respectively. Comparison of median rates paid on 18-month fixed-rate plans produced the greatest rate differences between S&Ls and banks. Large S&Ls' median was .29 percentage points above that of large banks. The median rate offered by smaller S&Ls was .38 percentage points higher than that offered by smaller banks; still these differences were much less than those found previously.

Our study indicates that S&Ls continue to offer somewhat higher interest rates than banks. In larger institutions, the highest median differential between large S&Ls and large banks was on the 18-month fixed-rate IRA, at .29 percent. This

**Table 2.** Institutions Offering IRAs

Type of Institution	Number Surveyed	Number Offering			Number of Plans For Institutions Offering IRAs		
		November	January	Median	November High	Low	January Median
Commercial							
Large	16	16	16	4	12	1	3
Small	18	17	11	2	5	1	2
S&Ls							
Large	16	16	16	3	10	2	2
Small	18	17	16	2	4	1	1
Credit Unions							
Large	6	6	5	2	4	1	2
Small	6	3	1	1	3	1	3
Insurance Co.							
National	9	9	9	2	6	1	1
Regional	12	6	5	2	2	1	1
Securities Firms							
National	8	8	8	4	5	2	3
Regional	12	6	9	3	5	1	1

**Table 3.** Interest Rates Paid on IRAs  
18 Month Maturity  
January and November 1982

	Variable Rate		Fixed Rate	
	Median Rate		Median Rate	
	November	January	November	January
Small Commercial Banks	9.11	13.07	10.00	12.75
Large Commercial Banks	9.26	13.35	10.06	13.88
Small Savings and Loans	9.29	12.72	10.38	14.00
Large Savings and Loans	9.39	13.54	10.35	14.45

differential is still close to the .25 percentage point differential commonly found in deposit rate regulation. On other accounts, the differential also was near .25 percentage points.

Rate variation also generally declined within size and institution categories. To measure variation we divided the standard deviation of rates in each category of institution by mean rate for the category for both types of 18-month accounts. These statistics—called coefficients of variation—are shown in Table 4 and illustrate the decline in variation. The coefficient increased only for the variable-rate IRAs offered by small banks. In the other categories it declined by as much as 35 percent.

A third factor other than rate and maturity possibly affecting the attractiveness of a particular variable-rate IRA is the frequency of rate changes. In early January a year ago, most institutions were setting their rates at monthly or longer intervals. In our November resurvey, we found few institutions setting rates at greater than monthly intervals and a larger proportion setting rates weekly. Smaller S&Ls and larger banks most often chose weekly intervals (see Table 5).

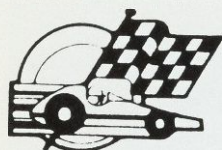
Fixed-rate instruments other than the 18-month account were offered by many institutions that we resurveyed. More institutions were offering the six-month money market certificate and the 30-month small saver certificate as IRAs than when we first questioned them. In addition to most large institutions, well over half of the small institutions were offering both of these fixed-rate plans.

Rates paid on the IRA money market certificate were still tied closely to those paid on regular money market certificates. The rates varied only slightly, with offering institutions paying a rate of around 8.569 percent, the highest allowed at the time of the survey.

The 30-month fixed-rate IRA was offered more often by banks than by S&Ls. Well over half of the banks offered this account compared to only 29 percent of the S&Ls. For both groups, the median rates were tied even more closely to the maximum legal rate set for small savers certificates than in the earlier survey. Fewer institutions than previously were paying rates that fell significantly below the Treasury note rate (Chart 1), indicating that IRA rates may have become somewhat more competitive with taxable alternatives.

In addition to the four plans discussed above, some institutions offered multi-year or open-maturity IRAs, the latter of which could be used to accumulate sufficient funds to invest in fixed-maturity time certificates. Over half of all institutions resurveyed allowed at least some of their regular certificates, such as a 91-day certificate, to be designated as an IRA. Over a quarter of the larger institutions were even more flexible, allowing customers to open any of their regular certificates as an IRA account.

Nearly all banks and S&Ls continued to shun establishment or service fees, although a few mentioned that they might begin charging in the future. One small S&L that had reported a set-up charge in the first survey has continued the practice. Only 6 percent of all surveyed banks' and S&Ls' IRA plans carried maintenance fees.



*"Almost all of the larger banks and S&Ls...offered [payroll deduction] plans to employers."*

Minimum initial deposits remained low for banks and S&Ls; more than half kept their deposit requirement at \$100 or less. For all plan types combined, a greater percentage of larger institutions had minimum deposit requirements of \$100 or less than did the smaller institutions. Minimum deposits were generally higher on fixed-rate accounts. For example, the all-institution median requirement for the 30-month fixed-rate plan remained at \$500; that for the popular 18-month variable rate plan was \$100. One large S&L, however, required a \$2,000 minimum on a second, higher yield 30-month IRA. This higher minimum IRA was offered in addition to the S&L's \$500 minimum 30-month plan. The account with the higher minimum yielded only slightly more. One small S&L had a similar arrangement

with its 18-month fixed-rate IRA. This account with the higher minimum also paid more.

Payroll deduction plans allow financial institutions to tap workers' savings at the source and allow workers to put away retirement funds automatically. We found in November that almost all of the larger banks and S&Ls that we surveyed offered these plans to employers. This is a considerable gain since January 1982 when most large banks but only half of the large S&Ls had such plans available. Small institutions continued to lag behind on these plans, showing little gain since the previous survey (Table 6). The large institutions' nearly unanimous adoption of payroll deduction plans may be a reaction to similar plans being offered widely by national insurance and securities firms.

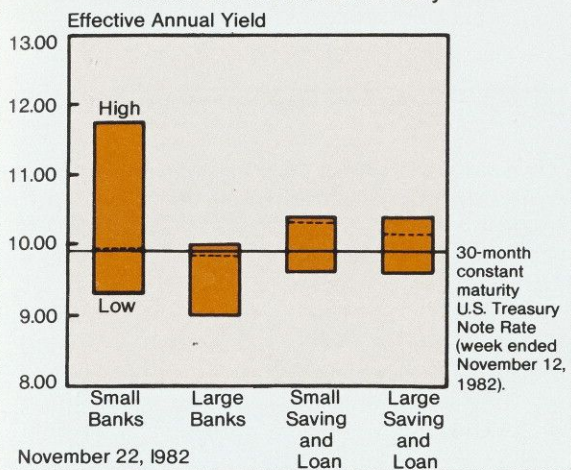
**Table 4.** Variation in Interest Rates Paid on IRAs  
18-Month Maturity  
November and January 1982

	Variable Coefficient of Variation		Fixed Coefficient of Variation	
	November	January	November	January
Small Banks	.0992	.0560	.0532	.0814
Large Banks	.0704	.0881	.0736	.0837
Small S&Ls	.0670	.0711	.0838	.0909
Large S&Ls	.0749	.1024	.0387	.0461

**Table 5.** Frequency of Rate Changes for 18-Month Variable Rate IRA Plans

	Daily	Weekly	2 Weeks	Monthly	Quarterly	No Set Schedule
Small Commercial Banks	0	20%	0	50%	30%	0
Large Commercial Banks	0	53%	0	40%	6%	0
Small S&Ls	0	56%	0	33%	0	11%
Large S&Ls	7%	33%	17%	40%	0	0

**Chart 1. Rates Paid on IRAs and U.S. Treasury Notes with 30-Month Maturity**



**Table 6. Institutions Offering Payroll Deduction IRAs**

Type of Institution	Number Surveyed	Number Offering Payroll Deduction IRAs	
		Nov.	Jan.
<b>Commercial Banks</b>			
Large	16	15	11
Small	18	3	3
<b>S&amp;Ls</b>			
Large	16	13	8
Small	18	5	1
<b>Credit Unions</b>			
Large	6	3	3
Small	6	3	1
<b>Insurance Co.</b>			
National	9	8	3
Regional	12	6	1
<b>Securities Firms</b>			
National	8	7	6
Regional	12	1	0

## Credit Unions

All six large credit unions resurveyed in November offered at least one IRA plan; only five had offered an IRA earlier. The average number of plans offered per large credit union was two. Only one large credit union was offering a variable-rate plan, its only plan. Three institutions offered two fixed-rate plans and one offered four.

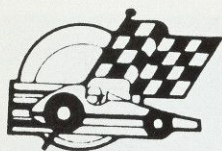
The fixed-rate plans ranged in maturity from 12 months to an open maturity. The two 12-month plans had effective yields of 10.9 percent and 9.01 percent, respectively; the rate of return on the 18-month variable-rate plan was 10.42 percent. The median rate on the three 18-month fixed-rate plans was 8.84 percent; that on the three 30-month fixed-rate plans was 8.9 percent. The median rate of return on the three open-maturity, fixed-rate plans was 8.3 percent. The median minimum denomination for all plans was \$500, quite similar to banks' minimum on fixed-rate accounts. Three of the six large credit unions offered payroll-deduction IRA plans.

Of the six small credit unions resurveyed, three were offering IRAs (a gain of two since January). One offered a fixed-rate plan only; while one offered three fixed-rate plans. One offered a variable-rate plan and a six-month money market certificate. The rate of return on the only variable rate plan offered was 10.98 percent. This plan had an open maturity and no

minimum denomination. Two of the four fixed-rate plans also had open maturities: one had a minimum denomination of \$5, the other had no minimum denomination. These plans offered 12.55 percent and 9 percent, respectively. The other two fixed-rate plans, offered by the same institution, had 18-month maturities. One had a minimum denomination of \$500 and a rate of return equal to 12.13 percent, the other a minimum denomination of \$2,000 and a return equal to 12.68 percent. Each of the three smaller credit unions offering IRAs offered payroll deduction plans.

## Securities Firms

Increasing flexibility and variety in depository institutions' IRA offerings brings them closer to their nondepository competitors, the securities and insurance firms. In November, however, these firms paid rates on their IRAs more similar to those paid by depository institutions than they had been previously. We surveyed eight national and 12 regional securities firms and found more of the national firms offering each general type of



*"Half of the regional insurance companies re-surveyed still were not offering IRAs."*

securities plan in November than in January 1982.

The eight national securities firms resurveyed continued to offer more investment options and greater investment flexibility than depository institutions. Self-directed, custodial, and money-market fund programs remained the three major investment categories. Most firms offering more than one program also continued to allow customers the option of moving funds freely among programs, dividing funds between them, or concentrating all funds in one plan.

All eight national securities firms offered a self-directed investment plan—a gain of two since January 1982. One firm offered only this type of plan. Self-directed investment programs included whatever investments the firm can offer: stocks, bonds, options, certificates of deposit, annuities, zero-coupon securities, limited partnerships, mutual funds, and others. Five of the eight national firms acted as custodians for their self-directed plans; three used banks as outside custodians. All eight firms' self-directed programs contained a provision for earning interest on or "sweeping" idle cash balances. Provisions for sweeping accounts varied. All firms swept accounts daily. Of the five firms acting as their own custodian, one swept all balances into a money market fund, two swept balances greater than one dollar into a money market fund, and two swept balances over \$250 into a money market fund. Of the three firms that used outside custodians, two swept all balances into a money market fund, one automatically swept all balances into a money market fund with a minimum balance of \$1,000.

Establishment fees for self-directed plans fell between \$20 - \$30 for seven firms, while one firm charged \$75. Annual maintenance fees for seven firms fell between \$20 and \$35 but were higher (\$50) for one firm. Six firms specified no minimum-deposit requirement; one required \$200, the other a minimum of \$250. Seven of the eight firms did not require minimum additional deposits for their self-directed plans, but one required minimum additional deposits of \$200.

Three firms attached commission fees for moving funds among investments, while five required no such fee.

Seven firms also offered custodial plans in which the customer invests in one type of mutual fund or another. Five of the seven offered one account, one offered two accounts, the other offered 10. Of the five offering just one account, establishment fees ranged from a maximum of \$15 to no fee at all. Maintenance fees for these five ranged from \$5 to \$15 per year. Minimum initial deposits for these same five ranged from no set amount to \$500. The two firms offering more than one custodial account replied that establishment fees, maintenance fees, and initial deposits would depend on which mutual fund was selected. The three investment directions for these mutual funds—short-term investments, equity investments, and bond and other short-term debt securities—were generally unchanged since our earlier survey.

In November, seven of the firms offered money market mutual funds for IRA investment, up from four in January 1982. Establishment fees for these accounts ranged from zero to \$25. Six firms required minimum initial investments ranging from \$250 to \$1,000. One firm required no minimum initial investment. Requirements for additional investment ranged from zero to \$50. The median rate of return on these money market funds, for the third week of November, was 9.42 percent—somewhat above the rate paid by banks and S&Ls on 18-month variable-rate accounts at that time but below the median rate on 18-month fixed-rate accounts at these institutions.

Of the eight national firms resurveyed, seven offered payroll-deduction plans. Three made available only their custodial plan for payroll deduction; four made available all of their IRA plans. Of these last four, two firms said they would work directly with the company to set up the most suitable program.

Regional securities dealers continued to act as intermediaries between national brokerage houses and their customers. Of the six firms offering

IRAs, one offered access to a custodial account, one offered a custodial and self-directed account, the remaining four firms offered all three investment options.

Each of the five regional firms offering custodial accounts offered at least three custodial programs. Establishment charges, maintenance charges, and minimum denominations for each custodial account depended upon which mutual fund was selected. All money market funds offered by four of the regional firms had outside custodians. Only one of these firms offered a payroll-deduction IRA.

## Insurance Companies

In January 1982, all of the national insurance companies surveyed were offering at least one version of an annuity plan to IRA customers. Indeed, these plans had been in place as IRAs for some time. Five of the 12 regional firms surveyed also offered such plans. By November another regional firm had begun to offer an IRA plan, and the variety of features offered in insurance firms' IRA annuities had increased.

Annuities varied in as many as three dimensions—type of investment and return, type of load, and type of premium. The first type of distinction, investment and return, had two basic options—the variable annuity and the fixed annuity. The variable annuity, usually self-directed, offered no guaranteed rate of return and offered as many as three investment choices: short-term investment, equity investment, and long-term bond and securities investment. Four companies offered variable annuity plans. None had establishment charges; their service charges varied from zero to \$36 a year.

Fixed annuity plans, on the other hand, offered a contractual rate of return, were not self-directed, and did not offer the investment flexibility of the variable annuity plans. Eight of the nine insurance companies offered at least one of these plans. Current rates of return ranged from 9.5 percent to 15 percent (on a slow changing variable rate plan) with a median rate of 11.50 percent. None of these plans had establishment charges. Their service charges varied from zero on half of the plans (generally those with lower yields) to \$36.

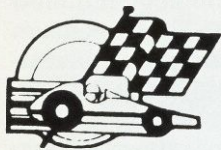
Three national insurance companies also described their plans according to the annuity's type of premium. These companies designated their plans as flexible-premium and single-premium

annuities. Flexible-premium annuities required small, monthly or annual payments. Single-premium annuities required one large lump-sum investment, usually rolled over from another IRA account. Of these three companies, one offered a flexible-premium, fixed-annuity plan only, the other two offered both a flexible-premium and single-premium plan. Of the two companies offering both, one offered the same rate of return on both plans (9.5 percent); the other company offered a higher return on its single-premium annuity than it did on its flexible-premium plan, 11.5 percent and 10.75 percent, respectively.

Two of the insurance companies also offered a custodial IRA account, similar to those offered by securities firms. Each offered customers four different mutual funds.

All nine of the national insurance companies resurveyed offered payroll-deduction plans. Four of the companies used the same plans as they did for their regular IRAs. Five used only some of their regular plans or had developed special payroll-deduction plans. Of these five companies, two offered both single-premium and flexible-premium annuities; both used their flexible-premium plans for payroll-deduction IRAs. Another company had a payroll-deduction plan with a higher rate of return than that earned by its regular IRA annuity; the other two companies had several, special plans for their payroll-deduction IRAs. These special plans used the general investment types previously mentioned: short-term investment, capital investments, and long-term bond and securities investments. With these special plans, employers invested annual, lump-sum amounts determined by a contract made between the employer and the insurance company. The insurance company charged a flat fee for maintenance of the annuities.

Half of the regional insurance companies resurveyed still were not offering IRAs. Three of the six that did were offering two annuity plans, the other three only one. All three firms offering two plans offered a single-premium, fixed annuity, and a flexible-premium, fixed annuity. One of the three companies paid a higher rate of return on its single-premium plan (13.25 percent) than it did on its flexible-premium plan (12 percent). The other two companies offered the same rates on both types of premiums. Of the three companies offering only one annuity, two plans were variable annuities with withdrawal fees, the other was a fixed annuity with both establishment and



*"Evolving IRA competition...made the surveyed institutions more alike in the types, characteristics and rates paid on IRAs."*

withdrawal fees. Rates of return on these three plans were between 12 and 13 percent. Two of the companies were using their flexible-premium plans for payroll-deduction IRAs.

## Summary and Conclusions

When we previously surveyed financial firms that were allowed to offer IRAs, we found that nearly all large firms were offering at least one plan and most offered several. We found fewer small institutions offering the plans, and those offering the plans paying lower rates of return than the larger institutions. Rates offered on IRAs varied considerably among individual institutions, types of institutions and sizes of institutions. National securities and insurance firms provided greater flexibility in their plans, but generally offered lower returns and assessed transactions charges not levied by depository institutions.

Evolving IRA competition seen in our November resurvey of the same 121 institutions brought changes that made the surveyed institutions more alike in the types, characteristics and rates paid on IRAs. More small institutions were offering

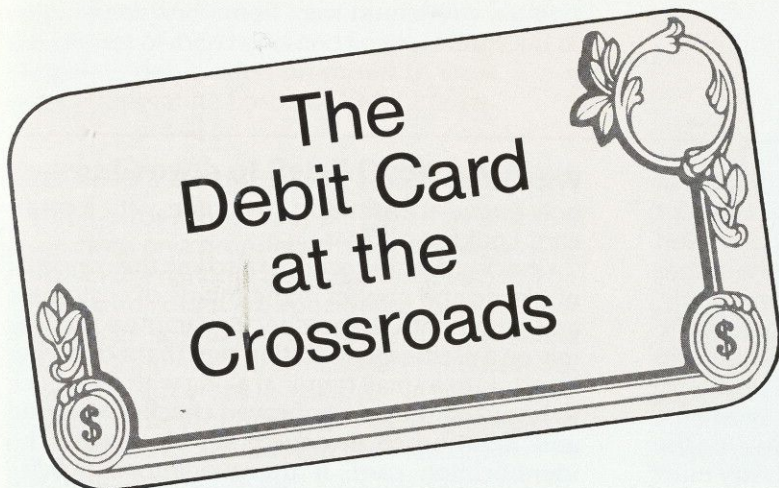
IRAs and most depository institutions had increased the variety of plans offered so that they more nearly mirrored securities dealers. More banks and S&Ls offered payroll-deduction IRA plans, again moving closer to their securities and insurance competitors.

Rates offered on IRAs were considerably more similar in November than the previous January. By almost any comparison among institutions, the rates have converged. The rates being offered in November had generally fallen since January, but no more than market rates.

The IRA experiment in unregulated competition may suggest the evolution we can expect as other deposit rate ceilings are lifted. If so, we may expect (1) institutions that hold back at first to be drawn into competition, (2) competitors to structure a variety of accounts to accommodate customer needs and mirror competitors' offerings and (3) rates offered by offering institutions to converge around market rates on alternative instruments.

—B. Frank King  
and Kathryn Hart





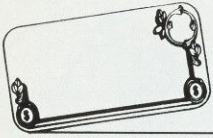
Pressures are mounting that could force merchants, bankers and others to resolve longstanding differences, clearing the way for the retail debit card to achieve its potential in tomorrow's payments system. But the consumer still must be convinced.

For several years, payments system experts have been predicting that plastic cards will replace checks and many cash transactions at the retail points of sale where goods or services are purchased. In these scenarios, plastic (debit) cards activate computer terminals at cashier stations or check-out counters to transmit payment instructions through an electronic telecommunications network linking retailers and financial institutions. When a sale is completed, the balance in a customer's checking account is decreased by the amount of the purchase almost instantly, while the balance in the retailer's account is increased.<sup>1</sup>

<sup>1</sup> Many of today's debit card transactions at the POS are paper-based. Debit cards are also used to access automated teller machines (ATMs), which may be located on-premise at some retail outlets. However, paper-based transactions, ATM access, and other transactions involving a plastic access card such as check guarantee services and credit card transactions, are outside the scope of this article.

This transition has not materialized on a large scale for several reasons. While the technology exists to link thousands of merchants and thousands of financial institutions in an integrated point-of-sale (POS) network, there has been no ground swell of support for the concept. The American consumer has not been receptive to the debit card alternative. At the same time, legal, fraud, security, and competitive factors have kept many financial institutions and merchants from developing and promoting the concept aggressively.

Although growth in the use of debit cards at the retail point of sale has been slow, recent trade periodicals include numerous announcements of new pilot tests of the concept. Throughout the nation this renewed interest in the debit card suggests that, even though earlier forecasts were far too optimistic, they may still prove accurate over the long run.



The recent spate of debit card experiments at the retail point of sale suggests that the concept is about to embark on a period of accelerated growth leading to a significant role in the future electronic payments system. More importantly, certain of the experiments suggest that some retailers have become willing to take a leadership role in developing the electronic debit card, with or without the active cooperation and assistance of financial institutions. However, to realize the full potential of the debit card, the industry must devote its attention to the thorny issues retarding its development.

## Evolution of The Debit Card

The debit card is evolving as an alternative to the check, for the customer's funds accessed in a debit card transaction are the kind traditionally accessed with a check.

The construction and layout of the plastic card used in a debit card transaction derive from the credit card. Generally, debit cards use the same embossing and magnetic-stripe technology used on bank credit cards. Often, the workflows for credit card and debit card transactions from merchants to facilitators are identical. Technologically, there is no reason why one card could not serve both a credit card and debit card role at the point of sale for electronic fund transfers.

Today, the debit card is used most frequently as an access device to automated teller machines (ATMs). ATMs have played an important role in the evolution of debit cards by familiarizing customers with the concept of using plastic rather than a check.

Financial institutions began developing what became known as debit cards as an ATM access device for their many customers without credit cards. While more than 80 percent of the nation's households maintain a checking account, only 35 to 40 percent hold a bank credit card.<sup>2</sup>

<sup>2</sup>The checking account estimate is from: Brown R. Rawlings, "Future of the Check," *Proceedings of a Conference on the Future of the U.S. Payments System, June 23-25, 1981*. Atlanta, Georgia: Federal Reserve Bank of Atlanta, 1981, pp. 52 and 61.  
The credit card estimate is from: *Payment Systems Perspective '82*. Atlanta, Georgia: Payment Systems, Inc., January 1982, pp. 46 and 48.

Without an access device such as a debit card, only financial institution customers with a credit card could use ATMs.

Check guarantee services also link the concepts of plastic and checks in the minds of customers and merchants. Some check guarantee services rely on a plastic identification card that a customer inserts into a small terminal along with the check to be guaranteed. An approved check is endorsed and returned to the customer along with the identification card. If the guarantor's policies have been followed and the check is approved, the merchant receives a "guaranteed" check.

While ATM access cards and check guarantee cards began evolving a debit card concept among consumers and merchants, spiraling costs in

### PARTIES INVOLVED IN AN ELECTRONIC DEBIT CARD TRANSACTION

Typically, a retail transaction using a debit card to transfer payment electronically involves three types of participants: customers, merchants, and facilitators.

**Customers.** One who buys a good or service and elects to make the purchase with a debit card. The customer may be buying for a business, but the focus of this article is the customer making a purchase as a member of a household unit.

**Merchant.** A retailer, professional, or service organization from whom the customer desires to make a purchase.

**Facilitator.** An organization that provides all or part of the electronic interface between a customer's checking deposits and a merchant's account.

For example, the customer may have a checking account balance at one financial institution and the merchant at another. Either or both of the financial institutions might operate the point-of-sale networks, or the merchant may have an arrangement with yet another organization to move funds electronically from its customers' accounts into the merchant's account. Any of these intermediate organizations—the merchant's financial institution, the customer's financial institution, or a third party network operator—could be referred to as a facilitator. Conceivably, as a few experiments are now demonstrating, the merchant can be a facilitator.

Therefore, a facilitator is any organization involved in transferring funds electronically from a customer to a merchant. Accordingly, the process of transferring funds electronically from customer to merchant is referred to as facilitation.

cash, check and credit card operations kindled the interest of merchants and financial institutions. Electronic debit cards promised to stem, if not reduce, operating costs for both groups.

### Recent Growth of Retail Debit Card Use

Debit cards in use today are issued by financial institutions on a proprietary basis or as a product of one of the national bankcard associations. The former cards often are considered to be local or regional in scope. From the outset, the latter cards were intended to be national or international.

Table 1 provides a glimpse at the recent growth in the Visa debit card as an example of how such cards are faring in the marketplace. At this time, the transaction volumes measure primarily paper-based debit card transactions, not electronic-based transactions. The number of financial institutions offering the Visa debit card is a measure of the institutions that have agreed to offer the card. Some are not yet offering cards even though they have signed agreements to do so.

Despite the impressive growth rate for the Visa debit card, the debit card—paper or electronic—has yet to impact appreciably the volume of credit card, cash or check transactions.

### Potential for Retail Debit Card Services

For the electronic debit card to become a major payment system, a vast array of customers, merchants and facilitators must be incorporated into electronic networks. Let's look at the formidable task confronting builders of an "electronic highway" for the nation's retail commerce.

**Potential for consumer use.** Households constitute the potential consumer market for retail debit cards. In 1980, there were about 80 million households in the United States. Of these about 59 million are classified as "family" households and the other 21 million-plus are considered "non-family" households.<sup>3</sup>

Customers often have several options for making retail payments. Table 2 shows retail customers' payment habits as indicated in a nationwide

**Table 1.** Visa Debit Card Growth Rates, 1982 and 1981

	1982*	1981**	% Chg.
Financial institutions offering Visa Debit Card	388	271	43.2
Quarterly transaction value (sales and ATM withdrawals)	\$544m	\$256m	112.5
Number of cardholders	3.1m	1.9m	63.2

m=million  
 \*Quarter ending June 30, 1982  
 \*\*Quarter ending June 30, 1981

Source: Mr. David Brancoli, Administrator of Public Relations, VISA USA, telephone interview December 10, 1982.

survey by Payment Systems, Inc. (PSI) of Atlanta during November and December 1981. The customers expressed strong reliance on cash, checks, and, in some instances, credit cards. Debit cards did not garner even an honorable mention.

The PSI survey also asked whether interviewees' financial institutions offered a debit card. Responses were:

- Yes. . . . . 30.8 percent
- No. . . . . 43.2 percent
- Do Not Know. . . 26.0 percent<sup>4</sup>

The debit card's support pales in contrast to the widespread availability and high levels of awareness enjoyed by its primary alternatives.

PSI also found that only 4.6 percent of the survey's participants actually held a debit card and that each used the card 6.4 times a month.<sup>5</sup> Asked whether they would use a debit card if their financial institution provided it, about 25 percent of PSI's respondents said they definitely or probably would.<sup>6</sup>

In sum, the base of actual debit card users is very small, while the base of potential users is large. Current debit card transaction volumes (primarily paper-based transactions) are small. For the electronic retail point of sale to become a viable alternative to cash, checks, and credit

<sup>3</sup>The Number News, Supplement to American Demographics, Volume 2 (March 15, 1982), p. 3. Note: This supplement was circulated in the April 1982 (Volume 4) issue of American Demographics.

<sup>4</sup>Table 43, "Payment Card Awareness and Usage," Payment Systems Perspectives '82. Atlanta, Georgia: Payment Systems, Inc., January 1982, p. 104.

<sup>5</sup>Table 43, "Payment Card Awareness and Usage," and Table 45, "Debit Cards Held and Use," Payment Systems Perspectives '82. Atlanta, Georgia: Payment Systems, Inc., January 1982, p. 104, 106.

<sup>6</sup>Table 46, "Likelihood of Using a Payment Card if Offered, Segmented by Region and Market," Payment Systems Perspectives '82, p. 108.



**Table 2.** Ways of Making Personal Purchases, November-December 1981

Type of Retailer	Method of Payment (Percent)*				
	Cash	Check	Bank Credit Card	Other Credit Card	Do Not Purchase
Food supermarkets	65.3	47.8			
Major department store	50.9	33.8	13.2	26.8	
Furniture/appliance store	32.1	36.5	14.1		18.1
Discount department store	62.0	28.4	9.4		10.7
Men's or women's clothing store	51.9	35.6	15.0		7.7
Gasoline service station	64.4	8.9	4.0	25.5	7.6
Restaurant (out of town)	72.2	3.1	16.7		9.0
Restaurant (at home)	85.4	7.3	8.5		5.1
Airline tickets	32.2	20.3	16.3	6.1	30.4
Hotels/motels	46.2	12.8	23.8		18.5

\*Multiple responses were allowed in the survey. Therefore, totals may exceed 100%.

Source: Table 5, Ways of Making Personal Purchases by Region and Market, **Payment Systems Perspectives '82**, Atlanta, Georgia: Payments Systems, Inc., January 1982, pp. 13 and 14.

cards, many more people must hold and use debit cards.

**Potential for merchant participation.** Table 3 profiles the size and diversity of U. S. retail outlets. For electronic debit cards to become a meaningful payment alternative, many of the nation's more than 650,000 retail outlets must be connected into an electronic network with the financial institutions where customers and retailers hold funds. Since stores often have multiple cashier stations or check-out lanes, plugging in to the "electronic highway" involves an even greater number of points of sale than retail outlets.

Even though the table's 1977 figures understate the number of retail outlets today, they make a pertinent point: The success of electronic debit cards depends on the rate at which retail outlets, especially those generating many transactions, connect with the electronic highway.

Extensive electronic highways already exist in Iowa and Nebraska. According to **Business Week**, the Dahl's Food Market chain in Des Moines uses one of these highways:

A Dahl's customer can pay his bill electronically with a proprietary debit card issued by one of 105 of the Iowa Transfer System's 592 members. A customer simply passes his plastic card through a magnetic-stripe reader built into a point-of-sale terminal that also functions as a cash register, punches in his personal identification number, and the amount of his tab is instantaneously transferred.<sup>7</sup>

Today, access to such an extensive local network is the exception, not the rule. Merchants in most areas of the country lack access to the shared networks enjoyed in Dahl's marketing area.

**The facilitator's role.** About 40,000 commercial banks, savings associations, and credit unions are potential facilitators—if and when they offer their customers debit cards and offer their merchant customers debit card terminals. Of course, not all of these institutions will operate switches.

<sup>7</sup>Electronic shopping builds a base," **Business Week**, October 26, 1981, p. 125.

**Table 3.** Retail Establishments: Types, Numbers and Sales Per Establishment, 1977

Type of Establishment	Number of Establishments	Annual Sales Per Establishment (\$)
Grocery	126,635	702,870
Department	8,807	8,732,764
Variety	14,152	490,978
Service station	146,523	366,829
Restaurant	237,728	228,857
Drinking establishments (alcoholic beverages)	70,886	97,359
Book store	7,589	226,949
Jewelry store	19,670	254,727
Florist	20,092	108,354
Camera shop	3,550	312,890
Liquor store	35,144	346,874
Sporting goods	17,147	243,304
Total	672,779	

Source: 1977 Census of Retail Trade, Volume II, Part I, U.S. Department of Commerce, Bureau of Census, November 1980, pp. 10, 11, 14, 16.

The majority will probably participate in shared networks, either directly or through a correspondent or national bankcard association.

Facilitators need not be financial institutions or bankcard associations. In recent years several large retailers including Sears, J.C. Penney, Kroger, and Safeway have sought larger roles in the delivery of electronic banking and payment services. For example, J.C. Penney stores now accept Visa cards and can access Visa's authorization system electronically. In fact, the number of potential facilitators grows and diversifies on what seems a daily basis.

From the perspective of customers, merchants, and facilitators, then, the debit card offers potential. Yet little of the card's potential has been realized so far.

### What's Impeding The Development of Electronic Retail Debit Cards?

Before the potential for electronic debit card transactions can be realized, several issues must be addressed: (1) the differing perspectives of merchants and financial institutions, (2) security and the potential for fraud, and (3) the economic incentives of the debit card and its alternatives. Response to these issues will determine how rapidly the card's potential becomes reality.

### The Conflict Between Merchants and Facilitators

For several years merchants and commercial banks have been at an impasse over how to implement electronic payment systems, especially retail electronic fund transfer (EFT) systems. The differing perspectives reflect differences in technologies being used, in terminal ownership, in customer bases, and in approaches to pricing the service.

**Technology.** Financial institutions typically base their debit cards on the magnetic-stripe technology used for years on bank credit cards.

Grocery stores, on the other hand, typically base their technology on an optical scanner that reads bar codes on product labels and transmits the information to an electronic cash register, or ECR. In this environment, the ideal debit card would incorporate customer and financial institution information in bar code-readable formats. In reality, supermarket tests usually rely on small terminals and magnetic-striped cards to effect electronic payments.

Department stores typically prefer optical character recognition (OCR) characters read from merchandise tags and proprietary credit cards with a hand-held "wand" or "gun." Product and customer information is fed into an ECR to effect electronic payments.

Finally, gasoline stations are experimenting with devices at the gasoline pump that use a card with a magnetic stripe. The cardholder's information is combined with transaction data generated at the pump to effect payment.

Financial institutions and each of these merchant factions are wedded to their respective investments. It is unrealistic to expect the merchant groups to give up their technology in order to accept electronic payments.

However, as terminal prices continue to decline, it is very reasonable to expect such devices to become more popular. For merchants unwilling to install stand-alone terminals, it is also reasonable to expect that many plastic cards will imitate the multiple technologies accessible in the forthcoming Visa electron card. One way or another, current differences in technology appear to be resolvable.

**Ownership of terminal devices.** Financial institutions tend to prefer owning the necessary terminals and charging merchants a user's fee for making transactions through them. On the other hand, retailers tend to prefer devices that are



integral components of their own electronic cash registers.

Accordingly, many merchants are amenable to paying a transaction fee, not including the cost of terminals, to a financial institution. But other merchants would prefer to own the terminals as well as the switch for their outlets and to charge financial institutions a fee for transactions. The importance of this issue should decline as merchants and financial institutions realize that the important issue is providing customers easy access to electronic debit card transactions, not how they are provided.

**Differences between customer bases.** Merchants began offering their own credit cards to build customer loyalty. They found that monthly statement mailings offered an effective promotion and sales medium. When bank credit cards became formidable alternatives, merchants were (and often still are) reluctant to honor them, fearing the cards could erode their customer bases.

Besides, the cashier station or check out stand represents something of a necessary evil to retailers because it costs money to operate and occupies valuable floor space that could be used for more profitable merchandising. Under these conditions, merchants are skeptical of wide varieties of plastic cards, all using different forms or terminals to complicate and slow down the purchase process. Furthermore, the previously stated reservations about bank credit cards also color many merchants' reactions to bank debit cards.<sup>8</sup>

Financial institutions, too, seek a competitive edge to retain their customer bases. Therefore, they are reluctant to share their EFT products with other financial institutions in their local market, even though the merchant may sell to customers of several institutions.

A stalemate results in which financial institutions refuse to cooperate and merchants reject EFT concepts until a way is found to use one terminal servicing all of their customers. This issue may

persist as long as financial institutions perceive themselves as the sole source of electronic services.

In practice, differences tend to disappear quickly when a merchant or another third party announces plans to offer the electronic service that merchants want and use. A perfect example is offered by Publix Supermarket chain in Florida, which is implementing an electronic payment capability for its customers. In the first stage, Publix will install ATMs at all its supermarkets to cash checks. In a subsequent stage, ECRs will offer an electronic payment option. Publix plans to own the terminals and to operate the switch, charging financial institutions for the transactions.<sup>9</sup>

Many financial institutions in Publix's market reacted rapidly and recently announced their own plans to form a shared network in Florida.<sup>10</sup> When implemented, the shared network will enable a large group of financial institutions to work together instead of individually to link merchants and financial institutions. Publix's entry proved a potent way to break the stalemate over proprietary versus shared networks.

**Pricing.** Merchants are critical of the national bankcard associations' rationale for pricing debit cards. Both MasterCard and Visa charge merchants identical fees for credit card and debit card transactions on the theory that processing costs are similar.

However, merchants contend that a debit card transaction saves financial institutions time and money compared to a check transaction. Therefore, merchants expect to enjoy some of the resulting savings.

The merchants' argument is one that financial institutions issuing debit cards will be compelled to answer to avoid nurturing debit card systems sponsored by merchants or other third party organizations. Given these alternatives, the conflict will tend to resolve itself as financial institutions make debit card pricing concessions to protect their merchant and cardholder bases.

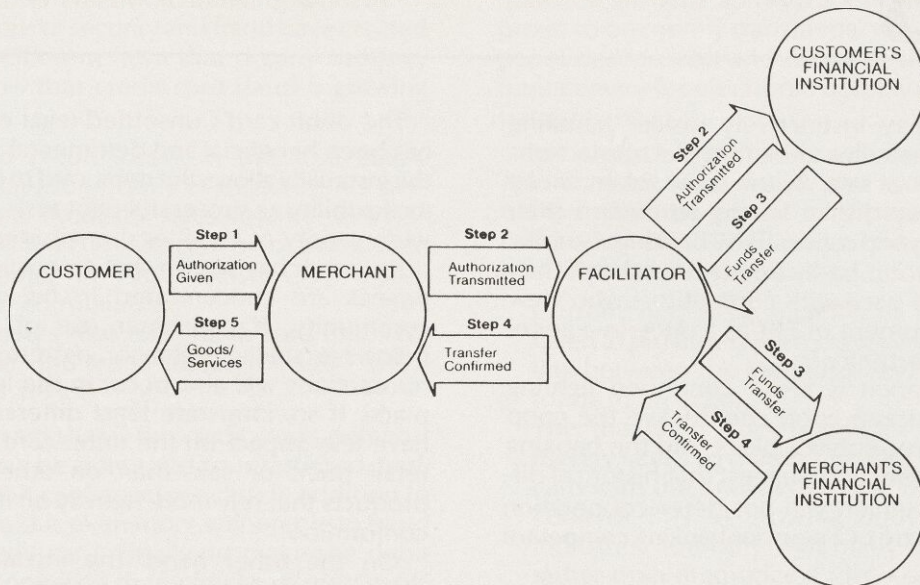
<sup>8</sup>Jeffrey Kutler, "Will Bankers and Retailers Ever Get Together?" *Transition*, Volume 2 (June/July 1982) pp. 25 and 26.

<sup>9</sup>Howard Jenkins, "EFT at the Supermarket Saves Time, Money," *American*

*Banker*, December 13, 1982, pp. 12 and 16.

<sup>10</sup>Robert M. Garsson, "Florida Banks to Link Systems Through Switch," *American Banker*, November 24, 1982, p. 16.

Chart 1.



Flows in a Debit Card Activated Electronic Funds Transfer at the Point of Sale

#### FLOW OF A RETAIL DEBIT CARD TRANSACTION

Chart 1 on this page presents the flow of information and funds in an electronic debit card transaction. Step 1 shows what happens when a customer authorizes a merchant to obtain funds from the customer's account at a financial institution to cover the price of goods or services to be purchased. One of several potential ways to do this electronically is for the customer to insert a debit card in a terminal device and, using a keyboard, to enter a personal identification number (PIN) and appropriate payment instructions.

Step 2 shows the flow of these instructions through the facilitator's network to the customer's financial institution. In industry parlance, a facilitator operates an electronic "switch" that shuttles data (whether it be authorizations, actual fund transfers, or confirmations) between merchants and financial institutions.

In step 3, the customer's checking account balance is reduced by the amount of the purchase. The funds

involved then flow from the customer's financial institution through the switch to the merchant's financial institution. There, the merchant's account balance is increased to reflect the purchase.

Step 4 shows the return message to the merchant and the customer at the point of sale confirming completion of the funds transfer. This confirmation concludes the electronic portion of the transaction process.

Step 5 concludes the transaction process by transferring the goods or services from the merchant to the customer.

The funds transfer is handled electronically from start to finish. The only paper generated at the point of sale is a customer receipt and probably an authentication document for the retailer including, perhaps, the customer's signature, amount of the purchase, and other pertinent data.

In summary, several issues have stalemated efforts to establish an electronic point-of-sale. But the stalemate is about to break. The Visa electron card, which includes a magnetic stripe, bar code, and OCR information about the card holder, suggests that everyone's technology base

can be harnessed in one electronic highway for payments. The realization that benefits from retail electronic payments transcend the benefits of standing pat should hasten the debit card. For example, William S. Anderson, chairman of NCR Corporation, recently wrote:



Retailers may instinctively dislike handling what they perceive to be financial transactions at the point of sale. By the same token, many bankers may dislike having to extend their activities beyond conventional banking channels. Yet each group badly needs the other if they are to keep pace with competitors who view the development of EFT as a once-in-a-generation opportunity.<sup>11</sup>

The implication is clear: continued fighting within the chicken coop could leave the coop open to the fox. Publix's plans, and the banking community's reaction, suggest that historical differences of opinion will not deter cooperation when the spectre of a new nonbanking competitor appears.

## Legal Issues

Legal issues surrounding the electronic debit card are not substantially different from those experienced by other electronic payment systems. The issues arise from several factors:

Electronic funds transfer (EFT) services are governed by a complex combination of federal and state laws. Some of these laws were designed specifically to govern EFT, such as the federal Electronic Fund Transfer Act, which establishes consumer rights and liabilities in EFT transactions.

However, in many cases EFT services are subject to laws enacted well before EFT services and systems were developed. Not surprisingly, this combination has produced some anomalies. Indeed, new problems continue to arise under even the most recently enacted laws, illustrating the difficulty of drafting rules to govern an industry undergoing rapid change.<sup>12</sup>

By comparison, checks, cash, and even credit cards enjoy a legal "edge" over electronic debit cards in that they incorporate well-established precedents and offer a more compatible body of law among the nation's jurisdictions.

The debit card's unsettled legal environment has been beneficial and detrimental. Beneficially, the instability allows the debit card to demonstrate its flexibility as successful pilot tests operate in a wide variety of local legal environments.

Research has shown that a consumer's check payees are concentrated in his or her local community. If consumer use of debit cards follows a similar behavior pattern, most such transactions will also occur in the local marketplace. If so, interstate legal differences should have less impact on the debit card's use at the retail point of sale than on other electronic products that rely more heavily on national legal conformity.

On the other hand, the inconsistent legal environment impedes the nation's large retail chains in developing standardized nationwide procedures. The time and effort to adapt standard procedures to local regulation decreases the chains' profitability and, if costs are substantial enough, stifles adoption of innovations such as the electronic debit card.

The legal environment is improving, however. A New Uniform Payments Code is under review as a potential replacement for the existing Uniform Commercial Code.<sup>13</sup> Rapid growth in deployment and usage of ATMs is forcing legislative and judicial bodies to update statutes and to establish new precedents. The process is gradual, but it is the same evolution experienced by other payment systems. As controversial and conflicting provisions of EFT law subside, a more supportive legal environment will evolve for the debit card.

Yet it would be naive to suggest that today's legal environment encourages debit card usage. It is far from hospitable and will remain so for varying periods around the nation.

## Security and Fraud Issues

The debit card's creators envisioned a product usable by households either unwilling or unqualified to hold a credit card. Supplied with a

<sup>11</sup>William S. Anderson, "Electronic Funds Transfer is Reaching the Point-of-Sale," *American Banker*, July 28, 1982, p. 69.

<sup>12</sup>Theresa A. Einhorn, "EFT and the Law," *The Southern Banker*, Volume 158

(October 1982), p. 19.

<sup>13</sup>James V. Vergari, "Computer Images As Proof of Payment," *Transition*, Volume 2 (November 1982), p. 24.



debit card, financial institutions' credit-cardless customers could hold a plastic card that accesses ATMs and other electronic banking services.

But questions of security and fraud have created a reality far different from that dream. Industry statistics show that credit card fraud is growing rapidly:

Fraud and credit losses in the Visa U.S.A. system increased from \$94 million (0.63 percent of total domestic sales volume) in 1977 to \$450 million (1.36 percent of total domestic sales volume) in 1980. MasterCard losses have been comparable.

Visa estimates that total bank card and T&E card credit and fraud losses for 1981 were around \$1 billion.<sup>14</sup>

The debit card shares the credit card's potential for fraud. It can be stolen and counterfeited. And, since the debit card accesses cash in addition to merchandise, it is even more vulnerable to fraud than the credit card. Finally, to make the debit card more appealing than checks to merchants and customers, debit card issuers usually guarantee debit card transactions.

Financial institutions have taken several initiatives to combat their large and growing loss exposure. Issuers now tend to use the same criteria to qualify debit cardholders as they do credit cardholders. Likewise, issuers usually require the same floor limits for credit card or debit card purchase authorizations. Also, through a task force of the American Bankers Association, issuers seek measures to prevent fraud. Finally, Visa is providing merchants with on-line authorization terminals to detect and prevent fraudulent use of Visa credit and debit cards.

One unfortunate result of these restrictive measures is a debit card that does not serve the credit-cardless segment of the market. Instead, the limitations tend to qualify the existing credit cardholder base for yet another card, leaving many consumers still cardless.

Clearly, today's debit card is not the universal access card it was intended to be. But with the introduction of on-line authorization terminals at the retail point of sale, and a subsequent trend to replace authorization terminals with true electronic transaction terminals, debit card qualifications

are likely to be eased to include many who do not hold credit cards. If so, today's stringent qualification and authorization processes may prove to be merely transitional requirements for paper-based debit and credit card transactions, unnecessary for electronic debit and credit card transactions.

But electronic terminals will not eliminate all risk of debit card fraud. For example, many believe that the plastic card-personal identification number (PIN) technique of customer identification is inadequate:

Current norms of security...in general have failed to provide much more than a rudimentary link between the individual and his access to funds in an account...

The magnetic stripe card-PIN combination merely seeks to match a holder of the plastic card with the knowledge of a four to six digit code or PIN. A growing body of research indicates, ironically, that many cardholders—rather than memorize a PIN—carry a written copy of their PIN near their bank card. Others literally write their PIN directly on their plastic card.<sup>15</sup>

Some alternatives, such as signature dynamics and voice recognition, are based on nontransferable, biometric characteristics. However, none of these alternatives is considered economical yet on a large scale.

Even if an alternative becomes feasible, it faces a supreme obstacle—consumer acceptance. To some degree, each of the PIN's alternatives infringes on the customer's privacy. Even worse, each one fuels customers' uneasiness about a future world that is plastic, electronic, computerized and impersonal.

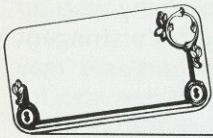
This uneasiness is just one aspect of the problem that electronic payments face in gaining consumer acceptance. Card issuers face a serious dilemma in choosing between growing losses from the card-PIN authentication techniques and potential consequences of authentication concepts now on the drawing board.

What conclusions can we draw from the puzzling issues of fraud and security? First, the problems are largely unquantifiable and, relatively speaking, still unaddressed. And second, fraud and security are important areas for future research. Their

<sup>14</sup>Update: Visa's terminal authorization network," *ABA Banking Journal*, Volume 74 (October 1982), p. 149.

<sup>15</sup>Robert Trigaux, "Direct Recognition Joining the Quill Pen," *American*

*Banker*, October 20, 1982, p. 29. Please note that writing the PIN on the card obviates consumers' protection under the Federal Reserve System's Regulation E.



continued neglect could allow massive frauds or losses that could inhibit the acceptance of electronic payment products for years to come. On-line terminals probably can reduce fraud. But without more extensive research, security and fraud issues could derail the electronic payment system.

## Economics

Not only does the technology for electronic debit card transactions exist today, but the cost of computer hardware, terminals, electronic switches, and communication lines is declining. By contrast, financial institutions supplying cash, issuing credit cards and offering individual checking accounts see the costs supporting these products increasing continuously. Merchants are experiencing similar cost increases.

These disconcerting cost trends are leading merchants and financial institutions to seek lower-cost alternatives for point-of-sale transactions. They hope to substitute electronic debit cards for many check, credit card, and cash transactions. But customer economics thwart their quest for widespread usage of debit cards. To put the economic issues in perspective, here are the respective positions of the financial institution, the merchant, and the customer.

**Issuing financial institutions.** The need to cope with escalating costs has driven issuers to seek lower cost substitutes for checks and credit cards. The electronic debit card fills the bill. Donald G. Long, a finance industry consultant with IBM, recently estimated that a check accepted by a merchant costs the banking system a net of nine cents—(13 cents handling and processing, less four cents deposit charges per item). In contrast, Long estimates that an electronic debit card, today, could more than halve the banking system's cost to four cents per transaction.<sup>16</sup>

The gap between the cost of a check and an electronic debit card transaction is expected to widen during the 1980s as labor and transportation

costs involved in check handling spiral and the costs of the electronic technology remain fairly stable or decline. Therefore, issuers should find the debit card an increasingly attractive alternative to traditional paper-based payments.

**Merchants.** Merchants, too, look longingly at the electronic debit card to help control expenses. For many retailers, the cost of handling checks, credit cards, and cash is becoming prohibitive. Further, some merchants detect other profit-inhibiting trends in the use of cash, checks and credit cards.

Two lines of retailing help explain why merchants find the electronic debit card more and more attractive. First is the retail grocery industry where, in 1981, the typical supermarket:

Cashed 2,786 checks per week, a staggering 63 percent increase from the...volume...reported in 1976....

At about 45 cents a check, the average store...paid about \$1,250 a week for check cashing. Since the average store...has weekly sales of \$150,000, checking costs now amount to 0.83 percent of sales—or nearly equal to the average supermarket's net margin (about 1 percent in recent years). By comparison, check handling costs...(in 1976) averaged only 0.46 percent of sales....

If POS programs can cut the supermarket's transaction cost to 25 cents or less, as organizers project, they can return supermarkets to their 1976 costs for accepting payments from demand deposits.<sup>17</sup>

The gasoline station offers the second case. The impetus for an alternative such as the debit card stems from (1) the increasing expense of major oil companies' proprietary credit cards, (2) the increasing risk in handling larger amounts of cash as gasoline prices rose during the last decade, and (3) the decreasing amount of gasoline purchased per visit using cash.

Some oil companies have addressed credit card costs by dropping their card, as did the Atlantic Richfield Co., or by offering discounts for

<sup>16</sup>Donald G. Long, "The Business Case for Electronic Banking," *Journal of Retail Banking*, Volume 4 (June 1982), pp. 19 and 20.

<sup>17</sup>"Grocery Check Volume Soars, reports FMI," *Bank Network News*, Volume 1 (June 21, 1982), pp. 1 and 3.

cash purchases. Either option entails increased risk both for gasoline stations that must keep more cash on premises and customers who must carry more cash.

Because of these growing pressures on supermarket and gasoline station profitability, these industries are now the target of many electronic debit card experiments and pilot tests. Many merchants also see the debit card as a profit generator through its potential to increase the amount of purchases per visit.<sup>18</sup>

Despite the conflict between merchants and facilitators, the two groups clearly share the problems of reducing costs and increasing profitability. As shown in the Publix case, the electronic highway has become so attractive to some merchants that they are willing to assume roles traditionally filled by financial institutions.

**Customers.** However, the customer has seen the economics quite differently. The customer has considered the debit card inferior to cash, checks and credit cards in an era where the prices of all alternatives appeared essentially identical. In such an environment, the customer's preference for the credit card, the check, and cash was a natural response.

Customers focus on the prices they pay to use each transaction alternative. In the past, convenience users of credit cards could pay off the balance due on the account every billing cycle. By doing so, they avoided interest expenses. Unless the issuer charged (1) an annual membership fee, (2) interest from the purchase date, not the billing date, or, (3) a per transaction fee, customers did not usually pay an explicit price to either a merchant or card issuer. Thus they enjoyed several economically worthwhile benefits that an electronic debit card, even when free, did not offer.

First, customers did not need cash to make a purchase. Second, they did not have to pay for purchases immediately, so they enjoyed the merchandise and an interest-free loan until purchases appeared on a monthly bill. And third, customers had legal recourses and rights with a credit card under the Fair Credit Billing Act superior to those with a debit card under the EFT Act.

These benefits yielded a better bargain than the electronic debit card, where funds transfer was immediate and legal rights were inferior. And, despite those differences, fees for the alternatives were comparable.

Compared to the debit card, the check was also economically superior from the customer's perspective. Even though customers paid an insignificant explicit or implicit fee for a checking account, the prices for a check transaction and an electronic debit card transaction were often identical. Besides, merchants often charged nothing for accepting or cashing checks. Checks take days to clear before customer checking account balances are reduced. What's more, customers could stop payment on checks if necessary during the collection process. In contrast, the electronic debit card required an immediate, non-stoppable funds transfer.

Finally, even today, customers seldom pay an explicit price for cash in a transaction. Yet merchants and financial institutions bear significant expenses—such as armored car services, secure storage of cash reserves or cash sales receipts, and theft insurance—to handle cash sales. Despite these real costs, cash transactions are usually free and, at some retail outlets actually are encouraged through discounts for cash purchases. Therefore, customers often have seen clear economic incentives not to use the electronic debit card.

But the past is now being seriously challenged. In the case of credit cards, the trend increasingly is toward pricing via annual membership fees and charging interest from the date of purchase, not the date of the monthly statement.

What's more, the deregulation of interest rates that began with NOW accounts and recently proceeded to super-NOW accounts is leading financial institutions to more explicit pricing of checking accounts. Merchants are moving from free check cashing to charging fees for check cashing, contracting with third parties to approve and guarantee checks, and, in some areas of the country, refusing to accept checks. The result for check writers is greater expense and, in some cases, less convenience.

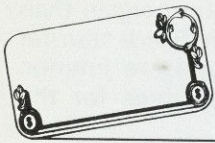
In the case of cash, the cost trends to the user are still very vague. Financial institutions have

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<sup>18</sup>However, merchants in some lines of retailing rely heavily on impulse purchases by their customers. These merchants like the credit card's ability to spur impulse buying behavior. They are wary of the debit card's access to checking account funds because customer perception of where the funds are coming from may curb impulse buying. The fear is minimized when

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issuers include an overdraft line of credit in their debit card products as they often do with checking accounts now. This observation was noted in an article by Robert L. Bartlett and Tim A. Butler, "Choosing Among Payment System Alternatives," especially pages 24 and 25, in the February/March 1982 (Volume 70), issue of *The Credit World*.



turned to ATMs to control cash dispensing costs. Incentive pricing is often used to stimulate ATM usage. Since merchants include cash handling costs in their merchandise prices, many customers are still unaware of the true costs involved in using cash.

At least in the case of credit cards and checks, customers will see their transaction costs rise as financial institutions and merchants are forced to more explicit pricing. At the same time, customers will find the electronic debit card to be a lower priced alternative for two reasons. First, the lower cost of debit card transactions will be reflected in lower prices. And second, merchants and financial institutions can be expected to use incentive pricing to stimulate the use of debit cards in lieu of cash, credit cards, or checks.

Merchants and financial institutions are becoming aware of the electronic debit card's significant cost control potential. Although costs are becoming more explicit to customers, transaction fees must become even more realistic before customers are strongly swayed from their traditional payment practices.

Since such a transition seems inevitable, merchants and financial institutions can control the transition's timing via the pricing strategies they pursue and their willingness to cooperate. The greater the emphasis on explicit pricing and cooperation, the sooner the transition will take place.

## The Debit Card's Potential Development

Assuming that the preceding issues are adequately addressed, the retailers most likely to adopt electronic debit cards appear to be supermarkets and gasoline stations, as well as the hybrid convenience store/self-service gasoline station. All three types of retailers generate large volumes of relatively small-value transactions, ideal for conversion from credit cards, checks or cash.

A synergy between several emerging electronic payment systems should accelerate the debit card's adoption process. First, ATMs are conditioning consumers to the immediacy of funds

transfer inherent in electronic payments. The value of such conditioning has been noted by perceptive retailers and is one reason why the first EFT implementations by many supermarket chains involve ATMs. Grocers can be expected to follow up ATM installation with debit card transactions at the point of sale.

The second step in the electronic debit card's evolution will occur when the debit card at the grocery store and gasoline station conditions customers to begin perceiving the debit card as an access card. When this threshold is crossed, the card will gain wider acceptance at other retail establishments.

The changed perception should also stimulate such concepts as home banking. As the debit card evolves into a funds access card, it seems likely to merge with the credit card and the truncated check into a true transaction card. The resulting card will embody, at the customer's election, any payment function authorized to him or her by the issuer.

The recently announced Visa electron card heralds the wedding of varying technologies of grocers, department stores, and financial institutions into a greater electronic "whole." Such a trend is consistent with efforts to develop a single access card for all transaction needs.

The debit card's evolution could move beyond a transaction card based on magnetic-stripe technology to an intelligent card with an embedded chip. More likely, though, is enhancement of the magnetic stripe to incorporate memory capability. As one of these alternatives materializes, it is likely that all households can use electronic payments for retail transactions, regardless of credit worthiness.

## Conclusion

The debit card is nearing a major crossroad in its development. Customer acceptance of paper-based debit card transactions has been lukewarm at best. Electronic pilot tests that demonstrate a definite savings potential for merchants and facilitators are occurring more frequently and among a wider range of retail lines. But customers

do not seek out the debit card. If anything, they tend to shun debit cards in favor of more traditional payment media.

Clearly, the customer is the pivotal ingredient in any migration to the debit card. Only when customers begin seeing an economic advantage to the debit card compared with its alternatives will they embrace the concept. The longer that customers can rely on underpriced alternatives, the longer it will take to evolve a more rational usage of lower cost electronic alternatives. It is difficult to conceive of widespread use of the debit card until its alternatives begin "paying their freight."

Surely the transition rate depends on other factors too. For instance, if financial institutions persist in advocating what merchants perceive as ineffective proprietary networks, the Publix Supermarket approach of internal ownership of ATMs and terminals may help convince merchants that they could do much of the banker's job without him. The handwriting is on the wall: merchants want an electronic point of sale system that meets their needs, and the source that provides it is a secondary consideration.

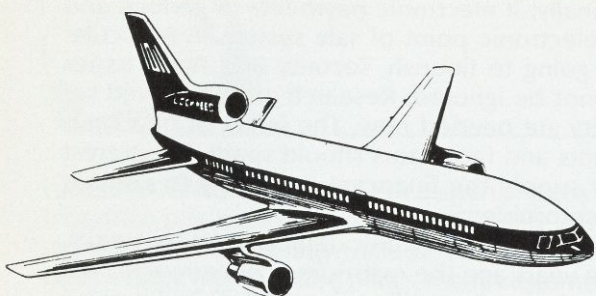
Finally, if electronic payments in general and an electronic point of sale system in particular are going to flourish, security and fraud issues cannot be ignored. Research and improved security are needed now. The influx of new merchants and facilitators should spark the interest and supply the financing necessary to address these problems.

Clearly, the electronic debit card has potential. Five years ago the overriding concern was "will there be an electronic point of sale?" Today, even though the number of electronic debit card transactions remains small, the concern now focuses on "who will own and operate the system?"

Even so, it is premature to declare the debit card a winner when words like "potential" and "ifs" abound in any assessment of the concept. The customer, above all, will determine the magnitude of the debit card's star. But the merchant and the facilitator control the key determinants of this potential. Only time will reveal how effectively they use their stewardship.

—Paul F. Metzker

*Note: Charles Haywood, a Research Department intern at the Federal Reserve Bank of Atlanta, collected statistics used in this article.*



# Air Cargo Cleared For A Takeoff

Despite a slowdown in airline traffic triggered by a national recession, the outlook for air cargo appears encouraging in a new operating environment free of most government restrictions on routes and rates. A new analysis suggests that the deregulation of air cargo five years ago has given a boost to the Southeast's major airports—seemingly at the expense of smaller communities and their airfields.

Five years after the Congress voted legislation lifting decades of government restrictions on the transport of air cargo, deregulation appears to have reshaped the movement of cargo in the Southeast.

The Cargo Reform Act of 1977, which preceded the more publicized deregulation of air passenger service by more than a year, has helped generate a wealth of new service for major airports such as Atlanta. Their tonnage figures and airport revenues have climbed, as passenger airlines and all-cargo operators alike have consolidated flights at cities with high population densities.

Not only did deregulation free existing carriers to compete for each others' business, but it opened the door to investors willing to gamble on creating new airlines. Many entrepreneurs have taken that plunge, even though the recession, high interest rates, air traffic control restrictions, mounting industry losses and high start-up costs have limited the growth of new airlines recently.

## Shift Toward Larger Hubs

Large southeastern airports have grown to handle about 90 percent of all cargo shipped in the region. The region's large hub airports have achieved that growth despite the braking effect of a lingering national recession. In fact, the region's large airports outpaced the nation's cargo tonnage growth by almost 24 percent from 1972 to 1981 (see Table 1). The large hubs have also gained in their share of the national total of enplaned cargo, moving from 11.5 to 14.2 percent during that same period (see Table 2).

Most of the gains enjoyed by big airports clearly have come at the expense of smaller airports in the region. Smaller facilities have seen their cargo service plummet since air carriers were given a free hand to curtail flights into less profitable cities. The severe impact of deregulation and the national slowdown on smaller hub cargo traffic is dramatized by Table 1. Enplaned revenue

**Table 1. Historical Growth of Southeast Air Cargo**  
(Enplaned Revenue Tons)

Large Hubs	1972	1974	1976	1978	1980	1981	Percent Change 1972 to 1981
Atlanta	120,765	123,286	120,736	152,274	159,528	162,932	34.9
Miami International	98,659	117,476	113,916	139,951	157,557	110,993	12.5
New Orleans	16,883	17,328	17,788	15,242	10,738	8,415	-50.2
Orlando	6,430	11,823	13,034	20,709	20,067	18,282	184.3
Tampa/St. Petersburg	14,219	15,417	15,135	15,600	16,618	13,250	-6.8
District Total	256,956	285,330	280,609	343,776	364,508	313,872	22.2
U.S. Total	2,236,999	2,420,751	2,376,632	2,667,571	2,481,251	2,205,284	-1.4
<b>Medium Hubs</b>							
Birmingham	3,065	2,313	2,223	2,781	2,237	2,095	-31.6
Jacksonville	3,159	2,812	2,473	2,582	2,345	1,829	-42.1
Ft. Lauderdale/Hollywood	2,752	5,053	4,900	8,632	9,154	10,910	296.4
Nashville	10,071	8,720	7,855	8,342	5,158	4,495	-55.4
West Palm Beach	1,428	2,155	1,786	2,064	2,409	2,175	52.3
District Total	20,475	21,053	19,237	24,401	21,303	21,504	5.0
U.S. Total	331,264	359,661	375,173	476,557	414,325	394,203	19.0
<b>Small Hubs</b>							
Augusta	802	642	769	751	579	429	-46.5
Baton Rouge	742	641	574	456	395	431	-41.9
Bristol/Kingsport	1,608	2,521	1,730	1,942	1,061	724	-55.0
Daytona Beach	631	651	684	791	596	475	-24.7
Fort Myers	561	366	380	860	1,059	1,081	92.7
Gainesville	N/A	N/A	237	209	302	175	N/A
Huntsville	1,954	1,938	1,228	1,362	689	602	-69.2
Jackson	2,117	2,028	1,849	2,201	1,684	1,503	-29.0
Knoxville	3,049	3,129	2,505	3,454	1,871	1,267	-58.4
Melbourne	493	509	458	456	347	301	-38.9
Mobile/Pascagoula	668	728	768	679	430	350	-47.6
Montgomery	921	840	711	765	490	642	-30.3
Pensacola	657	500	398	496	505	804	22.4
Sarasota/Bradenton	804	821	775	973	809	708	-11.9
Savannah	636	494	561	558	504	400	-37.1
Shreveport	1,986	1,922	1,977	1,676	1,606	1,412	-28.9
Tallahassee	332	347	323	429	218	595	79.2
Chattanooga	1,580	1,352	1,141	1,761	686	566	-64.2
Columbus	809	660	606	659	N/A	N/A	N/A
District Total	20,350	20,089	17,674	20,478	13,831	12,465	-38.7
U.S. Total	135,375	112,788	94,283	118,728	70,689	64,179	-52.6
Overall District Total	297,781	326,472	317,520	388,655	396,193	347,841	16.8
Overall National Total	2,703,638	2,893,200	2,843,088	3,262,856	3,493,325	2,663,666	-1.5

Source: Airport activity statistics (Civil Aeronautics Board)



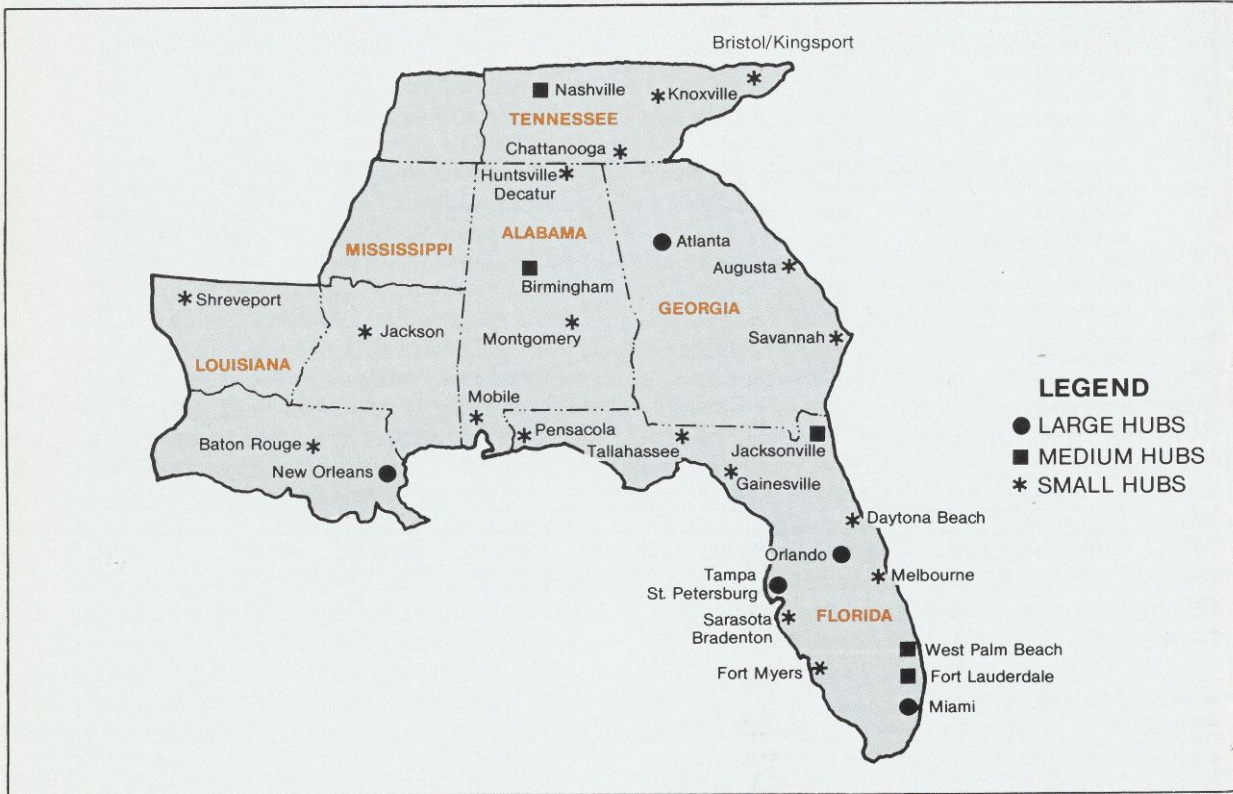
tons at small hubs in the Southeast nosedived nearly 40 percent from 1978 to 1981.

The shift in activity toward the larger hubs is important because airports, like airlines, are turning their attention to cargo to bolster revenues. For airports, those revenues customarily are generated by a combination of landing fees on aircraft operators and leases on passenger and cargo terminals. In addition, cargo-related expenditures, such as the wages paid to airline and airport workers, benefit the surrounding community as well.

Airport authorities also are relying more on the availability of cargo transportation as a selling point in promoting their facilities and their regions. Southeastern airports promote themselves, sometimes aggressively, on the basis of the region's

**Table 2.** Tons of Enplaned Cargo

Large Hubs	Percent of National Total	
	1972	1981
Atlanta	5.4	7.4
Miami International	4.4	5.0
New Orleans	0.8	0.4
Orlando	0.3	0.8
Tampa/St. Petersburg	0.6	0.6
<b>Subtotal, Southeast</b>	<b>11.5</b>	<b>14.2</b>
Medium Hubs		
<b>Subtotal, Southeast</b>	<b>6.2</b>	<b>5.5</b>
Small Hubs		
<b>Subtotal, Southeast</b>	<b>15.0</b>	<b>19.4</b>
<b>Overall Total, Southeast</b>	<b>11.1</b>	<b>13.1</b>





consistently good flying weather, a good highway system to enable truckers to haul goods easily from outlying areas, the availability of local U.S. Custom districts and the region's relatively recent creation of foreign trade zones. And air cargo has become increasingly important in that equation.

## Southeast Assumes Larger Role

Air cargo indeed is critical to the Southeast, an importance underscored by Miami International Airport's ranking as the world's fifth largest field in terms of cargo transport and Atlanta Hartsfield Airport's sixth-place ranking, as measured by at least one survey.<sup>1</sup> And Atlanta's airport, looking to expand its cargo business still more, is one of those embarking on a promotional campaign at trade shows to point out the advantages of shipping by air into or out of that facility.

The demand for air freight is a function of general economic activity, as well as air freight rates and the quality of service (which includes schedule frequency, speed, capacity, reliability of delivery time, and probability of loss or damage). Air cargo growth, then, appears to be closely related to business community growth—a relationship that helps explain the burgeoning Southeast's strong air cargo growth.

Within the region, population growth and industrial development alike help explain the emergence of individual air cargo centers. One reason for the apparent concentration of air cargo at the large hubs is that, because of population density, carriers base their marketing effort in such cities. Particularly strong advances in enplaned revenue tons also have occurred in areas such as Orlando, Florida, where many high-technology firms are located. That concentration also reflects the high-value products assembled in such an area, products that become logical candidates to be shipped by air rather than by slower surface modes of transportation.

Another reason for the Southeast's vigorous air cargo growth is the number of small business communities that need the service and the fact that manufacturing plants are more dispersed in the Southeast than in the North or Midwest.

Over 19 percent of the nation's revenue cargo tons<sup>2</sup> at small hubs were enplaned in the Southeast in 1981, at such cities as Augusta, Baton Rouge, Fort Myers, Knoxville, and Montgomery. Yet the region claims only a small portion of the nation's enplaned cargo at medium hubs—such cities as Birmingham, Jacksonville and Nashville.

## Deregulation Accelerates Trend

The Southeast's obvious concentration of air cargo operations at major airport hubs (see map) clearly has accelerated since deregulation.<sup>3</sup> Since the 1930s, the Civil Aeronautics Board (CAB) exercised restrictive control over both the routes that air carriers could fly and the rates they charged for both passenger and cargo operations. Generally, new competition was discouraged, whether it involved a proposed new airline or an older airline seeking to introduce new service in a market already served by a competitor. The CAB, protective of existing carriers and their traditional markets, frequently rejected petitions for new service—or delayed action until the applications were out of date. Under such restrictions, route expansion stagnated.

Similarly, airlines found it difficult to withdraw from any but the most unprofitable markets. Although the CAB theoretically adhered to a "use it or lose it" policy regarding cities' air service, it routinely ruled that even persistent losses weren't enough to allow an airline to withdraw from a market. The board's reluctance to permit airlines to pull out of markets preserved both passenger and cargo service artificially at some smaller cities that the carriers argued didn't generate enough traffic to warrant their flights.

Deregulation, though, gave airlines a virtually free hand to reduce or to eliminate service at unprofitable airports. Liberalized restrictions first cleared the way for the discontinuance of cargo operations and then, with the more encompassing 1978 airline deregulation bill, freed the carriers to discontinue passenger service as well. Deregulation permitted carriers to delete or add any city as long as the carrier gives the CAB 90 days notice. (The CAB currently

<sup>1</sup>Dade County (Florida) Aviation Department, from worldwide data assembled by the Airport Operators Council International, the British Airports Authority and Japan Air Lines.

<sup>2</sup>Enplaned revenue tons of cargo are the number of paid for tons of freight and express loaded on an aircraft including originating and transfer tons.

<sup>3</sup>Air traffic hubs are the cities and SMSA areas requiring aviation services.

Hub size is determined by number of enplaned passengers per year, which is directly related to the economic activity and therefore cargo activity of an area.

Large = 2,814,089 or more  
Medium = 703,522 - 2,814,088  
Small = 140,700 - 703,521



is winding down its remaining operations under a schedule that calls for it to be phased out by 1985. The board ended its regulatory control of fares as 1983 arrived, one year after it had relinquished its authority to regulate the routes flown by domestic airlines. Its surviving responsibilities include certification of new carriers and labor protection functions, activities that may be passed on to other agencies as the board goes "sunset.")

Airlines, taking advantage of their new operating freedom, have retrenched in less-profitable smaller markets to concentrate on the larger, more profitable ones. Table 1 verifies this by illustrating the dramatic falloff in the growth of cargo revenue tons at small and medium hubs in the Southeast; nearly every smaller community registered a double-digit decline during the period.

### Effects of Increased Competition

Ironically, the concentration of air cargo service at major hubs apparently has been encouraged further by deregulation of the nation's trucking industry in July 1980. When Congress voted to liberalize the traditional government limitations on new and expanded motor carrier service, it freed the air carriers' fleets of trucks to range farther in search of potential customers. Larger all-cargo airlines, in particular, have begun trucking freight over longer distances, picking up and delivering shipments in smaller cities for consolidation at major air traffic hubs to generate larger loads for efficient long-haul carriage. One cargo carrier explains that trucking deregulation freed it "to serve more cities by truck and consolidate package volumes for air movement, thus reducing the number of cities requiring direct service by air."<sup>4</sup>

The competitive free-for-all that followed deregulation's arrival not only has pitted the air cargo carriers against each other in vying for shippers but has sent them head-to-head with

trucking and rail competitors. That competition has stimulated rate wars and discounting that has proven costly to all the airlines and even helped speed the demise of a few.

Yet, from the standpoint of shippers, the competition has brought far greater choice in both price and service than existed during the era when airlines operated under the protective wing of government regulators.

Even for the carriers, the pricing flexibility brought by air cargo deregulation has brought advantages along with some pain. The airlines' cargo business, historically, has been cyclical. Recessions usually take a heavy toll on the nation's industry. When corporations experience financial problems, they take a hard look at transportation costs and cut back wherever possible at the expense of all transport carriers—but particularly hitting air cargo, with its higher rates.

Deregulation, however, has allowed the airlines to try a variety of rate options and pricing techniques, with some offering larger price reductions for guaranteed weekly or monthly contracts. Such innovations helped limit the airline industry's air cargo decline to 3 percent during recession year 1982 and should buffer some of the industry's cyclicity in the future.

By discounting prices, airlines also have been able to hold on to air cargo business that might have been lost to truck lines after Congress deregulated that industry's routes and rates. Large trucking companies have cut rates significantly since their industry was deregulated, making themselves more competitive. Trucking is considered to be the competing industry for air freight, especially for short distances where the speed advantages of air freight tend to be nullified. In 1978 the domestic air cargo average length of haul for the airlines was 1,135 miles.

### Air Cargo's Role in Airline Industry

Despite recent turbulence in rates, the evolving air cargo trade appears to offer a measure of stability for the troubled airline industry, which has been hurt by persistent recession. Passenger

<sup>4</sup>Federal Express 1981 Annual Report, p. 8.

revenues have plunged as corporations have cut back on discretionary business travel and nervous pleasure travelers have retrenched on their vacation spending. The major airlines, which reported a \$780 million profit in 1978, saw that profit slide to \$180 million in 1979—and have rung up record-breaking operating losses ever since. They reported an industry-wide loss of \$250 million in 1980, \$150 million in 1981—and \$600 million in 1982. That's a far cry from the industry's heady first year after the Airline Deregulation Act of 1978, when airline profits doubled with the help of a robust economy.

Airline sources estimate that more than 40,000 airline employees have been laid off since 1980, and many others have accepted pay freezes or wage cuts to help their companies stay in the air. One major airline—Dallas-based Braniff International—suspended operations last May, idling 9,500 employees, and asked for court protection under Chapter 11 of federal bankruptcy laws.

Declining revenues and rising costs for fuel and other necessities have jolted the profits of even traditionally profitable carriers. For 1982, for instance, Atlanta-based Delta Air Lines registered a loss of \$17.1 million, an unhappy reversal from its \$91.6 million profit a year earlier. The company blamed its uncustomary financial slowdown on a decline in passenger traffic, fare discounting and other factors largely beyond its control. Yet Delta's cargo revenues were up 3 percent over the year, suggesting that the freight business may retain some strength. At Miami-based Eastern Airlines, which lost \$74.9 million in 1982 and persuaded its creditors to relax the restrictions on a \$400 million loan agreement, air cargo revenue growth outdistanced passenger revenue growth for all of 1981.

The domestic air industry consists of two categories of carriers that haul air freight—airlines that carry freight in the holds of jet aircraft primarily devoted to transporting passengers, and the all-cargo carriers that carry cargo exclusively. Passenger/cargo carriers, which operate largely during daytime hours, dominate the cargo traffic share. All-cargo airlines, whose operations are concentrated during the night hours when businesses often want goods shipped, are fewer in number though they have multiplied since deregulation opened the door to new market entrants. The passenger/cargo carriers are divided into trunk carriers which serve major national markets and local service carriers,

which fly generally shorter routes between smaller cities.

Air cargo forwarders play an important and recently changing role in the air cargo picture. Forwarders traditionally limited themselves to contracting with the airlines, either passenger/cargo or all-cargo, to airlift the cargo they have picked up from individual shippers and consolidated for transport. In the mid-1970s, though, skyrocketing prices on jet fuel forced many passenger airlines to retrench their freighter operations. According to the Air Transport Association of America, fuel prices have increased 800 percent since 1972. Eastern Airlines, as an example, estimates it paid an average of \$1.01 a gallon for jet fuel in 1981, an increase of about 18 percent from the 86 cents paid in 1980 and nine times the 11.2 cents a gallon it paid in 1971. Eastern calculates that its fuel bill accounted for 29 cents of every expense dollar in 1980 even with more fuel-efficient modern jets, compared with just a dime of each expense dollar in 1973.<sup>5</sup>

Faced with awesome price hikes for fuel after the Mideast oil embargo, some major airlines in the mid-1970s sold off the quick-change jet aircraft they had been using to fly passengers during the day, cargo at night; others reduced flight frequencies between certain cities, particularly on shorter-haul routes, further limiting cargo airlift capability. To protect themselves, forwarders in effect created their own cargo airlines after deregulation dropped the barriers against such operations. Air forwarders found they had to buy or lease their own aircraft, according to John Emery Jr., chief executive officer of Emery Worldwide, if they were to maintain control of their operations and fulfill their promises of fast delivery.<sup>6</sup> Emery now operates a nocturnal fleet of 64 aircraft. Another forwarding firm, Airborne Express, not only operates its own fleet but owns its own airport—Airborne Air Park, a 450-acre facility in Wilmington, Ohio.<sup>7</sup> And United Parcel Service, which already boasted a nationwide system of trucks and terminals geared to small-package delivery, recently purchased used aircraft from troubled Braniff International and advertised substantially discounted rates for 48-hour service.

<sup>5</sup>Eastern Airlines 1981 Annual Report, p. 4.

<sup>6</sup>Emery Air Freight 1981 Annual Report, p. 4.

<sup>7</sup>Airborne Express 1981 Annual Report, p. 4.



While passengers may cut back on discretionary airline travel in lean economic times, many businesses owe their very livelihood to speedily delivered goods. Perishables ranging from strawberries to lobsters can be delivered from production areas to distant retailers. Timely publications, fashions, and cut flowers are examples of products that must be "fresh" to insure consumer interest and therefore produce sales. Air transport is therefore necessary for these products. Live animal shipments account for another growing segment of air-cargo freight, with Miami International a busy center for such shipments, many of them headed to or from Latin America.

Also important for manufacturers is air transport's ability to deliver parts quickly in response to unforeseen emergencies. The failure of a vital part in a production process could cost thousands of dollars in down time. Air express is especially suited for such urgent shipments as critical factory parts, since the customer can reserve a flight for his cargo just as he would if he were a passenger—even using the passenger schedule. In view of the time factor, it is not surprising that the leading commodities shipped by air, in terms of revenue, are electronic/electric equipment, machinery, auto parts, and printed material.

Control and security also constitute persuasive selling points for air freight. The time factor permits better control of inventories. Inventories can be kept lean and big orders can be ordered and flown in quickly, a capability that helps management avoid high carrying costs. Decisions can be deferred until nearly all factors involved in a decision are known. Air shipments also suffer less exposure to loss, damage, or mishaps during a day's cross country flight than during as much as two weeks of ground transportation. This relatively short travel time also makes it easier to track and recover a lost shipment.

Containerization offers another measure of security, as well as economy, by allowing customers to ship their goods in special containers that remain locked until they can be delivered to a customer firm's facility for unloading.

Eastern Airline calls these containers "flying warehouses." One wide-body plane can carry 16 of the containers, each capable of holding 3,150 pounds. The carriers can offer such shippers lower rates because they need handle only a single container rather than a multitude of smaller packages or crates.

### Small-Package Business Boom

Within the air cargo industry, the small-package segment has shown extraordinary growth in recent years. Some industry forecasters project that the small package/letter business will expand by 15 percent to 20 percent annually over the next decade.<sup>8</sup>

While general freight has broad restrictions as to size, weight, and type of commodity, limitations are much more restrictive for small package services. Small package shipments generally are restricted to packages of less than 70 pounds. They usually involve high-priority business shipments which are picked up at the shipper's door or a pickup station and which can be delivered as early as the following morning for customers willing to pay a premium.

Air Express, virtually as old as the airline industry itself, took off when the old Railway Express Agency teamed with the carriers in the early 1930s to offer a surface-air-surface, door-to-door system. Fast, frequent service was REA's hallmark. After World War II, though, as the automobile and airplane diverted rail passengers, REA went bankrupt. It took with it the ground transport system on which Air Express relied, and the service went into eclipse. But the demise of REA and Air Express proved to be a shot in the arm for new door-to-door type air courier services specializing in high value, top-priority shipments.

Growth in the small package sector is evidenced by Memphis-based Federal Express' explosive performance. Revenues for the company (a pioneer in the small-package field) in

<sup>8</sup>Airlines Newsletter, August 1, 1982, p. 84.

1982 were up nearly 40 percent from 1980. Federal Express operated a hub network that funnels flights from across the nation every night into a Memphis, Tennessee cargo base where shipments are transferred to other flights heading back out across its system. By its own estimates, Federal Express now handles more than 40 percent of the overnight door-to-door delivery business.<sup>9</sup>

When it was getting off the ground, Federal Express took advantage of a regulatory exemption by operating small jets that could fly into virtually any city as air taxis, generally unrestricted by Civil Aeronautics Board rules that prevented larger competitors from introducing service in new markets. Today, with CAB regulations governing routes and aircraft size generally eliminated, the carrier operates a fleet that includes large jetliners as well as its small Falcon jets. But it faces new competition for package business from the major passenger/freight airlines, also now free of CAB restrictions. Those carriers are stepping up marketing efforts to reap the rewards in expedited small package delivery, boasting same-day service that the overnight carriers don't match. Some airlines advertise that a package taken to their airport passenger counter or a special check-in desk will be put on the next flight out—guaranteed.

According to a spokesman for Eastern Airlines' cargo division, small packages represent air cargo's "hot growth" sector. Eastern and competing Delta offer small-package service under the names of Sprint and Dash, respectively. One recent airline entrant into the small package overnight market is United, the nation's largest passenger airline. United, expanding package service across the breadth of its 80-city passenger network, hopes to capture 12 to 15 percent of the market within the next two years. Flying Tiger Line, the first of the all-cargo airlines to introduce new service to selected southeastern cities after cargo operations were deregulated, also has taken the plunge into the small package market recently. Other contenders include organizations as diverse as Purolator Courier and, of course, the U.S. Postal Service.

If deregulation has provided the airlines with new flexibility to compete against truckers, the air traffic controllers' strike has limited their

options in the current slowdown. In past recessions, airlines enjoyed control over capacity. They could ground planes rather than continue flying them unprofitably. But the controllers' strike that began in August 1981 restricted the growth of flight "slots" at 22 larger cities. Although restrictions on arrivals and departures were imposed only to prevent remaining controllers from being overworked, the firing of controllers and protracted restrictions that followed have prompted airlines to continue money-losing flights to protect themselves. If they abandon flight slots, competitors can usurp the openings and be in a position to exploit them if the airline business should improve.

Yet, for shippers, some good news has come out of the controllers' strike. Restrictions imposed on peak traffic times have forced airlines to disperse their schedules more evenly throughout the day. This may be inconvenient to passengers, who prefer to fly during popular morning and afternoon hours. But shippers, especially those sending small packages, have benefited because their shipments can be sent out at more frequent intervals during the day.

## Summary and Conclusions

With traditional federal restrictions on air routes and rates lifted, the outlook for the air cargo industry appears encouraging despite the temporary braking effects of a nationwide recession. A Federal Aviation Administration forecast, for instance, predicts that the volume of air cargo handled nationally will virtually double by 1993.

Most of the growth is expected to occur at the large hub airports—a trend already clear in the Southeast. Major hubs such as Atlanta and Miami appear to be enjoying burgeoning cargo growth, which they are attempting to accelerate by promoting their advantages for shippers. Yet the big hubs' gains appear to have been achieved at the expense of smaller airports.

Smaller cities have lost some service—and with it, important revenues from landing fees and terminal leases—because deregulation of the air cargo industry permitted carriers to eliminate or reduce unprofitable flights. With deregulation, both cargo and passenger carriers were freed to cut back operations to airports that seemed to offer less potential for profits, just as they were authorized to introduce new

<sup>9</sup>*Ibid.*, p. 84.



service in attractive markets. When the airline industry functioned under the protective auspices of the Civil Aeronautics Board, new competition often was discouraged, whether it involved proposals for service by new airlines or requests by existing carriers to compete in other markets.

Ironically, the deregulation of motor freight has hastened the trend toward consolidation at major airports by freeing airlines' truck fleets to roam farther from hub airports picking up or delivering shipments. At the same time, trucking deregulation has stimulated rate competition between cargo-hauling airlines and truckers, who offer the keenest competition for air carriers over relatively short distances.

Although air cargo has seen its share of price competition since deregulation allowed carriers to compete on rates, it has proven relatively stable compared to the carriers' passenger operations. Corporate travelers and tourists alike have cut back on their trips in the face of the national recession. That economic slowdown, coupled with soaring costs for jet fuel and other industry needs, has brought bankruptcy to one airline and has pushed even traditionally profitable carriers into the loss column.

Air cargo, though, remains vital to producers with perishable goods to ship. Much of the enthusiasm in the air cargo industry is attributable to the vibrant envelope and small package segment. Those packages, often carrying business documents targeted for overnight delivery, have been growing faster than the

traditional so-called "heavyweight" shipments. Projections for that sector's growth appear encouraging even though advances in telecommunications could mean that less paper will be transported by air. The package sector's current growth has triggered a race for market share among a host of competitors, ranging from air cargo and passenger/cargo airlines to freight forwarders who are buying or leasing their own fleets of courier aircraft.

In the future, computer components and pharmaceuticals are expected to account for a greater share of air cargo volume. Intermodal containers that can be transferred from surface to air also are predicted to represent a growth area as producers streamline their distribution systems. To deal with the increased volume of air cargo, large airports will need to expand their cargo handling facilities.

In all, the deregulated economic environment appears to be favorable for the use of expedited cargo transportation. As the major carriers are forced to keep planes in the air because of competition for market share, more emphasis will undoubtedly be placed on cargo to utilize lift capacity that may otherwise be unused. Airports, following deregulation, also are looking more toward air cargo as a source of income to bolster traditional sources of revenue. The Southeast's large hubs should benefit measurably from increasing air cargo activity—but the role of the smaller airport remains a question mark.

—Donald E. Bedwell  
and David Avery

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# FINANCE

# STATISTICAL SUPPLEMENT

	JAN 1983	DEC 1982	JAN 1982	ANN. % CHG.		JAN 1983	DEC 1982	JAN 1982	ANN. % CHG.
<b>\$ millions</b>									
<b>UNITED STATES</b>									
Commercial Bank Deposits	1,245,657	1,197,213	1,120,920	+ 11	Savings & Loans				
Demand	323,040	294,695	328,111	- 2	Total Deposits	555,331	541,817	518,445	+ 7
NOW	68,480	66,498	54,615	+ 25	NOW	13,552	12,670	8,562	+ 58
Savings	219,609	155,568	148,931	+ 47	Savings	123,850	96,764	93,396	+ 33
Time	663,786	701,700	625,036	+ 6	Time	420,241	433,573	417,429	+ 1
Credit Union Deposits	52,279	52,030	40,734	+ 28	NOV				
Share Drafts	4,193	3,874	2,645	+ 59	OCT	479,943	481,215	509,914	- 6
Savings & Time	43,383	43,329	35,580	+ 22	NOV	19,549	18,307	15,686	+ 25
<b>SOUTHEAST</b>									
Commercial Bank Deposits	136,675	128,544	120,231	+ 14	Savings & Loans				
Demand	37,302	34,163	37,602	- 1	Total Deposits	81,262	79,488	76,020	+ 7
NOW	8,956	8,700	6,960	+ 29	NOW	2,363	2,081	1,398	+ 69
Savings	23,719	15,282	14,764	+ 61	Savings	15,531	11,936	11,824	+ 31
Time	69,902	72,684	64,599	+ 8	Time	63,965	65,754	62,926	+ 2
Credit Union Deposits	4,993	4,932	4,077	+ 22	NOV				
Share Drafts	369	345	281	+ 31	OCT	67,820	67,567	74,602	- 9
Savings & Time	4,217	4,153	3,486	+ 21	NOV	2,982	2,867	3,508	- 15
<b>ALABAMA</b>									
Commercial Bank Deposits	14,912	14,215	13,261	+ 12	Savings & Loans				
Demand	3,897	3,526	3,795	+ 3	Total Deposits	4,559	4,511	4,381	+ 4
NOW	802	766	612	+ 31	NOW	147	106	71	+107
Savings	2,080	1,609	1,527	+ 36	Savings	594	565	581	+ 2
Time	8,531	8,588	8,168	+ 4	Time	3,847	3,874	3,756	+ 2
Credit Union Deposits	857	854	698	+ 23	NOV				
Share Drafts	72	67	56	+ 29	OCT	3,696	3,701	4,002	- 8
Savings & Time	734	723	604	+ 22	NOV	49	50	52	- 6
<b>FLORIDA</b>									
Commercial Bank Deposits	45,523	42,255	39,682	+ 15	Savings & Loans				
Demand	13,159	12,170	13,341	- 1	Total Deposits	49,120	48,051	46,036	+ 7
NOW	3,928	3,786	3,043	+ 29	NOW	1,621	1,416	991	+ 64
Savings	10,255	6,517	6,409	+ 60	Savings	10,478	7,941	7,909	+ 32
Time	19,258	20,504	17,885	+ 8	Time	37,293	38,753	37,110	+ 0
Credit Union Deposits	2,256	2,217	1,861	+ 21	NOV				
Share Drafts	197	181	156	+ 26	OCT	39,773	39,460	45,595	- 13
Savings & Time	1,740	1,715	1,453	+ 20	NOV	2,327	2,267	3,090	- 25
<b>GEORGIA</b>									
Commercial Bank Deposits	20,230	18,142	16,661	+ 21	Savings & Loans				
Demand	6,694	6,167	6,445	+ 4	Total Deposits	10,232	9,851	9,646	+ 6
NOW	1,206	1,255	989	+ 22	NOW	245	240	140	+ 75
Savings	3,915	1,709	1,575	+148	Savings	1,732	1,205	1,187	+ 46
Time	9,252	9,737	8,604	+ 8	Time	8,409	8,542	8,360	+ 1
Credit Union Deposits	923	918	750	+ 23	NOV				
Share Drafts	41	37	24	+ 71	OCT	8,806	8,881	9,441	- 7
Savings & Time	828	818	700	+ 18	NOV	228	187	107	+113
<b>LOUISIANA</b>									
Commercial Bank Deposits	24,180	23,178	21,610	+ 12	Savings & Loans				
Demand	6,469	5,759	6,812	- 5	Total Deposits	8,176	8,077	7,469	+ 9
NOW	1,213	1,174	937	+ 29	NOW	139	129	82	+ 69
Savings	3,185	2,478	2,381	+ 34	Savings	1,488	1,282	1,240	+ 20
Time	13,829	14,081	12,244	+ 13	Time	6,603	6,692	6,181	+ 7
Credit Union Deposits	164	163	114	+ 44	NOV				
Share Drafts	11	11	8	+ 37	OCT	7,456	7,426	7,138	+ 4
Savings & Time	158	154	106	+ 49	NOV	210	190	182	+ 15
<b>MISSISSIPPI</b>									
Commercial Bank Deposits	10,898	10,611	9,849	+ 11	Savings & Loans				
Demand	2,487	2,311	2,550	- 2	Total Deposits	2,508	2,461	2,387	+ 5
NOW	654	636	515	+ 27	NOW	75	65	38	+ 97
Savings	1,197	762	733	+ 63	Savings	336	246	232	+ 45
Time	6,779	7,042	6,332	+ 7	Time	2,124	2,171	2,130	- 0
Credit Union Deposits	N.A.	N.A.	N.A.		NOV				
Share Drafts	N.A.	N.A.	N.A.		OCT	2,070	2,098	2,206	- 6
Savings & Time	N.A.	N.A.	N.A.		NOV	21	21	19	+ 10
<b>TENNESSEE</b>									
Commercial Bank Deposits	20,932	20,233	18,808	+ 11	Savings & Loans				
Demand	4,596	4,230	4,659	- 2	Total Deposits	6,667	6,537	6,101	+ 9
NOW	1,153	1,083	864	+ 33	NOW	136	125	76	+ 79
Savings	3,087	2,207	2,139	+ 44	Savings	903	697	675	+ 34
Time	12,253	12,732	11,366	+ 7	Time	5,689	5,722	5,389	+ 6
Credit Union Deposits	793	780	654	+ 21	NOV				
Share Drafts	48	49	37	+ 29	OCT	6,019	6,001	6,220	- 3
Savings & Time	757	743	623	+ 21	NOV	147	152	58	+153

**Notes:** All deposit data are extracted from the Federal Reserve Report of Transaction Accounts, other Deposits and Vault Cash (FR2900), and are reported for the average of the week ending the 1st Wednesday of the month. This data, reported by institutions with over \$15 million in deposits as of December 31, 1979, represents 95% of deposits in the six state area. The major differences between this report and the "call report" are size, the treatment of interbank deposits, and the treatment of float. The data generated from the Report of Transaction Accounts is for banks over \$15 million in deposits as of December 31, 1979. The total deposit data generated from the Report of Transaction Accounts eliminates interbank deposits by reporting the net of deposits "due to" and "due from" other depository institutions. The Report of Transaction Accounts subtracts cash in process of collection from demand deposits, while the report does not. Savings and loan mortgage data are from the Federal Home Loan Bank Board Selected Balance Sheet Data. The Southeast data represent the total of the six states. Subcategories were chosen on a selective basis and do not add to total. N.A. = fewer than four institutions reporting.





# EMPLOYMENT

	DEC 1982	NOV 1982	DEC 1981	ANN. % CHG.		DEC 1982	NOV 1982	DEC 1981	ANN. % CHG.
<b>UNITED STATES</b>									
Civilian Labor Force - thous.	110,477	110,855	108,574	+ 2	Nonfarm Employment- thous.	89,327	89,487	91,437	- 2
Total Employed - thous.	98,849	99,379	99,562	- 1	Manufacturing	18,156	18,297	19,705	- 8
Total Unemployed - thous.	11,628	11,476	9,013	+29	Construction	3,797	3,997	4,009	- 5
Unemployment Rate - % SA	10.8	10.7	8.8		Trade	20,941	20,674	21,170	- 1
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	15,949	15,982	16,108	- 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	19,084	19,116	18,775	+ 2
Mfg. Avg. Wkly. Hours	39.7	39.3	39.9	- 1	Fin., Ins., & Real Est.	5,357	5,347	5,313	+ 1
Mfg. Avg. Wkly. Earn. - \$	345	338	330	+ 5	Trans. Com. & Pub. Util.	5,014	5,027	5,157	- 3
<b>SOUTHEAST</b>									
Civilian Labor Force - thous.	14,265	14,454	13,864	+ 3	Nonfarm Employment- thous.	11,440	11,398	11,570	- 1
Total Employed - thous.	12,721	12,912	12,691	+ 0	Manufacturing	2,125	2,130	2,266	- 6
Total Unemployed - thous.	1,545	1,541	1,173	+32	Construction	649	657	708	- 8
Unemployment Rate - % SA	11.1	11.1	8.8		Trade	2,763	2,716	2,751	+ 0
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	2,134	2,141	2,144	- 0
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	2,279	2,263	2,201	+ 4
Mfg. Avg. Wkly. Hours	40.4	40.1	40.5	- 0	Fin., Ins., & Real Est.	643	643	635	+ 1
Mfg. Avg. Wkly. Earn. - \$	302	298	289	+ 4	Trans. Com. & Pub. Util.	695	695	707	- 2
<b>ALABAMA</b>									
Civilian Labor Force - thous.	1,726	1,724	1,666	+ 4	Nonfarm Employment- thous.	1,317	1,319	1,353	- 3
Total Employed - thous.	1,451	1,458	1,483	- 2	Manufacturing	326	327	356	- 8
Total Unemployed - thous.	275	265	183	+50	Construction	63	64	66	- 5
Unemployment Rate - % SA	16.1	16.0	11.2		Trade	276	272	278	- 1
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	293	296	293	0
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	215	215	212	+ 1
Mfg. Avg. Wkly. Hours	40.1	40.0	40.0	+ 0	Fin., Ins., & Real Est.	59	59	59	0
Mfg. Avg. Wkly. Earn. - \$	296	292	287	+ 3	Trans. Com. & Pub. Util.	69	70	71	- 3
<b>FLORIDA</b>									
Civilian Labor Force - thous.	4,851	4,954	4,569	+ 6	Nonfarm Employment- thous.	3,864	3,818	3,824	+ 1
Total Employed - thous.	4,391	4,485	4,236	+ 4	Manufacturing	449	450	471	- 5
Total Unemployed - thous.	460	469	333	+38	Construction	247	247	283	- 13
Unemployment Rate - % SA	9.9	9.5	7.7		Trade	1,070	1,046	1,030	+ 4
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	609	607	617	- 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	959	944	900	+ 7
Mfg. Avg. Wkly. Hours	41.2	40.2	41.1	+ 0	Fin., Ins., & Real Est.	284	283	277	+ 3
Mfg. Avg. Wkly. Earn. - \$	295	289	282	+ 5	Trans. Com. & Pub. Util.	236	233	235	+ 0
<b>GEORGIA</b>									
Civilian Labor Force - thous.	2,657	2,663	2,611	+ 2	Nonfarm Employment- thous.	2,164	2,159	2,185	- 1
Total Employed - thous.	2,449	2,448	2,424	+ 1	Manufacturing	488	487	510	- 4
Total Unemployed - thous.	209	215	187	+12	Construction	97	97	101	- 4
Unemployment Rate - % SA	8.1	8.4	7.3		Trade	508	499	515	- 1
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	437	441	435	0
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	369	369	360	+ 3
Mfg. Avg. Wkly. Hours	40.4	40.2	40.0	+ 1	Fin., Ins., & Real Est.	116	116	114	+ 2
Mfg. Avg. Wkly. Earn. - \$	278	275	267	+ 4	Trans. Com. & Pub. Util.	141	141	143	- 1
<b>LOUISIANA</b>									
Civilian Labor Force - thous.	1,847	1,913	1,861	- 1	Nonfarm Employment- thous.	1,612	1,614	1,651	- 2
Total Employed - thous.	1,650	1,703	1,702	- 3	Manufacturing	194	198	218	- 11
Total Unemployed - thous.	197	210	160	+23	Construction	128	130	140	- 9
Unemployment Rate - % SA	11.0	11.6	9.0		Trade	373	370	381	- 2
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	317	318	311	+ 2
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	299	297	295	+ 1
Mfg. Avg. Wkly. Hours	41.2	41.8	43.4	- 5	Fin., Ins., & Real Est.	76	76	75	+ 1
Mfg. Avg. Wkly. Earn. - \$	391	393	382	+ 2	Trans. Com. & Pub. Util.	129	129	132	- 2
<b>MISSISSIPPI</b>									
Civilian Labor Force - thous.	1,039	1,050	1,045	- 1	Nonfarm Employment- thous.	795	795	822	- 3
Total Employed - thous.	920	925	951	- 3	Manufacturing	200	201	218	- 8
Total Unemployed - thous.	118	125	94	+26	Construction	38	39	41	- 7
Unemployment Rate - % SA	11.4	12.7	9.1		Trade	166	163	167	- 1
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	184	183	187	- 2
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	122	122	122	0
Mfg. Avg. Wkly. Hours	40.2	39.2	38.8	+ 4	Fin., Ins., & Real Est.	33	33	33	0
Mfg. Avg. Wkly. Earn. - \$	262	253	241	+ 9	Trans. Com. & Pub. Util.	40	41	41	- 2
<b>TENNESSEE</b>									
Civilian Labor Force - thous.	2,145	2,150	2,112	+ 2	Nonfarm Employment- thous.	1,688	1,693	1,735	- 3
Total Employed - thous.	1,860	1,893	1,895	- 2	Manufacturing	468	467	495	- 5
Total Unemployed - thous.	286	257	216	+32	Construction	76	80	77	- 1
Unemployment Rate - % SA	13.5	12.6	10.4		Trade	370	366	380	- 3
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	294	296	301	- 2
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	315	316	312	+ 1
Mfg. Avg. Wkly. Hours	39.5	39.4	39.9	- 1	Fin., Ins., & Real Est.	75	76	77	- 3
Mfg. Avg. Wkly. Earn. - \$	290	286	277	+ 5	Trans. Com. & Pub. Util.	80	81	85	- 6

**Notes:** All labor force data are from Bureau of Labor Statistics reports supplied by state agencies. Only the unemployment rate data are seasonally adjusted. The Southeast data represent the total of the six states. The annual percent change calculation is based on the most recent data over prior year.



# CONSTRUCTION

	DEC. 1982	NOV 1982	DEC 1981	ANN % CHG		DEC 1982	NOV 1982	DEC 1981	ANN % CHG
<b>12-month Cumulative Rate</b>									
<b>UNITED STATES</b>									
Nonresidential Building Permits - \$ Mil.	45,658	45,459	51,898	-12	Residential Building Permits	39,636	38,212	40,247	-2
Total Nonresidential					Value - \$ Mil.				
Industrial Bldgs.	5,109	5,329	7,220	-29	Residential Permits - Thous.	537.5	518.4	557.5	-4
Offices	12,139	11,932	15,201	-20	Single-family units	447.5	429.0	411.6	+3
Stores	5,231	5,131	6,344	-18	Multi-family units				
Hospitals	1,818	1,775	1,395	+30	Total Building Permits	85,295	83,672	92,146	-7
Schools	800	800	781	+2	Value - \$ Mil.				
<b>SOUTHEAST</b>									
Nonresidential Building Permits - \$ Mil.	6,426	6,262	6,695	-4	Residential Building Permits	7,103	6,867	8,122	-13
Total Nonresidential					Value - \$ Mil.				
Industrial Bldgs.	723	719	790	-8	Residential Permits - Thous.	110.5	105.6	117.9	-6
Offices	1,384	1,343	1,425	-3	Single-family units	86.2	83.7	100.9	-15
Stores	927	951	1,144	-19	Multi-family units				
Hospitals	329	282	272	+21	Total Building Permits	13,529	13,129	14,817	-9
Schools	109	82	80	+36	Value - \$ Mil.				
<b>ALABAMA</b>									
Nonresidential Building Permits - \$ Mil.	399	392	440	-9	Residential Building Permits	239	236	296	-1
Total Nonresidential					Value - \$ Mil.				
Industrial Bldgs.	63	81	60	+5	Residential Permits - Thous.	4.9	4.6	5.4	-9
Offices	69	60	56	+23	Single-family units	4.3	4.3	5.5	-21
Stores	64	62	67	-4	Multi-family units				
Hospitals	44	23	23	+91	Total Building Permits	639	629	736	-7
Schools	8	8	5	+60	Value - \$ Mil.				
<b>FLORIDA</b>									
Nonresidential Building Permits - \$ Mil.	3,250	3,135	3,416	-5	Residential Building Permits	4,201	4,077	5,640	-26
Total Nonresidential					Value - \$ Mil.				
Industrial Bldgs.	378	367	392	-4	Residential Permits - Thous.	57.0	54.4	70.4	-19
Offices	679	640	620	+10	Single-family units	51.4	50.3	72.9	-29
Stores	493	509	658	-25	Multi-family units				
Hospitals	177	144	132	+34	Total Building Permits	7,451	7,212	9,056	-18
Schools	19	18	23	-17	Value - \$ Mil.				
<b>GEORGIA</b>									
Nonresidential Building Permits - \$ Mil.	982	980	1,096	-10	Residential Building Permits	1,366	1,300	1,028	+31
Total Nonresidential					Value - \$ Mil.				
Industrial Bldgs.	145	135	189	-23	Residential Permits - Thous.	26.3	25.2	21.1	+25
Offices	225	223	274	-18	Single-family units	13.0	12.0	8.8	+48
Stores	82	90	131	-37	Multi-family units				
Hospitals	25	34	35	-29	Total Building Permits	2,348	2,280	2,125	+10
Schools	17	19	28	-39	Value - \$ Mil.				
<b>LOUISIANA</b>									
Nonresidential Building Permits - \$ Mil.	976	939	909	+7	Residential Building Permits	652	638	603	+8
Total Nonresidential					Value - \$ Mil.				
Industrial Bldgs.	84	88	75	+12	Residential Permits - Thous.	11.2	10.8	9.9	+13
Offices	300	296	312	-4	Single-family units	8.4	8.1	8.1	+44
Stores	151	147	129	+17	Multi-family units				
Hospitals	32	29	47	-32	Total Building Permits	1,628	1,576	1,512	+7
Schools	50	24	18	+178	Value - \$ Mil.				
<b>MISSISSIPPI</b>									
Nonresidential Building Permits - \$ Mil.	160	157	179	-11	Residential Building Permits	181	167	162	+10
Total Nonresidential					Value - \$ Mil.				
Industrial Bldgs.	14	14	16	-13	Residential Permits - Thous.	3.5	3.3	3.5	+29
Offices	16	18	44	-64	Single-family units	2.2	2.1	1.7	+29
Stores	38	35	35	+9	Multi-family units				
Hospitals	5	5	8	-38	Total Building Permits	340	324	341	-7
Schools	4	3	1	+300	Value - \$ Mil.				
<b>TENNESSEE</b>									
Nonresidential Building Permits - \$ Mil.	659	659	655	+1	Residential Building Permits	463	449	392	+18
Total Nonresidential					Value - \$ Mil.				
Industrial Bldgs.	39	34	58	-33	Residential Permits - Thous.	7.6	7.3	7.6	+0
Offices	95	106	119	-20	Single-family units	6.9	6.9	3.9	+77
Stores	99	109	125	-21	Multi-family units				
Hospitals	45	38	17	+165	Total Building Permits	1,122	1,108	1,047	+7
Schools	11	11	6	+83	Value - \$ Mil.				

## NOTES:

Data supplied by the U. S. Bureau of the Census, Housing Units Authorized by Building Permits and Public Contracts, C-40. Nonresidential data excludes the cost of construction for publicly owned buildings. The southeast data represent the total of the six states. The annual percent change calculation is based on the most recent month over prior year. Publication of F. W. Dodge construction contracts has been discontinued.



# GENERAL

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.		DEC 1982	NOV (R) 1982	DEC 1981	ANN. % CHG.
<b>UNITED STATES</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	3Q	2,584.9	2,541.5	2,447.6	+ 6	Prices Rec'd by Farmers				
Taxable Sales - \$bil.	JAN	91,575	91,482	86,119	+ 6	Index (1977=100)	128	127	132	- 3
Plane Pass. Arr. 000's		N.A.	N.A.	N.A.		Broiler Placements (thous.)	81,770	79,861	79,017	+ 3
Petroleum Prod. (thous.)	JAN	8,680.5	8,619.8	8,695.1	- 0	Calf Prices (\$ per cwt.)	62.40	58.90	57.90	+ 8
Consumer Price Index						Broiler Prices (¢ per lb.)	25.8	24.3	27.1	- 5
1967=100	JAN	293.1	292.4	282.5	+ 4	Soybean Prices (\$ per bu.)	5.56	5.46	6.05	- 8
Kilowatt Hours - mils.	OCT	163.4	198.4	168.7	- 4	Broiler Feed Cost (\$ per ton)	202	201	211	- 4
<b>SOUTHEAST</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	3Q	307.4	301.8	289.3	+ 6	Prices Rec'd by Farmers				
Taxable Sales - \$ bil.		N.A.	N.A.	N.A.		Index (1977=100)	115	113	119	- 3
Plane Pass. Arr. 000's	NOV	3,603.1	3,763.6	3,723.9	- 3	Broiler Placements (thous.)	31,619	30,752	30,047	+ 5
Petroleum Prod. (thous.)	JAN	1,384.0	1,382.0	1,405.7	- 2	Calf Prices (\$ per cwt.)	58.84	55.17	53.55	+10
Consumer Price Index						Broiler Prices (¢ per lb.)	24.7	24.1	25.6	- 4
1967=100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	5.65	5.57	6.27	-10
Kilowatt Hours - mils.	OCT	27.6	34.8	27.6	+ 0	Broiler Feed Cost (\$ per ton)	191	189	207	- 8
<b>ALABAMA</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	3Q	33.8	33.6	32.8	+ 3	Farm Cash Receipts - \$ mil.				
Taxable Sales - \$ bil.	NOV	23.0	22.5	21.7	+ 6	(Dates: SEPT, SEPT)	1,354	-	1,388	- 2
Plane Pass. Arr. 000's	NOV	97.9	106.6	102.4	- 4	Broiler Placements (thous.)	10,530	10,263	9,697	+ 9
Petroleum Prod. (thous.)	JAN	53.0	52.0	58.0	- 9	Calf Prices (\$ per cwt.)	56.00	54.20	53.00	+ 6
Consumer Price Index						Broiler Prices (¢ per lb.)	24.5	24.0	23.5	+ 4
1967=100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	5.57	5.51	6.22	-10
Kilowatt Hours - mils.	OCT	3.6	4.9	3.9	- 8	Broiler Feed Cost (\$ per ton)	205	197	230	-11
<b>FLORIDA</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	3Q	114.3	111.3	105.5	+ 8	Farm Cash Receipts - \$ mil.				
Taxable Sales - \$ bil.	JAN	67.4	66.7	66.8	+ 1	(Dates: SEPT, SEPT)	3,176	-	3,042	+ 4
Plane Pass. Arr. 000's	NOV	1,636.5	1,709.0	1,725.5	- 5	Broiler Placements (thous.)	1,999	1,863	1,905	+ 5
Petroleum Prod. (thous.)	JAN	65.0	67.0	89.0	- 5	Calf Prices (\$ per cwt.)	61.00	57.10	54.50	+12
Consumer Price Index - Miami						Broiler Prices (¢ per lb.)	25.0	24.0	25.0	0
Nov. 1977 = 100		157.9	156.8	155.2	+ 2	Soybean Prices (\$ per bu.)	5.57	5.51	6.22	-10
Kilowatt Hours - mils.	OCT	8.1	9.2	7.8	+ 3	Broiler Feed Cost (\$ per ton)	215	210	220	- 2
<b>GEORGIA</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	3Q	53.3	52.5	50.6	+ 5	Farm Cash Receipts - \$ mil.				
Taxable Sales - \$ bil.	3Q	39.4	37.2	38.1	+ 3	(Dates: SEPT, SEPT)	2,138	-	2,190	- 2
Plane Pass. Arr. 000's	NOV	1,435.8	1,493.4	1,469.6	- 2	Broiler Placements (thous.)	12,718	12,338	12,344	+ 3
Petroleum Prod. (thous.)	JAN	N.A.	N.A.	N.A.		Calf Prices (\$ per cwt.)	54.90	51.50	51.10	+ 7
Consumer Price Index - Atlanta						Broiler Prices (¢ per lb.)	24.0	23.5	25.5	- 6
1967 = 100		296.1	297.8	282.2	+ 5	Soybean Prices (\$ per bu.)	5.55	5.36	6.10	- 9
Kilowatt Hours - mils.	OCT	4.2	5.5	4.1	+ 2	Broiler Feed Cost (\$ per ton)	185	185	194	- 5
<b>LOUISIANA</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	3Q	44.4	43.7	41.8	+ 6	Farm Cash Receipts - \$ mil.				
Taxable Sales - \$ bil.		N.A.	N.A.	N.A.		(Dates: SEPT, SEPT)	838	-	918	- 9
Plane Pass. Arr. 000's	NOV	250.6	271.0	259.6	- 3	Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Petroleum Prod. (thous.)	JAN	1,176.0	1,173.0	1,164.0	+ 1	Calf Prices (\$ per cwt.)	60.50	57.20	56.00	+ 8
Consumer Price Index						Broiler Prices (¢ per lb.)	26.0	24.5	28.5	- 9
1967 = 100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	5.69	5.69	6.52	-13
Kilowatt Hours - mils.	OCT	5.0	6.1	4.8	+ 4	Broiler Feed Cost (\$ per ton)	255	250	245	+ 4
<b>MISSISSIPPI</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	3Q	19.9	19.7	19.0	+ 5	Farm Cash Receipts - \$ mil.				
Taxable Sales - \$ bil.		N.A.	N.A.	N.A.		(Dates: SEPT, SEPT)	1,120	-	1,156	- 3
Plane Pass. Arr. 000's	NOV	28.8	27.7	30.0	- 4	Broiler Placements (thous.)	6,372	6,288	6,101	+ 4
Petroleum Prod. (thous.)	JAN	90.0	90.0	94.0	- 4	Calf Prices (\$ per cwt.)	62.70	57.60	55.60	+13
Consumer Price Index						Broiler Prices (¢ per lb.)	26.5	25.5	29.0	- 9
1967 = 100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	5.63	5.54	6.31	-11
Kilowatt Hours - mils.	OCT	1.8	2.6	1.9	- 6	Broiler Feed Cost (\$ per ton)	163	161	183	-11
<b>TENNESSEE</b>										
<b>Personal Income</b>						<b>Agriculture</b>				
(\$bil. - SAAR)	3Q	41.7	41.0	39.6	+ 5	Farm Cash Receipts - \$ mil.				
Taxable Sales - \$ bil.	DEC	28.7	27.4	26.9	+ 7	(Dates: SEPT, SEPT)	1,041	-	997	+ 4
Plane Pass. Arr. 000's	NOV	153.6	156.0	136.8	+12	Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Petroleum Prod. (thous.)	JAN	N.A.	N.A.	N.A.		Calf Prices (\$ per cwt.)	57.30	53.20	51.40	+ 11
Consumer Price Index						Broiler Prices (¢ per lb.)	22.5	23.5	24.0	- 6
1967 = 100		N.A.	N.A.	N.A.		Soybean Prices (\$ per bu.)	5.79	5.65	6.07	- 5
Kilowatt Hours - mils.	OCT	4.9	6.5	5.1	- 4	Broiler Feed Cost (\$ per ton)	181	193	210	-14

**Notes:**

Personal Income data supplied by U. S. Department of Commerce. Taxable Sales are reported as a 12-month cumulative total. Plane Passenger Arrivals are collected from 26 airports. Petroleum Production data supplied by U. S. Bureau of Mines. Consumer Price Index data supplied by Bureau of Labor Statistics. Agriculture data supplied by U. S. Department of Agriculture. Farm Cash Receipts data are reported as cumulative for the calendar year through the month shown. Broiler placements are an average weekly rate. The Southeast data represent the total of the six states. N.A. = not available. The annual percent change calculation is based on most recent data over prior year. R = revised.

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