Editors' Summary

THE BROOKINGS PANEL on Economic Activity held its thirtieth conference in Washington, D.C., on October 2 and 3, 1980. The papers presented then are published in this second issue in 1980 of *Brookings Papers on Economic Activity*. Four articles address economic issues of both immediate and continuing concern: financial markets and monetary policy, world oil markets and economic performance, the determinants of home building activity, and the valuation of corporations in stock and bond markets. Two shorter reports examine the consumer price index and the continuing problem of employment for blacks.

In the first article of this issue, Albert Wojnilower analyzes the behavior of financial markets, their interaction with monetary policy, and the crucial role they have played in the business cycle. Wojnilower argues that business expansions have almost always ended as a result of "credit crunches"—episodes when the supply of credit has been interrupted. In his view, the demands of borrowers are a relatively unimportant factor in explaining credit expansion, at least until after the peak is passed. Particularly around expansion peaks, he rejects models of orderly, continuously clearing financial markets with relatively stable demand and supply schedules for credit and money. Thus Wojnilower denies any substantial cyclical role of interest rates in rationing credit and argues for the importance of credit availability and quantitative restrictions in explaining the cyclical behavior of the economy and the mechanism through which monetary policy operates.

It is difficult to apply conventional statistical methods to test the credit-crunch hypothesis or, more generally, to choose between availability and interest rates in explaining the expansion of money and credit. The fact

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that nonprice rationing is not directly observable is a major difficulty; but a more fundamental problem is that, according to Wojnilower, the financial structure itself is constantly changing. Instead of using formal tests, Wojnilower supports his thesis with a rich chronology of developments in financial markets. The crunch episodes he identifies were often precipitated by interest rate ceilings that provoked disintermediation; but on occasion, they were caused by abrupt changes in bank portfolio behavior following surprises in policy or calamities in private markets. Each crunch has led to institutional changes, both by policymakers and by the financial community. Banks have reacted by devising new business practices to avoid restraints that previously restricted their lending. Similarly, the authorities have amended regulatory constraints in what Wojnilower regards as a series of misguided attempts to avoid repeating the last crunch. As a consequence, monetary policy has been conducted in a continually changing environment. And, partly as a consequence of this evolution, the severity of financial disruptions has increased during the period of Wojnilower's review.

In 1953 the U.S. Treasury's issuance of new thirty-year bonds yielding 3¼ percent led to the first postwar credit crisis as banks restrained their lending in the face of large capital losses on their existing bond portfolios. Wary of repeating that episode, the Treasury issued long-term bonds only three times in the next decade, and Congress provided favorable tax treatment for the portfolio losses that banks might realize in the future. Banks emerged from the 1953–54 recession less concerned about portfolio losses and more willing to sell bonds in order to expand loans. They again restricted lending in 1959 when investors withdrew time deposits from the banks in order to buy market securities whose yields had risen above Regulation Q ceilings. Following this episode, the authorities began to fear disintermediation, while the banks started issuing negotiable certificates of deposits (CDs) to enhance their ability to attract lendable funds.

These CDs marked the beginning of a new era of aggressive banking that transformed financial practices for the next two decades. During the first half of the 1960s the Federal Reserve raised the rate ceiling on CDs several times before it finally brought on the credit crunch of 1966 when it held the ceiling and offered funds through the discount window on the condition that banks restrict their lending. More innovations followed. Banks started arranging legally binding credit lines with borrowers that

could not be overturned by admonitions from the Federal Reserve, and they turned increasingly to the unregulated Eurodollar market for funds. Thus in 1969 when policy tightened, banks and bank borrowers escaped while disintermediation from thrift institutions dried up the mortgage market and drove house construction into a slump. Only the threat by Congress of new regulation on bank lending put an effective ceiling on loan rates and thus kept the banks from using expensive funds from the Eurodollar market to expand loans further.

In the 1970s two financial crises originated with failures in the private sector—Penn Central in 1970 and Franklin National Bank in 1974. In both cases the CD markets in general were disrupted, creating what Wojnilower calls a "crunch by accident rather than by design." The Federal Reserve bailed out the creditors so that, by the late 1970s, rescues were widely assumed to be its clear responsibility, just as after the 1950s the government was perceived as willing and able to avoid deep recession and financial collapse.

After the Penn Central crisis, the Federal Reserve eliminated CD ceilings. In 1978 the authorities allowed thrift institutions to issue money-market certificates so they could compete for funds when market interest rates rose. These further steps to remove the causes of disintermediation were consistent with the Federal Reserve's decade-long movement toward a monetary policy based on control over the growth of money.

Wojnilower is critical of the attempt by the monetary authority to eliminate regulatory constraints and to rely instead on controlling the growth of monetary aggregates in its conduct of policy. He regards the demand for credit as highly inelastic at most times and subject to changing expectations that make it virtually unbounded during periods of conventional monetary tightening. Thus he believes that extraordinary and unacceptable increases in interest rates would be needed to slow credit expansion in an unconstrained financial system. Furthermore, he argues that the control of a monetary aggregate, even if achieved, would provide little control over the growth of nominal spending in the economy. The financial system is continually creating instruments that substitute for money and is capable of expanding velocity without practical limit. Thus he reasons that any monetary aggregate the Federal Reserve did control would soon lose its historical relation to economic activity.

Wojnilower fears that in the absence of credit crunches caused by regulatory constraints, markets would experience crunches caused by serious

bankruptcy crises; crunch by design would be replaced by crunch by accident, with the authorities placed in the untenable position of limiting the damage at the cost of increasing the probability of further accidents. He thus advocates a return to a financial system with more regulatory constraints that would place quantitative limits on the expansion of credit and that would moderate the interest rate fluctuations that accompany the conduct of stabilizing monetary policy.

Participants at the meeting found Wojnilower's paper provocative and controversial. The discussion of the paper produced both support and criticism and a general interest in finding ways to test its key propositions more fully.

In the second article of this issue, William Nordhaus presents a unified model of the interaction between world oil markets and macroeconomic performance in industrial economies. His model of this interaction is informed by the developments that followed the 1973–74 OPEC price increase. This price increase contributed to inflation and to balance-of-payments difficulties, transferred purchasing power from the industrial economies to the oil-exporting nations, and pushed most governments into restrictive economic policies. Between 1973 and 1979 the expansion of real GNP in economies of countries in the Organisation for Economic Cooperation and Development slowed to 2.7 percent a year from 5.3 percent a year during the preceding decade. At the same time, the combination of higher oil prices and the world economic slowdown reduced the demand for oil. Oil consumption in the OECD countries was the same in 1978 as it was in 1973. By comparison, OECD consumption rose by an average of more than 7 percent a year during the preceding two decades. Between 1978 and 1980, world oil supplies were again disrupted and oil prices again rose sharply. Nordhaus' analysis aims at understanding such developments and their implications for the conduct of policy in the industrial countries.

Nordhaus first provides a model of the supply and demand for oil. For given prices, energy demand appears to be approximately proportional to output. For given levels of output, he reports estimates of the long-run price elasticities of crude oil that range between 0.2 and 0.5 Nordhaus is even more pessimistic about short-run elasticity. He argues that much of the substitution away from energy takes place only as the capital stock embodying old technology is replaced with capital of newer vintages. He

presents evidence on the useful lives of a number of types of capital and concludes that the price responses are spread over a period of one to four decades. As a result, in the short run it takes large price increases to produce a noticeable restriction of energy use. Any reduction in supply causes a sharp rise in spot market prices.

A crucial element in any model concerned with the interaction between world markets and economic activity is the specification of OPEC oil pricing behavior. Nordhaus argues that the behavior of key producers is best viewed as "noncooperative" rather than either as competitive or monopolistic. He also believes noneconomic considerations play a central role in their output and pricing decisions. In his formal model whenever world oil supply approaches short-run capacity—either because of strong demand or capacity disruptions—spot prices rise above list or contract prices. If such a situation is maintained for long, list prices are raised. Subsequently, if demand slackens, output of individual producing countries, particularly those that are financially unconstrained, will be restricted so as to maintain the higher list prices. Thus the mechanism generates an upward ratchet in the price of oil through time—unless demand growth is restrained and supply shocks are avoided so that spot prices never rise above list prices for long. Although it is difficult to predict precisely how much countries with revenues that are far in excess of current needs, such as Saudi Arabia, will vary output in order to moderate movements in spot prices, their concern with noneconomic considerations provides a plausible explanation of the major price movements during the 1970s.

In the long run, oil supplies and prices depend on new discoveries. Although drilling activity has increased sharply in response to higher oil prices, Nordhaus reports that additions to reserves have not. He recognizes that the reserves reporting may lag discoveries and that federal price controls may have led to some underreporting and to drilling of low-yield wells. However, he doubts that these factors can explain the disappointing trend in oil-finding rates in the 1970s, and is therefore pessimistic about long-run supply.

Higher world oil prices affect industrial economies in a number of ways. They directly add to inflation by raising the average price level and contributing to the wage-price spiral; they transfer real income to oil producers; and they alter production techniques, reducing labor productivity and potential output. In addition, depending on the response of policy, they may substantially reduce actual output relative to potential and in-

crease unemployment. To examine these effects, Nordhaus constructs a simplified econometric model of the major OECD economies, incorporating a world oil market and paying particular attention to the mechanisms by which oil affects the industrial countries. He then uses the model to investigate the effects of past OPEC price increases and to explore the policy alternatives available to the industrial nations. In contrast to some observers, he concludes that the first OPEC price increase of 1973–74 added only between 0.6 to 1.2 percentage points to the annual inflation rate for 1973–79 and substracted less than 0.2 percentage point from the annual growth in labor productivity. Real incomes were reduced by 2.9 percent over this period, primarily through the transfer of real income abroad. Nordhaus emphasizes that these estimates include only the direct economic effects of higher oil prices. The response of governments, which almost universally stepped on the economic brakes, added substantially to the reductions in output and employment that occurred.

The inclusion of a world oil market with explicit behavioral equations for OPEC oil supply and pricing enables Nordhaus to use his model to project future conditions in industrial economies under alternative assumptions for both oil supply and policy responses. In his projections the greatest economic costs come from loss of real income, either through higher world oil prices or through slow economic growth that reduces domestic output and employment. To avoid narrowing the gap between output and capacity in world oil markets, and thus driving up the spot and then the list price of oil, policy must restrain the demand for oil. But if this is done by slowing growth, the real income lost through lower production is even greater than the real income saved by avoiding higher oil import bills. According to Nordhaus' simulations, the optimal policy is to raise domestic energy prices for users in the industrial countries, through either taxes or equivalent conservation measures. By restraining demand for oil, high domestic prices keep world crude oil prices low while permitting a normal expansion of output and real incomes. Nordhaus' estimate of the optimal tax on oil ranges between $62 and $102 a barrel (1979 prices) by 1990, with the higher tax needed if OPEC supply capacity is disrupted. He notes, however, that these optimal taxes are estimated on the assumption that OECD nations act in unison in imposing them. If the United States acted alone, the optimal tax would be substantially smaller.

Just over a year ago analysts were puzzling over the extraordinary strength of residential construction during 1978 and the relatively small

size of the downturn in the first half of 1979 that occurred in the face of high interest rates, high housing prices, and slow economic growth. Jaffee and Rosen in *BPEA, 2:1979* attributed that strength in housing to the introduction of money-market certificates, which were first offered in June 1978 and which had allowed thrift institutions to compete for funds as market interest rates rose. They cautioned, however, that the worst might be yet to come, and it was. From 1979:3 to 1980:2, housing starts had their steepest decline in the postwar period, and the average real price of a house declined by more than 5 percent. In the third article of this issue, Patric Hendershott attributes both the prolonged boom and the recent severe drop in single-family housing to the behavior of real user costs of owner-occupied housing, a measure that depends on mortgage interest rates, expected inflation, and tax rates. Hendershott finds that the real user costs of owner-occupied housing declined steadily from the early 1960s until early 1979 as a result of a falling real after-tax mortgage rate. By comparison, the real user cost of rental housing exhibited no clear trend, so that the relative cost of owning rather than renting a home declined substantially. Thus the behavior of user costs over the long run has stimulated the demand for housing relative to other goods and services and, in addition, has caused a substitution of owner-occupied housing for rentals.

Hendershott divides his explanation of the real value of one-to-four family housing starts into three related parts: the decision by households of whether to buy or rent a home—the "tenure choice" that determines the demand for homeownership, their decision about "how much house" to buy, and the decisions by builders about how many housing starts to undertake. Hendershott follows Jaffee and Rosen in applying his analysis to a demographically adjusted homeownership rate, thereby isolating economic from demographic determinants. He then examines the importance of several economic variables: the ratio of the user cost of housing to rental user cost; a mortgage-payment constraint measuring the cash-flow problem of households that results when inflation causes high nominal mortgage interest rates, even when real rates have fallen; the credit-availability variables that depend on the flow of funds into thrift institutions; and real income. Using these variables, he estimates equations for the 1960:3–1978:4 period.

Hendershott finds that the user-cost ratio is the only variable that has a consistently important effect on tenure choice: it indicates that fewer people buy homes when the user cost of homeownership rises relative to the cost of renting. Hendershott finds that the behavior of this variable ex-

plains 56 to 66 percent of the increase in the adjusted homeownership rate over the 1960–78 period, which means that between 3.5 million and 4.0 million fewer householders would have become homeowners by 1978 if the real user cost had not fallen. He explains housing starts with credit availability and builder's expectations about housing demand, which in turn depend on expected homeownership variables. The estimated coefficients on the credit-availability variables are significant and indicate that a $1 billion increase in deposits in 1978 would raise starts by approximately 7,000 units. Although this is only 45 percent of the effect found previously by Jaffee and Rosen, Hendershott argues it is implausibly large, implying that 31 percent of incremental funds going to thrift institutions is used to finance new construction of one-to-four family structures. An equation for the average quality of starts completes Hendershott's model explaining the value of starts. In his preferred equation, which takes explicit account of the proportion of starts that are subsidized, the income elasticity of house quality is found to be 0.68, close to that obtained by other authors using microeconomic data. On the other hand, the price elasticities he finds, −0.10 for the user cost and −0.16 for the mortgage-payment constraint, are smaller than those obtained from micro data.

Hendershott uses his estimated equations to forecast housing demand over the crucial 1979–80 period. Special interest centers on the performance of home building in that period because of the introduction in 1978 of the new money-market certificates. In order to assess whether credit availability restrained home building despite the new certificates, Hendershott simulates housing starts under three alternative assumptions about credit rationing: it is the same as in earlier cycles; it is half as great; and there is no credit rationing.

By a small margin, the model that assumes half credit rationing provides the best forecast of starts for the entire 1979–80 period. However, when Hendershott allows for two unusual developments of that period, he is led to prefer the assumption of no rationing. In the first half of 1980 the interest rate yield curve was inverted by an unprecedented amount. Normally, short-term interest rates rise 50 to 100 basis points above the long-term rate in the later stages of the business cycle; but in the 1980 episode short-term rates rose 300 basis points above long-term rates. Hendershott argues that this led to the expectation of an unusually large decline in mortgage rates and induced home buyers to postpone their purchases. Furthermore, he reasons that starts were unusually depressed in the first

quarter of 1979 by the severe winter. The errors from the forecasts that assume no credit rationing best matched the expected impact on starts from these unusual developments. Thus Hendershott concludes that, for the first time in many housing cycles, rationing was not a factor in the most recent downturn. Although the discussants at the meeting agreed that the money-market certificates had altered the relative importance of market interest rates and mortgage availability, some were not convinced by Hendershott's argument for completely suppressing availability effects.

Hendershott's equation for the average quality of housing starts underpredicts from 1979:2 onward; it misses the actual rise in quality in 1979:2, and predicts a substantially larger decline in quality than that which occurred during the first two quarters of 1980. He attributes the large 1980 underpredictions of quality to the same inverted yield curve that he uses to explain the overpredictions in the number of starts. He argues that households that went ahead with purchases did not lower their quality choice by the predicted amount because they expected to be able to refinance at lower mortgage rates.

Hendershott performs a number of policy simulations with his model. To assess the effect of inflation during 1964–79, he simulates the model with user cost and mortgage-rate variables held at their 1964 values while attributing the difference between these and actual values to inflation. On this basis, he finds that inflation raised the real value of the one-to-four family housing stock by 15 percent over this period, or from $744 billion to $856 billion in 1972 prices. The quality of the average home was improved by inflation, although the amount of improvement varied according to the time period. From 1977 to 1979, inflation raised the average quality of starts by 10 percent, or $2,000 in 1972 prices.

Hendershott also assesses the importance in past housing cycles of real user costs, the mortgage-payment constraint, and credit availability. He concludes that the pre-1979 decline in the real user cost relative to the rental price induced more homeownership and greater housing quality in both expansion and recession phases of the cycle. He also reports that the rising nominal mortgage rate constrained the increase in the quality of housing during both phases of the cycle. Finally, he finds credit availability had a large cyclical effect before 1979–80, contributing to the weakness of housing in recessions and its strength in booms.

During the first half of the 1970s the performance of the U.S. stock

market disappointed investors and puzzled both academic and lay observers. Adjusted for inflation, stock prices declined at an average rate of 2.3 percent a year in 1968–79, and at the end of 1978 were only about half of their historical peak level in 1965. The decline in stock prices relative to after-tax earnings is equally striking. For no other ten-year period, including the Great Depression, have stocks performed so poorly. This behavior of the stock market constitutes a major part of the weakness in the total market valuation of U.S. nonfinancial corporations that is explored by William Brainard, John Shoven, and Laurence Weiss in the final article of this issue.

The authors focus on how the market values the real capital stock of firms, the most important component of national and private wealth. The market value of this capital, defined as the sum of the market values of equity and bonds, has shown the same decline relative to the sum of after-tax earnings and interest payments as the stock market itself. Similarly, the market value of capital relative to the replacement cost of capital, Tobin's "q," has shown a dramatic decline, with several estimates placing q in the late 1970s at only one-half its 1965 value. A low value of q discourages investment in new plant and equipment and decreases growth.

The authors begin by calculating the intrinsic value of a firm, defined as the present discounted value of its expected future cash flows. Properly calculated and adjusted for risk, a firm's market value would be equal to its intrinsic value. In practice, the two may not be equal—because the assumed discount rate does not correspond to the rate the market uses to discount future earnings, because forecasts of future cash flows do not correspond to investors' beliefs, or because inappropriate adjustments for risk have been made. Because of the difficulty of knowing how the market forecasts, the authors use a variety of models to project before-tax earnings. They also make various assumptions about future investment and issuance of debt and explicitly calculate future taxes. These calculations of intrinsic value thus span a range of reasonable earnings projections. They also should capture the future effects of some effects, such as high inflation, on the current market value of the firm. Yet regardless of what assumptions are used, the authors' calculations indicate a large decline in market value relative to their estimates of the present value of after-tax cash flows. For example, using the inflation-adjusted government bond rate to discount future cash flows yields intrinsic values within 15 percent

of the aggregate market value for 1961–68; by comparison, market values average only approximately 40 percent of the calculated intrinsic values for 1974–78. Or, equivalently, the real discount rate required to equate market and present values has shown a dramatic increase, averaging less than 5 percent in the first half of the 1960s and more than 10 percent in 1974–77, no matter what earnings projections are used.

With hindsight, there has been no shortage of explanations for the decline in the market value of capital over this period that these calculations reveal—inflation, taxes, oil, risk, and "the end of capitalism." However, testing these explanations is difficult. They all concern one episode and there are insufficient degrees of freedom in the aggregate time-series data either to accept or to reject them. Brainard, Shoven, and Weiss use data on individual firms to increase the degrees of freedom. They reason that, because firms differ in riskiness, debt structure, and other characteristics, they may have been affected differentially by events of the 1970s. By analyzing changes in the market's valuation of firms with different characteristics, they attempt to infer the relative importance of the various explanations for the aggregate. Specifically, the authors attempt to explain the cross-sectional variation in Z, the ratio of market value to intrinsic value of firms.

One common explanation of the decline in the market's valuation of expected earnings is that investors perceive that these earnings have become riskier. To examine this hypothesis, the authors construct a measure of the systematic or nondiversifiable risk suggested by the capital-asset pricing model, but they measure the risk on the total return to capital of a firm rather than on the more commonly used yield plus gain. The amount of risk this measure attributes to a firm depends on the correlation between the firm's return and the aggregate return to capital, and on the riskiness of the aggregate return itself. Hence the relation between the authors' risk measure and a firm's market value should provide information about the importance the market attributes to risk in the aggregate. The authors find that taking account of risk, and of variation in its importance over time, explains some of the variation in aggregate market values. The results are most striking for 1974, when the risk adjustments in their preferred model reduce the implied real discount rate from 15.2 percent to 10.2 percent, implying that much of the decline in market values in that year is attributable to greater perceived risk. However, variations in the estimated risk discount do not explain the market's per-

formance in other years. By 1977 the authors' estimated risk adjustment returns to approximately the same level it had been early in the sample period, despite the continued depression of market values and Z.

Brainard, Shoven, and Weiss also investigate the importance to market valuation of the firm-specific, or "own," risk, which in principle can be diversified away. Contrary to the predictions of the capital-asset pricing model, the authors find that own risk frequently has a significant negative effect on market value. Like nondiversifiable risk, however, changes in the importance of own risk do not seem to explain the general market decline in the 1970s.

The period of poor stock market performance has been one of rapid inflation. Martin Feldstein and others have argued that inflation has contributed to this poor performance because, under U.S. tax laws, inflation increases the real tax liability on corporate capital. The authors allow for this effect of anticipated inflation on market values by explicitly calculating future taxes using historical cost depreciation and actual inventory valuation. The low values for Z they report are after such adjustments; hence the low market valuation of corporations does not appear to be explained by the tax effects of high inflation rates. One could hypothesize that the market expected inflation to accelerate from its high levels of the 1970s, so that the expected value of these tax effects would be larger than the authors have allowed for in calculating Z; but they show that the advantages of the tax deductibility of interest would then begin to outweigh the disadvantages of historical cost depreciation, and the puzzle would remain.

Franco Modigliani and Richard Cohn offer a different explanation of the effect of inflation. They argue that the market is subject to two types of "inflation confusion." The first, which cannot be tested directly by the procedures used by Brainard, Shoven, and Weiss, is simply that the market confuses nominal and real discount rates. This is consistent with the increase in real discount rates that the authors find, but it cannot be distinguished from other aggregate explanations for such an increase. The second type of inflation confusion is that equity holders fail to take account of the gain resulting from real depreciation of their nominal liabilities whereas bondholders, who are losing from this depreciation, do. The authors test this hypothesis by attempting to explain deviations in the market value of firms relative to estimated intrinsic value by the share of interest payments in gross cash flows. Contrary to the Modigliani-Cohn hypothesis, firms with interest-intensive cash flows and high debt-

equity ratios do not appear to be especially undervalued in the market of the 1970s.

Although Brainard, Shoven, and Weiss provide a range of future earnings projections, even the most pessimistic of them—which maintains the recent low returns to capital—implies either a very low value of Z or a high real discount rate. They observe that even these low earnings projections may not fully capture the pessimism of the market about the future. Although such a possibility is difficult to test, the authors find some support for it in the relative performance of two types of firms: those with a relatively high fraction of their prospective earnings in the distant future; and those that have historically experienced high net rates of return, reflecting perhaps quasi-rents on long-lived intangible assets. Both types of firms have shown greater than average reductions in market value in the last years of the authors' sample, suggesting that investors have become less confident about the future.

In the first of the two reports of this issue, Frank Levy provides a new analysis of the experience of blacks in the labor market, a subject that has been studied by economists and has been a concern of policymakers for decades. Most studies have focused on median earnings and have concluded that substantial progress has been made in narrowing the differentials between black and white workers (see, for example, Freeman in *BPEA, 1:1973*). Levy analyzes employment prospects rather than earnings and relates the probability of employment (and labor force participation) to the characteristic of individuals. This enables him to describe the distribution of employment probabilities for the population of black (and white) males that he analyzes rather than simply the probability of employment for the average black. Using this approach, he uncovers a development in the employment experience of blacks that has not received attention in earlier research.

Levy identifies three main changes when he compares data for 1964 and 1978, the two years for which he provides a detailed statistical analysis. First, in the upper part of the distribution of workers ranked by employability—containing workers with the highest probability of being employed—the gap between blacks and whites has narrowed. Whereas in 1964 a black in the 85th percentile of employability had the same probability of employment as a white in the 39th percentile, by 1978 a black in the 85th percentile had as great a probability as a white in the 49th per-

centile. Such employment gains are consistent with the reduction in the gap between the median earnings of blacks and whites reported by other researchers. Second, employment experience has deteriorated in the lower part of the distribution for both black and white males. In 1965, 10 percent of blacks and 5 percent of whites had employment probabilities at or below 0.65; in 1978 they had employment probabilities below 0.20. This deterioration is reflected in a growing proportion of black males who were out of the labor force in recent years, a status that was relatively rare in 1964. Third, there is a growing permanence in the labor market status of individuals, a phenomenon Levy describes as "sorting" according to the individual's characteristics, including past labor market status. This inference follows from the large positive association that Levy finds for 1978 between an individual's employment prospects and the weeks spent looking for work in the previous year. Together with his second finding, it leads Levy to conclude that employment experience among black males is diverging, with some improving their position and closing the gap relative to whites and others falling into a position of chronic joblessness.

During the first six months of 1980, the consumer price index rose at an annual rate of more than 15 percent, and in the peak month of that period, at a 19 percent rate. Then in July the index did not rise at all. Homeownership costs, as measured in the CPI, were an important contributor to this extraordinary volatility. If they had risen only as fast as all other items, the total CPI would have risen at an annual rate nearly 3.0 points less during the first half of 1980, and 7.4 points more in July. In the second report of this issue, Alan Blinder identifies the current measurement of homeownership costs as a major defect in the index and examines alternative ways of treating this important item in the CPI.

The CPI currently includes both home purchase prices and mortgage interest rates in its measure of homeownership. Blinder finds that together they are given too much weight in the total index, so that their recent increases have contributed excessively to inflation as measured by the CPI. At the end of 1979, the relative importance of homeownership—the product of the base-period weight of homeownership and the increase in its relative price since the base period—amounted to 25 percent of the entire index. In addition, the direct inclusion of mortgage interest rates makes the entire CPI excessively volatile because mortgage rates themselves vary so much over the business cycle. Blinder argues that the

CPI should substitute the price of the housing services consumed by homeowners—implicit rents—for the price of houses and mortgage interest rates that it now includes. Because rentals that are currently sampled may not be appropriate proxies for the implicit rents on owner-occupied homes, he urges that the Bureau of Labor Statistics consider the feasibility of sampling a more appropriate population of rental units. Blinder notes that, if the roles of the homeowner as consumer of housing services and as investor in real estate are merged, the user cost of homeownership becomes another candidate for inclusion in the CPI. However, Blinder shows that user-cost measures are even more volatile than the present treatment of homeownership because they are so heavily influenced by variations in mortgage interest rates, making them inappropriate for most purposes for which the CPI is used.