Beyond Price Stability:
A Reconsideration of Monetary Policy in a Period of Low Inflation

The Federal Reserve System is responsible for formulating and implementing U.S. monetary policy. It also supervises banks and bank holding companies, and provides financial services to depository institutions and the federal government.

The Federal Reserve Bank of Cleveland is one of 12 regional Reserve Banks in the United States that, together with the Board of Governors in Washington, D.C., comprise the Federal Reserve System.

The Federal Reserve Bank of Cleveland, including its branch offices in Cincinnati and Pittsburgh and its check processing center in Columbus, serves the Fourth Federal Reserve District (Ohio, western Pennsylvania, the northern panhandle of West Virginia, and eastern Kentucky.

It is the policy of the Federal Reserve Bank of Cleveland to provide equal employment opportunities for qualified persons regardless of race, creed, color, national origin, age, gender, or disability.

Contents

PRESIDENT'S FOREWORD

Sandra Pianalto, first vice president; G. Watts Humphrey, chairman; David H. Hoag, deputy chairman; and Jerry L. Jordan, president.

The United States' economic performance last year was remarkable. Real output growth, despite most forecasts to the contrary, did not slow down from the 4-percent pace set a year earlier. The economy's vigor last year was all the more significant given the adverse performance of the Japanese and Southeast Asian economies, which some analysts thought would severely affect overall U.S. activity. Instead, our nation's unemployment rate declined to figures not seen in nearly 30 years, and the share of working-age population actually employed attained a record high. Investment activity continued at a strong pace last year in the forms of business capital, new housing, and consumer durable goods purchases. Data for the first quarter of 1999 suggest that these fundamentals remain solidly in place. Not surprisingly, public sentiment about current economic conditions has never been better.

The purchasing power of the dollar remained nearly constant last year, as the Consumer Price Index increased by only 1.6 percent. Moreover, if price stability is defined as an environment in which people's economic decisions are not influenced by expected changes in money's purchasing power, last year's inflation statistics and consumer surveys suggest that price stability is at hand. A decade ago, most economists would not have thought it possible for our economy to expand as it has without an increase in inflation, let alone decline to such a low rate.

Those of us in the Federal Reserve System who have long advocated that monetary policy can best contribute to economic growth by achieving price stability obviously take pride in our nation's recent robust economy. At the same time, there are reasons to be concerned that price stability, as such, should not be interpreted as an indicator of monetary stability. There may be conditions where monetary policy inadvertently supports speculative investment—economic activity that

later proves to be unprofitable—on a large enough scale to trigger or deepen a recession. These conditions may exist even while the economy exhibits price stability. The essay in this annual report provides a reexamination of monetary policy principally focused on price stability by setting today's economic conditions against those of the 1920s.

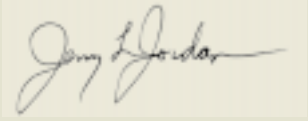
The events of the 1920s were very much on our mind last year for another reason: We moved back into our renovated historic main office building in Cleveland. The restored structure, which was rededicated on its 75th anniversary, once again reveals the magnificent craftsmanship of three-quarters of a century ago. The restored main building, along with the newly-built operations center, was completed ahead of schedule and under budget. Together, these facilities enable us to provide cost-effective payments services to our customers, and a stimulating working environment for our employees.

We took several major steps last year toward shaping our future in payments services. In partnership with the Atlanta Reserve Bank, the Cleveland Fed assumed a leadership role in managing the check processing and automated clearinghouse operations of the Federal Reserve System. The Cleveland Fed also assumed responsibility for managing check automation issues for all Reserve Banks, which includes a major role in standardizing the System's check services production platform. Our Pittsburgh office maintained its tradition of developing innovative solutions for the U.S. Treasury. Based on the success of a Pittsburgh pilot program, the Bureau of Public Debt authorized the national installation of a new optical scanning technology that will increase productivity in processing savings bond applications. While we expanded our leadership activities, we also expanded our check volumes significantly and still operated our financial services activities at full cost recovery and high rates of efficiency.

Considerable energy was also devoted to ensuring our preparedness and our customers' readiness for the Year 2000 date change. We tested all our critical applications by mid-year and have been testing with our customers since. Our efforts to assist depository institutions with their Y2K readiness include our payments services, automation, and banking supervision and regulation personnel.

The directors of our Cincinnati, Cleveland, and Pittsburgh offices, together with the members of our business and community bank advisory councils, contributed to the Bank's success through their sound counsel and guidance. We especially want to acknowledge two directors who have completed their terms of service in 1998 on our Cleveland board: David A. Daberko (chairman and chief executive officer of National City Corporation) and I.N. Rendall Harper Jr. (president and chief executive officer of American Micrographics Company, Inc.). Thanks are also due to Michele Tolela Myers (former president of Denison University), who resigned due to relocation outside the Fourth District. They have served the Bank well and their insight and expertise will be missed.

I wish to extend my deep appreciation to the officers and staff of the Federal Reserve Bank of Cleveland for their extraordinary efforts and achievements. Managing change was a real challenge and a great accomplishment during the past year. The move back into the Bank's main office building and Year 2000 testing required many long days and weekends of extra work. In addition, delivering business as usual for our customers while continuing to transform the Bank into a stronger, more flexible organization would not have been possible without the energy, skill, and perseverance of our officers and staff. Our employees' dedication is apparent in the progress and accomplishments we made in 1998 and will continue to make in the future. I am very pleased to have been a part of all that we accomplished during the year.



Jerry L. Jordan
President

Beyond Price Stability: A Reconsideration of Monetary Policy in a Period of Low Inflation

Does price stability indicate that monetary policy is being appropriately conducted? It would seem so based on the increasing number of central banks that have adopted price stability as their primary, if not sole, objective. It is certainly a welcome change from the belief that monetary authorities had the responsibility and capacity to fine-tune fluctuations in the real economy. This doctrine, however, may have caused many economists and policymakers to overlook its potential limitations. Writing in 1929, too late to prevent the Great Depression, the famous economist A.C. Pigou warned that in times of changing productivity, macroeconomic stability and stable prices "are fundamentally incompatible with one another."[1]

Proposals for making price stability the Federal Reserve's primary monetary policy objective still deserve serious consideration and support, but perhaps this objective should be considered in a broader context than has been the case in recent years. In this essay, we resurrect arguments—most from around the time of the Great Depression—that seem particularly relevant for thinking through the puzzles and potential pitfalls of our current environment of benign price pressures, rapid asset appreciation, and substantial liquidity. We hope to incite a more substantive discussion on the role of monetary policy in an era where the attainment of a near-zero inflation environment appears to be a real possibility.

The Case for Zero Inflation

Economic policies have always been forged from a combination of economic theory, institutional design, political acceptance, and personality. The particular set of economic policies a nation follows at any point in time are governed by factors no single player completely controls. Sometimes the confluence of these parameters is strong enough and long enough to define an era. For example, the period from 1960 to 1980 marked an era in U.S. monetary policy governed by the principle that the Federal Reserve could—and should—promote low interest rates and easy money to reduce unemployment, possibly even at the cost of permanently greater inflation. Monetary policy was a tool to be used to "manage growth" in the economy.

Poor economic performance during the 1970s, including unacceptably high inflation, multiple recessions, and weak productivity growth, disenchanted those who thought inflation was benign and that growth could be closely "managed" over the course of a business cycle. Zero-inflation advocates accepted the premise that countercyclical monetary policy could temper extreme fluctuations around predetermined trends, but they contended that policy's primary contribution to economic prosperity lay elsewhere. In their view, a stable-price monetary policy could contribute to the economic landscape by eliminating distortions and uncertainties from economic decisions.

Monetary policy in the last two decades has been geared toward price stability, that is, creating an environment in which neither inflation nor inflation expectations enter into economic decisions. The idea that monetary policy should be set to achieve long-term price stability has supplanted the idea that policymakers can systematically obtain more economic growth by engineering, or even tolerating, more inflation. Few economists and experienced policymakers now believe that monetary policy can be used to determine trends in unemployment or GDP growth; they accept the notion that these properties are determined by a nation's legal system, the education and skill of its workforce, capital formation, productivity, and innovation. The economy's remarkable performance during this period has apparently convinced many that we have arrived at a new era of monetary policy, one of low and stable inflation.

The victory of price stability over managed growth deserves more appreciation than it commonly receives. The Federal Reserve's acceptance of price stability as the most important course of action by which it can contribute to economic prosperity has created an environment in which Americans expect inflation to remain low for long periods of time. If unforeseen events push inflation away from this norm, Americans will expect the Fed to aim its policy instruments in the direction of price stability. U.S. citizens will no longer need to spend time and money looking for ways to protect their wealth from erosion due to changes in the purchasing power of the dollar. Decisions to consume and invest will be based on the underlying value of these activities, and not on their usefulness as a hedge against inflation. Over time, the nation's standard of living will benefit considerably.

The triumph of price stability, however, should not make policymakers complacent. Though price stability brings clear benefits to an economy, it does not always correlate with acceptable economic performance. As Japan and several other Asian countries are now demonstrating, severe economic contractions can result from financial system imbalances that are not clearly signaled by consumer price inflation. Despite its many virtues, an economy characterized by a low, or zero, rate of increase of consumer prices may not necessarily exhibit financial stability and sustainable growth.

Do Stable Prices Imply That Monetary Policy is Stabilizing?

The argument that price stability is not a sufficient condition for sustainable growth has been made by observers of economic fluctuations since before the Great Depression. Price-level stabilization during "years of rapidly advancing productivity," argued D.H. Robertson in the 1920s, can "become a serious source of trouble."[2] Other scholars who analyzed the "great contraction" of the 1930s, including A.G.B. Fisher, Ralph Hawtrey, Gottfried Haberler, F.A. Hayak, Ludwig von Mises, and A.C. Pigou, all concluded that the absence of consumer price inflation in the 1920s sent false signals about financial and economic stability.[3]

These scholars thought about monetary policy differently than we do today because their ideas were formed when nations adhered to a gold standard. These economists believed that the price level would *fall* if money growth remained unchanged during a period of accelerating productivity because they expected the quantity of gold to be fixed in the short term. The notion that a monetary authority could manipulate money supply growth to choose the price level (or inflation rate) was not a policy option.

Contemporary monetary authorities have the ability to determine the price level through their policies. If the authorities do not wish to see the price level fall during a period of accelerating productivity, they must allow the rate of money growth to accelerate. But, given this option, what should the monetary authority actually choose: to promote deflation (or disinflation) by holding the money supply steady, or aim for a stable price level by expanding the money supply? Does it matter which path is chosen?

Historical Precedent

There is no general consensus among economists as to what caused the "great contraction" of the 1930s, but one school of thought is that the seeds were sown during the prior boom. Austrian and neoclassical writers have argued that the wealth gains of increasing productivity during the 1920s *should* have been observed in rising real incomes as the prices of goods and services fell relative to unchanged wages. A favorable "productivity surprise" *should* have meant that workers' pay went further than before, not because salaries increased, but because their unchanged nominal values would have purchased

more goods and services.[4] After all, more output could be produced with the same amount of labor. These economists expected the money supply to remain steady, forcing the prices of goods and services to decline (or not increase as much as previously had been anticipated).

But that is not exactly what happened. The industrialized nations were not following a pure gold standard at that time, but a modified gold regime that permitted more price-level flexibility than the classical economists had contemplated. The productivity boom did not bring deflation. The monetary regime allowed for an expansion of liquidity which, in turn, enabled nominal money wages to rise (although not as rapidly as productivity) and the price level to hold relatively steady. Early in the boom, returns to capital accelerated significantly relative to the returns to labor.[5] Although it would have been foolish to expect that the share of national income going to businesses could continuously rise relative to the share going to labor, it appears in retrospect that asset market valuations may have reflected this belief. The bust following the boom is a storied episode in U.S. economic history.

The imbalances that ultimately led to the Depression may have been due, in part, to two illusions. Working people, for their part, did not realize that the value of their skills was rising faster than their paychecks. All they saw, for a while, was increased job availability and escalating salaries. The fact that the labor share of national income was trending down while business profits trended up was not an issue for wage earners. However, expecting that workers would never overcome their illusion and seek to be paid commensurate with their new, higher productivity was a different sort of illusion on the part of investors. Since it was inevitable that the labor share of national income would revert back toward its long-run value, capital's share was also destined to fall back toward its own norm.

The turmoil caused by the sharp decline of asset prices when business profits began to fall short of past experience caused a curtailment of new investment and reduced the demand for more workers—a recession. Without the widespread bank failures, a prolonged depression might not have occurred, but a correction of the inherent imbalances was unavoidable.

An Alternative Outcome

New Zealand economist A.G.B. Fisher argued in 1935 that the mistake of the 1920s was that the economy's extraordinary productivity gains failed to elicit an increase in the purchasing power of money. In other words, the average of consumer prices should have decreased in the face of improved productivity—just as food prices fall when there are bumper crops. However, monetary expansion arrangements that kept the average of prices from falling generated "false profits signals, causing resources to be misallocated." These false signals led to excessive investment in capacity and surplus inventory. Fisher contended that, "Not only is a fall of prices which is a result of increased productive efficiency not a bad thing, but efforts to check such a fall will inevitably lead to disequilibrium and depression."[6]

Fisher, of course, wrote in a time when notions like disequilibrium had a different, and much less precise, connotation than in our age. But the basic message of his argument seems perfectly relevant to modern macroeconomic thinking: Unless people know how the money supply will evolve, they will have trouble determining the value of money and goods. Valuing assets becomes problematic as well, because assets represent claims to the future purchase of goods and services. In addition to being a store of value, assets serve as collateral for borrowing. Whenever the market prices of office buildings, hotels, apartment buildings, farm land, shopping centers, or common stock rise above levels consistent with future revenue streams, borrowers can incur debts that ultimately turn bad. Moreover, lenders suffer loan losses, and if those losses are severe enough, lenders can become insolvent. In the process, credit is channeled to sub-optimal undertakings and economic performance is impaired.

When the owners of capital disproportionally reap the new wealth that is created by accelerated productivity, shortsighted projections can cause asset valuations to rise to unsustainable levels relative to goods and factor prices. Investment, supported by strong corporate cash flows and ample collateral, feeds the economywide boom. Money supply growth contributes to and extends this process when price signals are uncertain due to confusion about how policymakers will respond to productivity improvement. Accordingly, monetary authorities should be on the lookout for unusual strength in money growth and asset prices at a time when productivity appears to be accelerating.

Monetary Policy Today

As we entered 1999, the pace of real economic activity once again exceeded market expectations of sustainable growth by a wide margin. Consumers continued to acquire houses and durable goods at a fast clip, and financial institutions provided the credit necessary to support a prodigious rate of national spending. The United States is borrowing from abroad to consume far more than it produces and, at the same time, through Social Security, it is transferring resources from future generations to bolster the consumption of current retirees. This spending frenzy finds additional support from equity markets, where price levels and earnings multiples continue to set records.

The experiences of the 1920s and 1930s provide a perspective from which to think about today's monetary policy. Real growth may indeed reflect the transition to a permanently higher level of material well-being, ushered in by the information technology revolution that began some 20 years ago. Current spending patterns may indeed be a justified response by current generations to the prospect of permanently greater wealth for themselves and future generations.

But exceptional demand conditions in the United States have also been accompanied by torrid monetary expansion. M2 growth has been accelerating for the past five years, reaching a nearly 9 percent rate last year. Its growth rate exceeds what would normally be seen in an economy with 5 percent to 6 percent nominal growth and relatively stable interest rates.

Surprisingly, consumer price inflation registers only between one and two percent. The conventional explanation for reconciling strength in economic activity and monetary growth with the benign inflation rate is a shift in the demand for money. A surge in money demand means that people have decided to hold more of their wealth in the form of money balances. This could happen if the cost of holding money relative to other assets has declined, or if people desire more liquidity. If money demand surges along with an expansion of money supply, harmful inflationary developments or other types of market instability might be considered unlikely.

There is, however, a significantly more troubling interpretation of events, a view grounded in historical precedent. Suppose that people have been overestimating the size of the productivity gain and confounding asset price valuations. These mistakes may have converted a real burst of productivity-driven output and wealth gains into speculative excess. In this view, asset prices do not accurately reflect projections of the future earnings streams. Instead, they reflect a situation in which earnings are overvalued and supported by excess liquidity. Conventional consumer price inflation, then, becomes only one concern.

Even worse is the possibility that when the speculative excess ends, it will bring with it the type of real dislocation that has surfaced in the past and has recently plagued Japan and other countries. Similar signs were present in those economies—fast money growth accompanied by stable goods prices but soaring asset prices. The warning signals were neglected, and those economies paid for that neglect.

Money and Asset Prices—
Irrational Exuberance and Expectations Traps

Accelerating money growth in the United States during the past few years might have been accommodating more than a burgeoning volume of dollar-based goods and services transactions around the world. Some portion of the expanding money supply might have been supporting increased asset prices including, farm land, housing, and equity prices, but especially the latter.

How might this process work? Essentially the same way that A.G.B. Fisher reasoned in 1935. Initially, people rationally expect corporate profits to rise during an expansion. In our current expansion, there have been good reasons to suspect productivity gains would boost profits even further. Encouraged by low inflation, stable interest rates, technological progress, and a stable global political climate, companies stepped up their rates of capital formation. Increased capacity, in turn, contributed to further price competition in world markets. Collectively, these developments encouraged people to expect stronger corporate earnings into the future. As the U.S. expansion gathered momentum, aggregate demand outstripped supply by wider margins, pulling in capital from abroad. An appreciating exchange rate made import prices decline at ever-faster rates and contributed to the picture of emerging price stability.

None of this appears unhealthy, but for the possibility that it is prolonged and accentuated by a surplus of money growth. Although the process by which monetary factors influence the real economy is not well understood, most economists recognize that, in the short run, wages are slow to adjust to liquidity-driven demand. In time, such rigidities relax and economic fundamentals prevail. This process may be slow or rapid, depending on institutional arrangements and the clarity of environmental information. With this latter point, however, we distinguish the concept of price stability from *monetary stability*. For in the event that monetary policy itself is artificially boosting demand and short run economic activity, the conditions are set to turn positive productivity gains into a speculative bull run. This outcome becomes all the more plausible when normal impediments to expanding demand are slackened significantly by weakness in the rest of the world.

In other words, a pessimistic story about the state of the U.S. economy might go as follows: Legitimate expectations of future earnings prompt a boom in consumption, investment, and equity prices. Moreover, weak economic activity elsewhere in the world has the effect of relaxing capacity constraints, providing a safety valve of imported goods and services at dollar prices that are actually declining sharply. This phenomenon depresses U.S. consumer price inflation, but only temporarily, because of rapid money growth. With no inflationary pressures in sight, the Federal Reserve does not interpret money and credit conditions as being quite stimulative.

A particular problem arises when the absence of overt inflation acceleration leads analysts, producers, and consumers to underestimate the corrosive influence that easy monetary policy can accommodate in the economy. Do these corrosive influences now exist in the U.S. economy? Households may feel wealthier, but the most significant portion of that wealth now consists of equities, not their homes. Consumer spending has been brisk lately, but its pace has been achieved through declining saving rates and increased debt-to-income ratios. Consumers appear to be relying heavily on their equity holdings as a financial cushion.

For their part, banks find it increasingly difficult to fund commercial loan growth without purchasing funds in money markets. Banks' balance sheets show that securities share of total assets has been dwindling, reflecting reduced liquidity. Consequently, the economy could be vulnerable to a sharp downward revaluation of stock prices, because consumer spending could fall off and because equity finance has become a vital source of corporate funding.

Does this explanation of recent events require irrational exuberance to hold it together? Yes and no. It certainly requires that mistakes are made, but it does not necessarily imply that a chain of negative consequences can occur only in the presence of widespread irrationality. Ordinarily, economists would expect market forces to correct mistakes in judgment about equity valuations and bond prices as more information becomes available about the underlying strength of corporate profits and monetary policy. But suppose that financial market participants think that monetary policy will respond to unsettled market conditions by injecting more liquidity. The results of such actions could short-circuit the normal forces that would generate market corrections, at least for a little while. For its part, the monetary authority could find itself in a sort of "expectations

trap." The best choice of action at each decision point may seem to be one that validates private expectations and calms roiled markets, despite the fact that excess liquidity conditions would still prevail.

Prognosis

If this pessimistic story accurately describes U.S. economic conditions during the past few years, a stronger case can be made today that monetary policy should have moved more decisively toward tightness early in 1997. At that time, there was still no sign of accelerating inflation, and the economy appeared to be on solid footing. However, it is only in the last two years that asset prices have surged and put households, businesses, and financial institutions at risk to a sharp correction. Economists still disagree about the causes of the boom and bust that took place 70 years ago, so it is not surprising that there is no consensus yet on how to interpret the data being generated by today's economy, including the role of monetary policy. Conventional frameworks appear inadequate. The point of this essay is not to claim sure knowledge, but rather to illustrate how a responsible monetary authority could inadvertently foster excessive liquidity in an economy characterized by accelerating productivity and slowly adjusting wages.

There is another, equally important point. If the economy does suffer a downturn exacerbated by financial market corrections, it would be wrong to conclude that a monetary policy geared toward price stability was a mistaken choice. Price stability represents a significant improvement over managed economic growth. But price stability is, after all, a means to an end. And, as has been demonstrated, it has limitations as an overall indicator of economic health. During a period of rapid technological change and exuberant financial markets, monetary authorities must still account for—and reckon with—excessive monetary growth.

Notes

1. A.C. Pigou, *Industrial Fluctuations*. 2nd ed. London: Macmillan, 1929, p. 254.
2. Dennis H. Robertson, *Banking Policy and the Price Level*. London: P.S. King, 1926, pp. 68, 58.
3. This paraphrases arguments presented in George Selgin, "The 'Productivity Norm' versus Zero Inflation in the History of Economic Thought," *History of Political Economy*, vol. 27, no. 4 (1995), pp. 712-17, 723-31.
4. See Selgin, pp. 708-27
5. Between 1920 and 1929, the average annual increase in output per man-hour was 2.7 percent, while the average increase in money earnings was only 1.0 percent. From 1922 to 1929 disposable personal income rose an average of 4.6 percent per annum, while corporate profits rose at 10.3 percent per year in the same period. Corporate profit data could not be found annually for 1920 and 1921, but the annual increase 1922–23 was nearly 28 percent, compared with a 14.4 percent increase in disposable personal income. For the years 1921–23 the average annual increase in real private GDP per unit of capital increased 8.7 percent while increasing only 0.8 percent per unit of labor.
6. Allen G.B. Fisher, "Does an Increase in Volume of Production Call for a Corresponding Increase in Volume of Money?" *American Economic Review*, vol. 25, no. 2 (1935), p. 209.

Sources

U.S. Department of Commerce, Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*. Washington, D.C.: GPO, 1975.

U.S. Department of Commerce, Bureau of Foreign and Domestic Commerce, *Statistical Abstract of the United States, 1922–24, 1926, 1929, 1932*. Washington, D.C.: GPO, 1923–25, 1927, 1929, 1932, respectively.

February 18, 1999

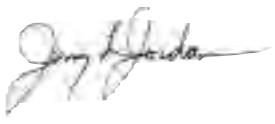
To the Board of Directors of the
Federal Reserve Bank of Cleveland:

The management of the Federal Reserve Bank of Cleveland (FRB Cleveland) is responsible for the preparation and fair presentation of the Statement of Financial Condition, Statement of Income, and Statement of Changes in Capital as of December 31, 1998 (the "Financial Statements"). The Financial Statements have been prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System and as set forth in the Financial Accounting Manual for the Federal Reserve Banks, and as such, include amounts, some of which are based on judgments and estimates of management.

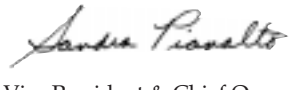
The management of the FRB Cleveland is responsible for maintaining an effective process of internal controls over financial reporting including the safeguarding of assets as they relate to the Financial Statements. Such internal controls are designed to provide reasonable assurance to management and to the Board of Directors regarding the preparation of reliable Financial Statements. This process of internal controls contains self-monitoring mechanisms, including, but not limited to, divisions of responsibility and a code of conduct. Once identified, any material deficiencies in the process of internal controls are reported to management, and appropriate corrective measures are implemented.

Even an effective process of internal controls, no matter how well designed, has inherent limitations, including the possibility of human error, and therefore can provide only reasonable assurance with respect to the preparation of reliable financial statements.

The management of the FRB Cleveland assessed its process of internal controls over financial reporting including the safeguarding of assets reflected in the Financial Statements, based upon criteria established in the "Internal Control—Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, the management of the FRB Cleveland believes that the FRB Cleveland maintained an effective process of internal controls over financial reporting including the safeguarding of assets as they relate to the Financial Statements.



President & Chief Executive Officer
Federal Reserve Bank of Cleveland



First Vice President & Chief Operating Officer
Federal Reserve Bank of Cleveland

REPORT OF INDEPENDENT ACCOUNTANTS

PriceWaterhouseCoopers LLP

To the Board of Directors of the
Federal Reserve Bank of Cleveland:

We have examined management's assertion that the Federal Reserve Bank of Cleveland ("FRB Cleveland") maintained effective internal controls over financial reporting and the safeguarding of assets as they relate to the Financial Statements as of December 31, 1998 included in the accompanying management assertion.

Our examination was made in accordance with standards established by the American Institute of Certified Public Accountants, and accordingly, included obtaining an understanding of internal controls over financial reporting, testing, and evaluating the design and operating effectiveness of internal controls, and such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

Because of inherent limitations in any internal controls, misstatements due to error or fraud may occur and not be detected. Also projections of any evaluation of internal controls over financial reporting to future periods are subject to the risk that internal controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, management's assertion that the FRB Cleveland maintained effective internal controls over financial reporting and over the safeguarding of assets as they relate to the Financial Statements as of December 31, 1998 is fairly stated, in all materials respects, based upon criteria described in "Internal Control—Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Cleveland, Ohio
March 5, 1999

REPORT OF INDEPENDENT ACCOUNTANTS

PriceWaterhouseCoopers LLP

To the Board of Directors of the Federal Reserve System and the
Board of Directors of the Federal Reserve Bank of Cleveland:

We have audited the accompanying statements of condition of the Federal Reserve Bank of Cleveland (the "Bank") as of December 31, 1998 and 1997, and the related statements of income and changes in capital for the years then ended. These financial statements are the responsibility of the Bank's management. Our responsibility is to express an opinion on the financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used, and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 3, the financial statements were prepared in conformity with the accounting principles, policies and practices established by the Board of Governors of the Federal Reserve System. These principles, policies and practices, which were designed to meet the specialized accounting and reporting needs of the Federal Reserve System, are set forth in the "Financial Accounting Manual for Federal Reserve Banks" and constitute a comprehensive basis of accounting other than generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly in all materials respects, the financial position of the Bank as of December 31, 1998 and 1997, and results of its operations for the years then ended, on the basis of accounting described in Note 3.

Cleveland, Ohio
March 5, 1999

COMPARATIVE FINANCIAL STATEMENTS

Statement of Condition

(in millions)

	As of December 31, 1998	As of December 31, 1997
Assets		
Gold certificates	$ 643	$ 669
Special drawing rights certificates	574	574
Coin	16	27
Items in process of collection	527	352
U.S. government and federal agency securities, net	29,680	30,020
Investments denominated in foreign currencies	1,271	1,083
Accrued interest receivable	280	284
Bank premises and equipment, net	190	162
Other assets	23	22
Total assets	$ 33,204	$ 33,193
Liabilities and Capital		
Liabilities:		
Federal Reserve notes outstanding, net	$ 26,164	$ 28,441
Deposits:		
Depository institutions	1,574	1,815
Other deposits	14	11
Deferred credit items	334	235
Surplus transfer due U.S. Treasury	84	52
Interdistrict settlement account	4,170	1,888
Accrued benefit cost	49	46
Other liabilities	17	21
Total liabilities	$ 32,406	$ 32,509
Capital:		
Capital paid in	$ 399	$ 349
Surplus	399	335
Total capital	798	684
Total liabilities and capital	$ 33,204	$ 33,193

The accompanying notes are an integral part of these financial statements.

Statement of Income

(in millions)

	For the year ended December 31, 1998	For the year ended December 31, 1997
Interest income:		
Interest on U.S. government securities	$ 1,755	$ 1,668
Interest on foreign currencies	28	24
Total interest income	1,783	1,692
Other operating income (loss):		
Income from services	52	50
Reimbursable services to government agencies	29	24
Foreign currency gains (losses), net	120	(165)
Government securities gains, net	3	1
Other income	2	1
Total other operating income (loss)	206	(89)
Operating expenses:		
Salaries and other benefits	71	69
Occupancy expense	13	11
Equipment expense	10	10
Cost of unreimbursed Treasury services	1	1
Assessments by Board of Governors	37	36
Other expenses	56	56
Total operating expenses	188	183
Net income prior to distribution	$ 1,801	$ 1,420
Distribution of net income:		
Dividends paid to member banks	$ 23	$ 19
Transferred to surplus	64	57
Payments to U.S. Treasury as interest on Federal Reserve notes	546	—
Payments to U.S. Treasury as required by statute	1,168	1,344
Total distribution	$ 1,801	$ 1,420

Statement of Changes in Capital

(in millions)

For the years ended December 31, 1998 and December 31, 1997

	Capital Paid in	Surplus	Total Capital
Balance at January 1, 1997 (5.9 million shares)	$ 292	$ 286	$ 578
Net income transferred to surplus		57	57
Statutory surplus transfer to the U.S. Treasury		(8)	(8)
Net change in capital stock issued (1.1 million shares)	57		57
Balance at December 31, 1997 (7.0 million shares)	$ 349	$ 335	$ 684
Net income transferred to surplus		64	64
Net change in capital stock issued (1.0 million shares)	50		50
Balance at December 31, 1998 (8.0 million shares)	$ 399	$ 399	$ 798

The accompanying notes are an integral part of these financial statements.

Notes to Financial Statements

1. ORGANIZATION:

The Federal Reserve Bank of Cleveland ("Bank") is part of the Federal Reserve System ("System") created by Congress under the Federal Reserve Act of 1913 ("Federal Reserve Act") which established the central bank of the United States. The System consists of the Board of Governors of the Federal Reserve System ("Board of Governors") and twelve Federal Reserve Banks ("Reserve Banks"). The Reserve Banks are chartered by the federal government and possess a unique set of governmental, corporate, and central bank characteristics. Other major elements of the System are the Federal Open Market Committee ("FOMC"), and the Federal Advisory Council. The FOMC is composed of members of the Board of Governors, the president of the Federal Reserve Bank of New York ("FRBNY") and, on a rotating basis, four other Reserve Bank presidents.

Structure:

The Bank and its branches in Cincinnati and Pittsburgh, and its regional check processing center in Columbus serve the Fourth Federal Reserve District, which includes Ohio and a portion of Kentucky, Pennsylvania, and West Virginia. In accordance with the Federal Reserve Act, supervision and control of the Bank is exercised by a Board of Directors. Banks that are members of the System include all national banks and any state chartered bank that applies and is approved for membership in the System.

Board of Directors:

The Federal Reserve Act specifies the composition of the board of directors for each of the Reserve Banks. Each board is composed of nine members serving three-year terms: three directors, including those designated as Chairman and Deputy Chairman, are appointed by the Board of Governors, and six directors are elected by member banks. Of the six elected by member banks, three represent the public and three represent member banks. Member banks are divided into three classes according to size. Member banks in each class elect one director representing member banks and one representing the public. In any election of directors, each member bank receives one vote, regardless of the number of shares of Reserve Bank stock it holds.

2. OPERATIONS AND SERVICES:

The System performs a variety of services and operations. Functions include: formulating and conducting monetary policy; participating actively in the payments mechanism, including large-dollar transfers of funds, automated clearinghouse operations and check processing; distribution of coin and currency; fiscal agency functions for the U.S. Treasury and certain federal agencies; serving as the federal government's bank; providing short-term loans to depository institutions; serving the consumer and the community by providing educational materials and information regarding consumer laws; supervising bank holding companies, and state member banks; and administering other regulations of the Board of Governors. The Board of Governors' operating costs are funded through assessments on the Reserve Banks.

The FOMC establishes policy regarding open market operations, oversees these operations, and issues authorizations and directives to the FRBNY for its execution of transactions. Authorized transaction types include direct purchase and sale of securities, matched sale-purchase transactions, the purchase of securities under agreements to resell, and the lending of U.S. government securities. Additionally, the FRBNY is authorized by the FOMC to hold balances of and to execute spot and forward foreign exchange and securities contracts in fourteen foreign currencies, maintain reciprocal currency arrangements ("F/X swaps") with various central banks, and "warehouse" foreign currencies for the U.S. Treasury and Exchange Stabilization Fund ("ESF") through the Reserve Banks.

3. SIGNIFICANT ACCOUNTING POLICIES:

Accounting principles for entities with the unique powers and responsibilities of the nation's central bank have not been formulated by the Financial Accounting Standards Board. The Board of Governors has developed specialized accounting principles and practices that it believes are appropriate for the significantly different nature and function of a central bank as compared to the private sector. These accounting principles and practices are documented in the "Financial Accounting Manual for Federal Reserve Banks" ("Financial Accounting Manual"), which is issued by the Board of Governors. All Reserve Banks are required to adopt and apply accounting policies and practices that are consistent with the Financial Accounting Manual.

The financial statements have been prepared in accordance with the Financial Accounting Manual. Differences exist between the accounting principles and practices of the System and generally accepted accounting principles ("GAAP"). The primary differences are the presentation of all security holdings at amortized cost, rather than at the fair value presentation requirements of GAAP, and the accounting for matched sale-purchase transactions as separate sales and purchases, rather than secured borrowings with pledged collateral, as is required by GAAP. In addition, the Bank has elected not to present a Statement of Cash Flows or a Statement of Comprehensive Income. The Statement of Cash Flows has not been included as the liquidity and cash position of the Bank are not of primary concern to the users of these financial statements. The Statement of Comprehensive Income, which comprises net income plus or minus certain adjustments, such as the fair value adjustment for securities, has not been included because as stated above, the securities are recorded at amortized cost and there are no other adjustments in the determination of Comprehensive Income applicable to the Bank. Other information regarding the Bank's activities is provided in, or may be derived from, the Statements of Condition, Income, and Changes in Capital. Therefore, a Statement of Cash Flows or a Statement of Comprehensive Income would not provide any additional useful information. There are no other significant differences between the policies outlined in the Financial Accounting Manual and GAAP.

The preparation of the financial statements in conformity with the Financial Accounting Manual requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates. Unique accounts and significant accounting policies are explained below.

a. Gold Certificates

The Secretary of the Treasury is authorized to issue gold certificates to the Reserve Banks to monetize gold held by the U.S. Treasury. Payment for the gold certificates by the Reserve Banks is made by crediting equivalent amounts in dollars into the account established for the U.S. Treasury. These gold certificates held by the Reserve Banks are required to be backed by the gold of the U.S. Treasury. The U.S. Treasury may reacquire the gold certificates at any time and the Reserve Banks must deliver them to the U.S. Treasury. At such time, the U.S. Treasury's account is charged and the Reserve Banks' gold certificate accounts are lowered. The value of gold for purposes of backing the gold certificates is set by law at $42 2/9 a fine troy ounce. The Board of Governors allocates the gold certificates among Reserve Banks once a year based upon Federal Reserve notes outstanding in each District at the end of the preceding year.

b. Special Drawing Rights Certificates

Special drawing rights ("SDRs") are issued by the International Monetary Fund ("Fund") to its members in proportion to each member's quota in the Fund at the time of issuance. SDRs serve as a supplement to international monetary reserves and may be transferred from one national monetary authority to another. Under the law providing for United States participation in the SDR system, the Secretary of the U.S. Treasury is authorized to issue SDR certificates, somewhat like gold certificates, to the Reserve Banks. At such time, equivalent amounts in dollars are credited to the account established for the U.S. Treasury, and the Reserve Banks' SDR certificate accounts are increased. The Reserve Banks are required to purchase SDRs, at the direction of the U.S. Treasury, for the purpose of financing SDR certificate acquisitions or for financing exchange stabilization operations. The Board of Governors allocates each SDR transaction among Reserve Banks based upon Federal Reserve notes outstanding in each District at the end of the preceding year.

c. Loans to Depository Institutions

The Depository Institutions Deregulation and Monetary Control Act of 1980 provides that all depository institutions that maintain reservable transaction accounts or nonpersonal time deposits, as defined in Regulation D issued by the Board of Governors, have borrowing privileges at the discretion of the Reserve Banks. Borrowers execute certain lending agreements and deposit sufficient collateral before credit is extended. Loans are evaluated for collectibility, and currently all are considered collectible and fully collateralized. If any loans were deemed to be uncollectible, an appropriate reserve would be established. Interest is recorded on the accrual basis and is charged at the applicable discount rate established at least every fourteen days by the Board of Directors of the Reserve Banks, subject to review by the Board of Governors. However, Reserve Banks retain the option to impose a surcharge above the basic rate in certain circumstances. There were no outstanding loans to depository institutions at December 31, 1998 and 1997 respectively.

d. U.S. Government and Federal Agency Securities and Investments Denominated in Foreign Currencies

The FOMC has designated the FRBNY to execute open market transactions on its behalf and to hold the resulting securities in the portfolio known as the System Open Market Account ("SOMA"). In addition to authorizing and directing operations in the domestic securities market, the FOMC authorizes and directs the FRBNY to execute operations in foreign markets for major currencies in order to counter disorderly conditions in exchange markets or other needs specified by the FOMC in carrying out the System's central bank responsibilities.

Purchases of securities under agreements to resell and matched sale-purchase transactions are accounted for as separate sale and purchase transactions. Purchases under agreements to resell are transactions in which the FRBNY purchases a security and sells it back at the rate specified at the commencement of the transaction. Matched sale-purchase transactions are transactions in which the FRBNY sells a security and buys it back at the rate specified at the commencement of the transaction.

Reserve Banks are authorized by the FOMC to lend U.S. government securities held in the SOMA to U.S. government securities dealers and to banks participating in U.S. government securities clearing arrangements, in order to facilitate the effective functioning of the domestic securities market. These securities-lending transactions are fully collateralized by other U.S. government securities. FOMC policy requires the lending Reserve Bank to take possession of collateral in amounts in excess of the market values of the securities loaned. The market values of the collateral and the securities loaned are monitored by the lending Reserve Bank on a daily basis, with additional collateral obtained as necessary. The securities loaned continue to be accounted for in the SOMA.

Foreign exchange contracts are contractual agreements between two parties to exchange specified currencies, at a specified price, on a specified date. Spot foreign contracts normally settle two days after the trade date, whereas the settlement date on forward contracts is negotiated between the contracting parties, but will extend beyond two days from the trade date. The FRBNY generally enters into spot contracts, with any forward contracts generally limited to the second leg of a swap/warehousing transaction.

The FRBNY, on behalf of the Reserve Banks, maintains renewable, short-term F/X swap arrangements with authorized foreign central banks. The parties agree to exchange their currencies up to a pre-arranged maximum amount and for an agreed upon period of time (up to twelve months), at an agreed upon interest rate. These arrangements give the FOMC temporary access to foreign currencies that it may need for intervention operations to support the dollar and give the partner foreign central bank temporary access to dollars it may need to support its own currency. Drawings under the F/X swap arrangements can be initiated by either the FRBNY or the partner foreign central bank, and must be agreed to by the drawee. The F/X swaps are structured so that the party initiating the transaction (the drawer) bears the exchange rate risk upon maturity. The FRBNY will generally invest the foreign currency received under an F/X swap in interest-bearing instruments.

Warehousing is an arrangement under which the FOMC agrees to exchange, at the request of the Treasury, U.S. dollars for foreign currencies held by the Treasury or ESF over a limited period of time. The purpose of the warehousing facility is to supplement the U.S. dollar resources of the Treasury and ESF for financing purchases of foreign currencies and related international operations.

In connection with its foreign currency activities, the FRBNY, on behalf of the Reserve Banks, may enter into contracts which contain varying degrees of off-balance sheet market risk, because they represent contractual commitments involving future settlement, and counter-party credit risk. The FRBNY controls credit risk by obtaining credit approvals, establishing transaction limits, and performing daily monitoring procedures.

While the application of current market prices to the securities currently held in the SOMA portfolio and investments denominated in foreign currencies may result in values substantially above or below their carrying values, these unrealized changes in value would have no direct effect on the quantity of reserves available to the banking system or on the prospects for future Reserve Bank earnings or capital. Both the domestic and foreign components of the SOMA portfolio from time to time involve transactions that can result in gains or losses when holdings are sold prior to maturity. However, decisions regarding the securities and foreign currencies transactions, including their purchase and sale, are motivated by monetary policy objectives rather than profit. Accordingly, earnings and any gains or losses resulting from the sale of such currencies and securities are incidental to the open market operations and do not motivate its activities or policy decisions.

U.S. government and federal agency securities and investments denominated in foreign currencies comprising the SOMA are recorded at cost, on a settlement-date basis, and adjusted for amortization of premiums or accretion of discounts on a straight-line basis. Interest income is accrued on a straight-line basis and is reported as "Interest on U.S. government securities" or "Interest on foreign currencies," as appropriate. Income earned on securities lending transactions is reported as a component of "Other income." Gains and losses resulting from sales of securities are determined by specific issues based on average cost. Gains and losses on the sales of U.S. government and federal agency securities are reported as "Government Securities Gains, net". Foreign currency denominated assets are revalued monthly at current market exchange rates in order to report these assets in U.S. dollars. Realized and unrealized gains and losses on investments denominated in foreign currencies are reported as "Foreign currency gains (losses), net". Foreign currencies held through F/X swaps, when initiated by the counter party, and warehousing arrangements are revalued monthly, with the unrealized gain or loss reported by the FRBNY as a component of "Other assets" or "Other liabilities," as appropriate.

Balances of U.S. government and federal agencies securities bought outright, investments denominated in foreign currency, interest income, amortization of premiums and discounts on securities bought outright, gains and losses on sales of securities, and realized and unrealized gains and losses on investments denominated in foreign currencies, excluding those held under an F/X swap arrangement, are allocated to each Reserve Bank. Securities purchased under agreements to resell and the related premiums, discounts and income, and unrealized gains and losses on the revaluation of foreign currency holdings under F/X swaps and warehousing arrangements are allocated to the FRBNY and not to other Reserve Banks. Income from securities lending transactions is recognized only by the lending Reserve Bank.

e. Bank Premises and Equipment

Bank premises and equipment are stated at cost less accumulated depreciation. Depreciation is calculated on a straight-line basis over estimated useful lives of assets ranging from two to fifty years. New assets, major alterations, renovations and improvements are capitalized at cost as additions to the asset accounts. Maintenance, repairs and minor replacements are charged to operations in the year incurred.

f. Interdistrict Settlement Account

At the close of business each day, all Reserve Banks and branches assemble the payments due to or from other Reserve Banks and branches as a result of transactions involving accounts residing in other Districts that occurred during the day's operations. Such transactions may include funds settlement, check clearing and automated clearinghouse ("ACH") operations, and allocations of shared expenses. The cumulative net amount due to or from other Reserve Banks is reported as the "Interdistrict settlement account."

g. Federal Reserve Notes

Federal Reserve notes are the circulating currency of the United States. These notes are issued through the various Federal Reserve agents to the Reserve Banks upon deposit with such Agents of certain classes of collateral security, typically U.S. government securities. These notes are identified as issued to a specific Reserve Bank. The Federal Reserve Act provides that the collateral security tendered by the Reserve Bank to the Federal Reserve Agent must be equal to the sum of the notes applied for by such Reserve Bank. In accordance with the Federal Reserve Act, gold certificates, special drawing rights certificates, U.S. government and agency securities, loans allowed under Section 13, and investments denominated in foreign currencies are pledged as collateral for net Federal Reserve notes outstanding. The collateral value is equal to the book value of the collateral tendered, with the exception of securities, whose collateral value is equal to the par value of the securities tendered. The Board of Governors may, at any time, call upon a Reserve Bank for additional security to adequately collateralize the Federal Reserve notes. To satisfy its obligation to provide sufficient collateral for its outstanding Federal Reserve notes, the Reserve Banks have entered into an agreement that provides that certain assets of the Reserve Banks are jointly pledged as collateral for the Federal Reserve notes of all Reserve Banks. In the event that this collateral is insufficient, the Federal Reserve Act provides that Federal Reserve notes become a first and paramount lien on all the assets of the Reserve Banks. Finally, as obligations of the United States, Federal Reserve notes are backed by the full faith and credit of the United States government.

The "Federal Reserve notes outstanding, net" account represents Federal Reserve notes reduced by cash held in the vaults of the Bank of $3,370 million, and $3,265 million at December 31, 1998 and 1997, respectively.

h. Capital Paid in

The Federal Reserve Act requires that each member bank subscribe to the capital stock of the Reserve Bank in an amount equal to 6% of the capital and surplus of the member bank. As a member bank's capital and surplus changes, its holdings of the Reserve Bank's stock must be adjusted. Member banks are those state-chartered banks that apply and are approved for membership in the System and all national banks. Currently, only one-half of the subscription is paid-in and the remainder is subject to call. These shares are nonvoting with a par value of $100. They may not be transferred or hypothecated. By law, each member bank is entitled to receive an annual dividend of 6 percent on the paid in capital stock. This cumulative dividend is paid semiannually. A member bank is liable for Reserve Bank liabilities up to twice the par value of stock subscribed by it.

i. Surplus

The Board of Governors requires Reserve Banks to maintain a surplus equal to the amount of capital paid in as of December 31. This amount is intended to provide additional capital and reduce the possibility that the Reserve Banks would be required to call on member banks for additional capital. Reserve Banks are required by the Board of Governors to transfer to the U.S. Treasury excess earnings, after providing for the costs of operations, payment of dividends, and reservation of an amount necessary to equate surplus with capital paid in. Payments made after September 30, 1998 represent payment of interest on Federal Reserve notes outstanding.

The Omnibus Budget Reconciliation Act of 1993 (Public Law 103-66, Section 3002) codified the existing Board surplus policies as statutory surplus transfers, rather than as payments of interest on Federal Reserve notes, for federal government fiscal years 1998 and 1997 (which began on October 1, 1997 and 1996, respectively). In addition, the legislation directed the Reserve Banks to transfer to the U.S. Treasury additional surplus funds of $107 million and $106 million during fiscal years 1998 and 1997, respectively. Reserve Banks were not permitted to replenish surplus for these amounts during this time. The Reserve Banks made these transfers on October 1, 1997 and October 1, 1996, respectively. The Bank's share of the 1997 transfer is reported as "Statutory surplus transfer to the U.S. Treasury."

In the event of losses, payments to the U.S. Treasury are suspended until such losses are recovered through subsequent earnings. Weekly payments to the U.S. Treasury vary significantly.

j. Cost of Unreimbursed Treasury Services

The Bank is required by the Federal Reserve Act to serve as fiscal agent and depository of the United States. By statute, the Department of the Treasury is permitted, but not required, to pay for these services. The costs of providing fiscal agency and depository services to the Treasury Department that have been billed but will not be paid are reported as the "Cost of unreimbursed Treasury services."

k. Taxes

The Reserve Banks are exempt from federal, state, and local taxes, except for taxes on real property, which are reported as a component of "Occupancy expense."

4. U.S. GOVERNMENT AND FEDERAL AGENCY SECURITIES:

Securities bought outright and held under agreements to resell are held in the SOMA at the FRBNY. An undivided interest in SOMA activity, with the exception of securities held under agreements to resell and the related premiums, discounts and income, is allocated to each Reserve Bank on a percentage basis derived from an annual settlement of interdistrict clearings. The settlement, performed in April of each year, equalizes Reserve Bank gold certificate holdings to Federal Reserve notes outstanding. The Bank's allocated share of SOMA balances was approximately 6.499 percent and 6.917 percent at December 31, 1998 and 1997, respectively.

The Bank's allocated share of securities held in the SOMA at December 31, that were bought outright, were as follows (in millions):

	1998	1997
Par value:		
Federal agency	$ 22	$ 47
U.S. government:		
Bills	12,659	13,635
Notes	12,212	12,050
Bonds	4,515	4,109
Total par value	29,408	29,841
Unamortized premiums	480	429
Unaccreted discounts	(208)	(250)
Total allocated to Bank	$ 29,680	$ 30,020

Total SOMA securities bought outright were $456,667 and $434,001 million at December 31, 1998 and 1997, respectively.

The maturities of U.S. government and federal agency securities bought outright, which were allocated to the Bank at December 31, 1998 were as follows (in millions):

	Par value		
Maturities of Securities Held	U.S. Government Securities	Federal Agency Obligations	Total
Within 15 days	$ 75	$ —	$ 75
16 days to 90 days	6,443	2	6,445
91 days to 1 year	9,335	5	9,340
Over 1 year to 5 years	7,002	4	7,006
Over 5 years to 10 years	2,913	11	2,924
Over 10 years	3,618	—	3,618
Total	$ 29,386	$ 22	$ 29,408

At December 31, 1998 and 1997, matched sale-purchase transactions involving U.S. government securities with par values of $20,927 million and $17,027 million, respectively, were outstanding, of which $1,360 million and $1,178 million were allocated to the Bank. Matched sale-purchase transactions are generally overnight arrangements.

5. INVESTMENTS DENOMINATED IN FOREIGN CURRENCIES:

The FRBNY, on behalf of the Reserve Banks, holds foreign currency deposits with foreign central banks and the Bank for International Settlements and invests in foreign government debt instruments. Foreign government debt instruments held include both securities bought outright and securities held under agreements to resell. These investments are guaranteed as to principal and interest by the foreign governments.

Each Reserve Bank is allocated a share of foreign-currency-denominated assets, the related interest income, and realized and unrealized foreign currency gains and losses, with the exception of unrealized gains and losses on F/X swaps and warehousing transactions. This allocation is based on the ratio of each Reserve Bank's capital and surplus to aggregate capital and surplus at the preceding December 31. The Bank's allocated share of investments denominated in foreign currencies was approximately 6.425 percent and 6.354 percent at December 31, 1998 and 1997, respectively.

The Bank's allocated share of investments denominated in foreign currencies, valued at current exchange rates at December 31, were as follows (in millions):

	1998	1997
German Marks:		
Foreign currency deposits	$ 672	$ 526
Government debt instruments including agreements to resell	152	204
Japanese Yen:		
Foreign currency deposits	43	37
Government debt instruments including agreements to resell	398	311
Accrued interest	6	5
Total	$ 1,271	$ 1,083

Total investments denominated in foreign currencies were $19,769 million and $17,046 million at December 31, 1998 and 1997, respectively, which include $15 million and $3 million in unearned interest for 1998 and 1997 respectively, collected on certain foreign currency holdings that were allocated solely to FRBNY.

The maturities of investments denominated in foreign currencies which were allocated to the Bank at December 31, 1998 were as follows (in millions):

Maturities of Investments Denominated in Foreign Currencies	
Within 1 year	$ 1,210
Over 1 year to 5 years	32
Over 5 years to 10 years	29
Total	$ 1,271

At December 31, 1998 and 1997, there were no open foreign exchange contracts or outstanding F/X swaps.
At December 31, 1998 the warehousing facility was $5,000 million, with zero outstanding.

6. BANK PREMISES AND EQUIPMENT:

A summary of bank premises and equipment at December 31 is as follows (in millions):

	1998	1997
Bank premises and equipment:		
Land	$ 7	$ 7
Buildings	141	89
Building machinery and equipment	40	31
Construction in progress	5	36
Furniture and equipment	65	59
	258	222
Accumulated depreciation	(68)	(60)
Bank premises and equipment, net	$ 190	$ 162

Depreciation expense was $10 million for both December 31, 1998 and 1997.

The Bank leases unused space to outside tenants. Those leases have terms ranging from 1 to 16 years. Rental income from such leases was $253 thousand and $250 thousand for the years ended December 31, 1998 and 1997, respectively. Future minimum lease payments under agreements in existence at December 31, 1998 were (in thousands):

1999	$ 212
2000	697
2001	706
2002	764
2003	773
Thereafter	8,242
	$ 11,394

7. COMMITMENTS AND CONTINGENCIES:

At December 31, 1998 the Bank was obligated under noncancelable leases for premises and equipment with terms ranging from one to approximately two years. These leases provide for increased rentals based upon increases in real estate taxes, operating costs or selected price indices.

Rental expense under operating leases for certain operating facilities, warehouses, and data processing and office equipment (including taxes, insurance, and maintenance when included in rent), net of sublease rentals, was $2 million and $3 million for the years ended December 31, 1998 and 1997, respectively. Certain of the Bank's leases have options to renew.

Future minimum lease payments under noncancelable operating leases and capital leases, net of sublease rentals, with terms of one year or more, at December 31, 1998 were not material.

There were no other commitments and long-term obligations in excess of one year at December 31, 1998.

Under the Insurance Agreement of the Federal Reserve Banks dated as of June 7, 1994 each of the Reserve Banks has agreed to bear, on a per incident basis, a pro rata share of losses in excess of 1 percent of the capital of the claiming Reserve Bank, up to 50 percent of the total capital and surplus of all Reserve Banks. Losses are borne in the ratio that a Reserve Bank's capital bears to the total capital of all Reserve Banks at the beginning of the calendar year in which the loss is shared. No claims were outstanding under such agreement at December 31, 1998 or 1997.

The Bank is involved in certain legal actions and claims arising in the ordinary course of business. Although it is difficult to predict the ultimate outcome of these actions, in management's opinion, based on discussions with counsel, the aforementioned litigation and claims will be resolved without material adverse effect on the financial position or results of operations of the Bank.

8. RETIREMENT AND THRIFT PLANS:

Retirement Plans:

The Bank currently offers two defined benefit retirement plans to its employees, based on length of service and level of compensation. Substantially all of the Bank's employees participate in the Retirement Plan for Employees of the Federal Reserve System ("System Plan") and the Benefit Equalization Retirement Plan ("BEP"). The System Plan is a multi-employer plan with contributions fully funded by participating employers. No separate accounting is maintained of assets contributed by the participating employers. The Bank's projected benefit obligation and net pension costs for the BEP at December 31, 1998 and 1997, and for the years then ended, are not material.

Thrift Plan:

Employees of the Bank may also participate in the defined contribution Thrift Plan for Employees of the Federal Reserve System ("Thrift Plan"). The Bank's Thrift Plan contributions totaled $2 million for both December 31, 1998 and 1997 and are reported as a component of "Salaries and other benefits."

9. POSTRETIREMENT BENEFITS OTHER THAN PENSIONS AND POSTEMPLOYMENT BENEFITS:

Postretirement Benefits Other Than Pensions:

In addition to the Bank's retirement plans, employees who have met certain age and length of service requirements are eligible for both medical benefits and life insurance coverage during retirement.

The Bank funds benefits payable under the medical and life insurance plans as due and, accordingly, has no plan assets. Net postretirement benefit cost is actuarially determined using a January 1 measurement date.

Following is a reconciliation of beginning and ending balances of the benefit obligation (in millions):

	1998	1997
Accumulated postretirement benefit obligation at January 1	$ 37.9	$ 34.6
Service cost-benefits earned during the period	1.1	1.0
Interest cost of accumulated benefit obligation	2.6	2.5
Actuarial gain	3.6	0.4
Contributions by plan participants	0.1	0.2
Benefits paid	(1.1)	(0.8)
Accumulated postretirement benefit obligation at December 31	$ 44.2	$ 37.9

Following is a reconciliation of the beginning and ending balance of the plan assets, the unfunded postretirement benefit obligation, and the accrued postretirement benefit cost (in millions):

	1998	1997
Fair value of plan assets at January 1	$ —	$ —
Actual return on plan assets	—	—
Contributions by the employer	1.0	0.6
Contributions by plan participants	0.1	0.2
Benefits paid	(1.1)	(0.8)
Fair value of plan assets at December 31	$ —	$ —
Unfunded postretirement benefit obligation	$ 44.2	$ 37.9
Unrecognized initial net transition asset (obligation)	—	—
Unrecognized prior service cost	—	—
Unrecognized net actuarial gain	0.2	3.9
Accrued postretirement benefit cost	$ 44.4	$ 41.8

Accrued postretirement benefit cost is reported as a component of "Accrued benefit cost."

The weighted-average assumption used in developing the postretirement benefit obligation as of December 31 is as follows:

	1998	1997
Discount rate	6.25%	7.00%

For measurement purposes, an 8.5 percent annual rate of increase in the cost of covered health care benefits was assumed for 1999. Ultimately, the health care cost trend rate is expected to decrease gradually to 4.75 percent by 2006, and remain at that level thereafter.

Assumed health care cost trend rates have a significant effect on the amounts reported for health care plans. A one percentage point change in assumed health care cost trend rates would have the following effects for the year ended December 31, 1998 (in millions):

	1 Percentage Point Increase	1 Percentage Point Decrease
Effect on aggregate of service and interest cost components of net periodic postretirement benefit cost	$ 0.8	$ (0.8)
Effect on accumulated postretirement benefit obligation	8.9	(8.3)

The following is a summary of the components of net periodic postretirement benefit cost for the years ended December 31 (in millions):

	1998	1997
Service cost-benefits earned during the period	$ 1.1	$ 1.0
Interest cost of accumulated benefit obligation	2.6	2.6
Amortization of prior service cost	—	—
Recognized net actuarial loss	(0.1)	—
Net periodic postretirement benefit cost	$ 3.6	$ 3.6

Net periodic postretirement benefit cost is reported as a component of "Salaries and other benefits."

Postemployment Benefits:

The Bank offers benefits to former or inactive employees. Postemployment benefit costs are actuarially determined and include the cost of medical and dental insurance, survivor income, and disability benefits. Costs were projected using the same discount rate and health care trend rates as were used for projecting postretirement costs. The accrued postemployment benefit costs recognized by the Bank at December 31, 1998 and 1997, were $5 million and $4 million, respectively. This cost is included as a component of "Accrued benefit cost." Net periodic postemployment benefit costs included in 1998 and 1997 operating expenses were $1 million for both years.

OFFICERS AND CONSULTANTS

As of December 31, 1998

Jerry L. Jordan
President & Chief Executive Officer

Sandra Pianalto
First Vice President & Chief Operating Officer

Charles A. Cerino
Senior Vice President
Cincinnati and Columbus Offices
Check, Marketing

Lawrence Cuy
Senior Vice President
Information Technology, Financial Management Services

R. Chris Moore
Senior Vice President
Banking Supervision and Regulation, Credit Risk Management, Data Services

Samuel D. Smith
Senior Vice President
Facilities, Protection, Business Continuity Planning, Information Security

Mark S. Sniderman
Senior Vice President & Director of Research
Corporate Communications & Community Affairs, Research

Donald G. Vincel
Senior Vice President
Unisys IPS Development

Robert F. Ware
Senior Vice President
Cash, Treasury Services, Electronic Payments, and Cleveland Operations

David E. Altig
Vice President & Economist
Research

Andrew J. Bazar
Senior Consultant
Information Technology Services

Terry N. Bennett
Vice President
Information Technology Services

Jake D. Breland
Vice President
Banking Supervision and Regulation

Andrew C. Burkle, Jr.
Vice President
Banking Supervision and Regulation

David P. Jager
Vice President
Cash, Securities/Fiscal

Rayford P. Kalich
Vice President
Banking Supervision and Regulation, Credit Risk Management, Data Services

Robert W. Price
Vice President
Check Collection, Retail Product Office, Check Automation, and Check Operations

David E. Rich
Senior Consultant
Information Technology Services

Edward E. Richardson
Vice President
Marketing/Sales

Terrence J. Roth
Vice President
Marketing/Product Development

Robert B. Schaub
Vice President
Pittsburgh Office
Securities/Fiscal

Susan G. Schueller
Vice President & General Auditor

Edward J. Stevens
Senior Consultant & Economist
Research

James B. Thomson
Vice President & Economist
Research

Joseph C. Thorp
Vice President
Facilities

Robert Van Valkenburg
Vice President
Financial Management Services

Peggy A. Velimesis
Vice President
Human Resources & EEO Officer

Andrew W. Watts
Vice President & General Counsel

Charles F. Williams
Vice President
Cincinnati, Pittsburgh, and Columbus Offices
Check Services

James A. Blake
Consultant
Information Technology Services

Raymond L. Brinkman
Assistant Vice President
Pittsburgh Office
Building, Cash, Protection, Securities/Fiscal

Michael F. Bryan
Assistant Vice President & Economist
Research

Ruth M. Clevenger
Assistant Vice President & Community Affairs Officer
Corporate Communications & Community Affairs

William D. Fosnight
Assistant Vice President & Assistant General Counsel

Joseph G. Haubrich
Consultant & Economist
Research

Suzanne M. Howe
Assistant Vice President
ACH, Funds Transfer, Electronic Delivery Services

Barbara H. Hertz
Assistant Vice President
Cincinnati Office
Facility/Information Technology Services, Cash/Fiscal, Protection, EEO Officer

Stephen H. Jenkins
Assistant Vice President
Banking Supervision and Regulation

Dean Longo
Consultant
Information Technology Services

William J. Major
Assistant Vice President
Check Collection

Laura K. McGowan
Assistant Vice President
Financial Management Services, Strategic Planning & Special Projects

Stephen J. Ong
Assistant Vice President & Corporate Secretary
Corporate Communications & Community Affairs

James W. Rakowsky
Assistant Vice President
Facilities, Business Continuity Planning, Building Transition

Kimberly L. Ray
Assistant Vice President
Pittsburgh Office
Check Collection, Marketing, Automation, General Services, EEO Officer

John P. Robins
Consultant
Banking Supervision and Regulation

William J. Smith
Assistant Vice President
Human Resources

Gregory L. Stefani
Assistant Vice President
Banking Supervision and Regulation

Henry P. Trolio
Assistant Vice President
Information Technology Services, Deputy EEO Officer

Darell R. Wittrup
Assistant Vice President
Accounting, Billing

Consultants are highly skilled employees who contribute to attaining the Bank's goals through their specialized professional or technical skills.

DIRECTORS

As of December 31, 1998

Cleveland

G. Watts Humphrey, Jr.
Chairman & Federal Reserve Agent
President
GWH Holdings, Inc.
Pittsburgh, Pennsylvania

David H. Hoag
Deputy Chairman
Chairman & former CEO
The LTV Corporation
Cleveland, Ohio

David A. Daberko
Chairman & CEO
National City Corporation
Cleveland, Ohio

David S. Dahlmann
President & CEO
Southwest National Corporation
Greensburg, Pennsylvania

Robert Y. Farrington
Executive Secretary-Treasurer, Emeritus
Ohio State Building and
Construction Trades Council
Columbus, Ohio

I. N. Rendall Harper, Jr.
President & CEO
American Micrographics Company, Inc.
Monroeville, Pennsylvania

Cheryl L. Krueger-Horn
President & CEO
Cheryl & Company
Westerville, Ohio

Tiney M. McComb
Chairman & President
Heartland BancCorp
Gahanna, Ohio

David L. Nichols
Former Chairman & CEO
Mercantile Stores, Inc.
Fairfield, Ohio

Robert W. Gillespie
Federal Advisory Council Representative
Chairman & CEO
KeyCorp
Cleveland, Ohio

David S. Dahlmann, David H. Hoag, I. N. Rendall Harper, Jr., G. Watts Humphrey, Jr., David A. Daberko, Tiney M. McComb, Robert Y. Farrington, and David L. Nichols

Cincinnati

George C. Juilfs
Chairman
President & CEO
SENCORP
Newport, Kentucky

Judith G. Clabes
President & CEO
Scripps Howard Foundation
Cincinnati, Ohio

Phillip R. Cox
President & CEO
Cox Financial Corporation
Cincinnati, Ohio

Jean R. Hale
President & CEO
Community Trust Bank, N.A.
Pikeville, Kentucky

Thomas Revely, III
President & CEO
Cincinnati Bell Supply Co.
Cincinnati, Ohio

Wayne Shumate
Chairman & CEO
Kentucky Textiles, Inc.
Paris, Kentucky

Stephen P. Wilson
President & CEO
Lebanon Citizens National Bank
Lebanon, Ohio

Stephen P. Wilson, George C. Juilfs, Judith G. Clabes, Wayne Shumate, Jean R. Hale, and Phillip R. Cox

Pittsburgh

John T. Ryan III
Chairman
Chairman & CEO
Mine Safety Appliances Company
Pittsburgh, Pennsylvania

Georgia Berner
President
Berner International Corporation
New Castle, Pennsylvania

Charles E. Bunch
Senior Vice President
Strategic Planning and Corporate Services
PPG Industries, Inc.
Pittsburgh, Pennsylvania

Gretchen R. Haggerty
Vice President, Accounting and Finance
U. S. Steel Group, USX Corporation
Pittsburgh, Pennsylvania

Edward V. Randall, Jr.
Chairman
PNC Bank Foundation
Pittsburgh, Pennsylvania

Thomas J. O'Shane
Chairman & CEO
First Western Bancorp, Inc.
New Castle, Pennsylvania

Peter N. Stephans
Chairman & CEO
Trigon Incorporated
McMurray, Pennsylvania

Charles E. Bunch, Gretchen R. Haggerty, John T. Ryan III, Georgia Berner, and Thomas J. O'Shane

Payments Services

- The Bank devoted significant resources to prepare for the century date change. Updating and testing of its critical application systems was completed on June 30. Testing of its applications with depository institutions began on July 1. Plans have been made to ensure that any Year 2000 issues that may arise with the Bank or its customers can be dealt with effectively.

- In partnership with the Federal Reserve Bank of Atlanta, the Cleveland Fed assumed leadership of the Retail Product Office (RPO), which manages check processing and automated clearinghouse operations for the Federal Reserve System. The RPO established the National Check Product Management Team to oversee Systemwide check automation, check operations, and new check services product development.

- The Bank undertook responsibility for managing check automation issues for the 12 Federal Reserve Banks. Working with the Federal Reserve Bank of Dallas, the Cleveland Fed will coordinate efforts to standardize the software and system applications used in check automation services at all Reserve Banks.

- The financial services of the Bank continued to operate efficiently. The Cleveland Fed was ranked third overall in the aggregate cross-sectional unit-cost index, which compares efficiency among the 12 Reserve Banks. The same index ranked Cleveland first in both the retail payments function and its check processing component.

- All financial services—automated clearinghouse operations, cash services, check processing, funds transfer, and book-entry securities transfer—succeeded in matching costs and revenue. Check processing, the largest service, achieved a cost-revenue match and also met the local net revenue target, which is critical to the Federal Reserve System's ability to meet national level cost-recovery targets.

- The Bank saw a strong increase in its check business in 1998. Overall, check volume grew more than 10 percent in the Fourth District, with all four offices experiencing gains. The Pittsburgh office posted an upsurge in volume (32.5 percent) because a major correspondent bank left the processing business.

- The Cleveland Reserve Bank assumed a lead role in conducting the FedLine Cash Web ordering application pilot project and supported the implementation of CashLan in several other Reserve Districts.

- The Cleveland Fed's Pittsburgh office continued to serve as one of five savings bond sites in the Federal Reserve System for the U.S. Treasury. Pittsburgh also completed the Regional Delivery System pilot project for scanning savings bond applications. After evaluating the results of the pilot project, the Bureau of the Public Debt authorized the system, which greatly improves efficiency in application processing. The new technology will be installed at all five Reserve System savings bond sites in 1999.

Monetary Policy/Research

- The Bank's staff of Research economists had 26 articles published or accepted for publication in conference volumes, books, and leading international and U.S. professional journals.

- Economic research articles appearing in Bank publications and other scholarly outlets explored key policy topics such as the functioning of the economy in low-inflation environments, price-level and interest-rate targeting, measurement of core inflation, mortgage lending discrimination, productivity, taxation and Social Security, and productivity measurement.

- The Research Department sponsored several high-level conferences that focused on the role of central banks in money and payments systems, and microeconomic models of search, matching, and exchange. Other activities included the publication of the proceedings of its 1997 conference on comparative financial systems in the *Journal of Money, Credit, and Banking*.

- During a period of unusual economic activity, the Cleveland Fed's economic research staff continued to provide high quality analytical support for and policy advice to the Bank president's participation in Federal Open Market Committee meetings and other important Bank constituents.

Supervision and Regulation

- Supervision and Regulation increased its focus on risk monitoring, risk management, and risk-based supervisory response. The area made key additions to its staff's expertise in specialized fields such as credit administration and capital markets activities. It also adopted additional risk-focused procedures for conducting consumer compliance examinations. The function remained among the most cost-efficient in the System, based on assets supervised.

- In conjunction with other regulatory agencies, Supervision and Regulation staff worked to ensure that the nation's banking system will be prepared for the century date change. Phase I reviews including awareness, assessment, and renovation of critical systems were conducted for all Fourth District supervised institutions. Phase II exams will focus on renovation, testing, and implementation of banks' critical systems and will be completed by the end of the first quarter of 1999. Supervision and Regulation continued to provide Year 2000 information and outreach efforts to community and business groups and financial institutions.

- The Bank placed particular emphasis on making greater use of technology to improve overall Supervision and Regulation processes. Increased availability of remote access, improved examination support tools, and the advent of customized information generation combined to make the supervision process more effective.

- The Credit Risk Management and Data Services functions successfully implemented new account adjustment procedures. These included consolidating the "as of" adjustment function from locations throughout the Fourth District, a change that improved management, coordination, and communication for financial institutions.

Quality Improvements

- The Cleveland Fed continued its Bankwide transformation effort to fulfill its vision to become the best example of a private enterprise serving the public interest. Functional areas throughout the Bank implemented previous improvement recommendations and identified new growth opportunities. Four cross-functional teams were chartered to provide recommendations on strategic issues, and their efforts will continue into 1999. The Bank institutionalized its transformation effort by dedicating permanent resources from the quality and strategic management functions to facilitate future continuous improvement phases. With this transition, the Bank's transformation initiative evolved from a "program" to a permanent process and management philosophy.

Cleveland Building Project

- The renovation of the Bank's historic main office building was completed ahead of the project schedule and under budget with occupancy occurring in the July–August time frame. Administrative activities in the main office building were resumed with no interruption of service. The restoration of the landmark main office and the construction of the adjacent operations facility provides state-of-the-art facilities that will increase the flexibility, speed, and efficiency with which the Cleveland Fed serves the financial industry. To commemorate the multi-year construction and renovation project, the Bank held a public opening ceremony for city, business, and community officials, in addition to a series of week-long grand opening and rededication celebrations for Bank employees. Alan Greenspan, Chairman of the Board of Governors of the Federal Reserve System, was the principal speaker at the event for Bank employees.

BUSINESS ADVISORY COUNCIL

Margo E. Broehl
Attorney at Law
Wooster, Ohio

Robert M. Cleveland
Vice President
Woodford Feed Company, Inc.
Versailles, Kentucky

Daniel B. Cunningham
Secretary/Treasurer
Long-Stanton Manufacturing Co., Inc.
Hamilton, Ohio

Norman S. Graves
President & CEO
National Metal Processing, Inc.
Richmond, Kentucky

Daniel P. Hughes
Vice President
The Dalton Group
Cuyahoga Falls, Ohio

James D. Kiggen
Chairman & CEO
Xtek, Incorporated
Cincinnati, Ohio

John A. Kobacker
President & CEO
The Marlenko Group
Columbus, Ohio

Elizabeth N. Kraftician
President & CEO
Touchstone Research Laboratory, Ltd.
Triadelphia, West Virginia

James W. Liken
President & CEO
Liken Home Medical, Inc.
Pittsburgh, Pennsylvania

F. James McCarl
President & CEO
McCarl's, Inc.
Beaver Falls, Pennsylvania

William J. Schneider
Senior Partner
Miller-Valentine Group
Dayton, Ohio

Steven C. Thomas
President & CEO
Mulach Steel Corporation
Leetsdale, Pennsylvania

COMMUNITY BANK ADVISORY COUNCIL

W. Richard Baker
Chairman, President & CEO
Ohio Heritage Bank
Coshocton, Ohio

Charles Beach, Jr.
Chairman
Peoples Exchange Bank
Beattyville, Kentucky

Michael N. Clemens
President & CEO
Commerce Exchange Bank
Beachwood, Ohio

G. Henry Cook
Chairman, President & CEO
Somerset Trust Company
Somerset, Pennsylvania

James R. Drenning
President & CEO
The Merchants National Bank of Kittanning
Kittanning, Pennsylvania

John O. Finnan
Chairman, President & CEO
Peoples Bank of Northern Kentucky
Crestview Hills, Kentucky

Michael J. Hagan
President & CEO
Iron and Glass Bank
Pittsburgh, Pennsylvania

Jeffrey A. Maffett
President & CEO
Eaton National Bank and Trust Company
Eaton, Ohio

Kristine N. Molnar
President & CEO
WesBanco Bank Wheeling
Wheeling, West Virginia

Benjamin T. Pugh
Chief Executive Officer
Premier Financial Bancorp, Inc.
Vanceburg, Kentucky

Eugene W. Workman
President & CEO
The Savings Bank and Trust Company
Orrville, Ohio

Paul G. Wreede
President & CEO
The Commercial Bank
Delphos, Ohio

Cleveland
1455 East 6th Street
Cleveland, OH 44114
(216) 579-2000

Cincinnati
150 East 4th Street
Cincinnati, OH 45202
(513) 721-4787

Pittsburgh
717 Grant Street
Pittsburgh, PA 15219
(412) 261-7800

Columbus
965 Kingsmill Parkway
Columbus, OH 43229
(614) 846-7494

This annual report was prepared by the Corporate Communications & Community Affairs Department and the Research Department of the Federal Reserve Bank of Cleveland.

For additional copies, contact the Corporate Communications & Community Affairs Department, Federal Reserve Bank of Cleveland, P.O. Box 6387, Cleveland, OH 44101, or call 1-800-543-3489 (OH, PA, WV) or 216-579-2001.

The annual report essay is also available electronically through the Cleveland Fed's home page on the World Wide Web: *http://www.clev.frb.org*.

Acknowledgements

Managing Editor:
Patricia DeMaioribus

Contributing Editor:
Deborah Zorska

Design: Michael Galka