

Federal Reserve Bank of Cleveland

Year-End Report of the Fourth District Economists' Roundtable

by Michael F. Bryan and John B. Martin

Although economists share a common science, their roles in society vary a great deal. Academic economists expand our understanding of the purpose and operation of markets. Government economists use this knowledge to guide policies. And business economists apply these principles to enterprise.

Perhaps because of these vastly different roles, the bridges that link economists in disparate fields can be narrow and far apart. Yet each discipline depends on the other. Business economists need to be exposed to the frontiers of economic thought and to keep abreast of government policies that influence their companies. Academics must evaluate the conformity between theory and evidence. And government economists are called on to synthesize the sometimes abstract thoughts of academics and the practical considerations of business.

In this spirit, the Federal Reserve Bank of Cleveland hosts the Fourth District Economists' Roundtable, a thrice-annual meeting of business economists. Through these encounters, we hope to consider innovative and potentially useful ideas in academic research, to discuss issues regarding the economic outlook, and to provide a forum for participants to critique the conduct of monetary policy. This *Economic Commentary* is a summary of the group's November 3 meeting.

■ The Economic Outlook

At its May 20 meeting, the Roundtable projected that the economy would strengthen from its 2½ percent first-quarter growth rate to 3½ percent in 1994:IIQ. After that brief spurt, the panelists expected growth to moderate, with output rising about 3 percent in the third quarter and then leveling off at around 2¾ percent through the end of 1995. The view at that time was that after a final burst in production spurred by investment spending, particularly on business equipment and consumer durables, the economy would gradually slow to its potential growth rate.

The actual GDP numbers proved to be somewhat better than that projection, with output rising 4.1 percent and 3.9 percent in the second and third quarters, respectively. To some, this indicated that the economy had a bit more room to expand before it was pushed to its production limits. To others, it warned that we had entered a zone of overcapacity production — an area where it is presumed that inflationary pressures begin to percolate.

At its November caucus, the Roundtable continued to project a significant slowing in the pace of business activity, and for essentially the same reasons as stated last May: There comes a point in every expansion when resources become fully employed and the economy naturally loses steam (figure 1). The median view of the 18 panelists is for real GDP to

At its final meeting of 1994, the Fourth District Economists' Roundtable projected that real GDP will moderate slightly this quarter and into 1995, while inflation is expected to hold steady or even pick up a bit. This *Economic Commentary* is a summary of the group's November 3 meeting, held at the Federal Reserve Bank of Cleveland.

moderate to a 2.9 percent pace this quarter, although the range of expectations is relatively wide—from highs of 3.6 percent to lows of just under 2 percent. As we move into 1995, the economy's growth trajectory is expected to return to a level similar to its postwar average, about 2.5 percent.

The probability distributions of the growth projections for 1995 and 1996 were fairly uniform, and the panel sees little prospect of a recession during the next two years. Chances that the economy will average less than a 2 percent growth rate were set at no more than one in five for 1995 and at only about one in three for 1996.

Many analysts believe that inflationary pressures become prominent only after an economy's resources have been stretched to capacity. This occurs if a nation's actual growth rate exceeds its potential growth rate for a sustained

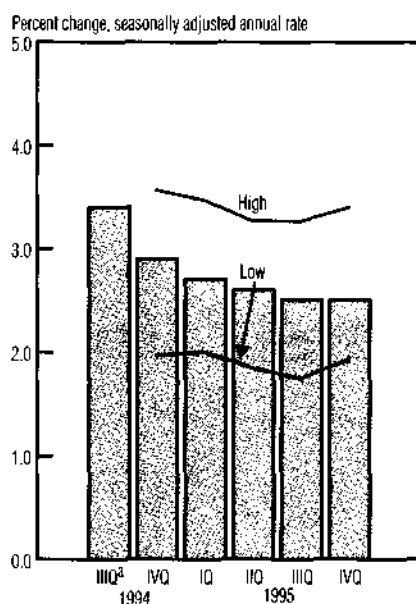
period or if the rate of unemployment falls below its "natural" level. However, there was no obvious consensus among the participants on where the U.S. economy's capacity stands (table 1). Most think that the potential growth rate is near 2.5 percent per year — similar to the group's 1995 GDP forecast. But a significant contingent believes that the potential growth rate may be substantially higher: More than 20 percent set it at 3 percent per year or more. Similarly, about one in three panelists thinks that full employment will not be reached until the jobless rate falls into the 5.4 to 5.6 percent range, about ¼ percentage point below its October level.

Few in the group expect any measurable improvement in inflation over the next year or two, however, and there is a general belief that it may actually pick up slightly in the latter half of 1995 (figure 2). The most optimistic projections see the Consumer Price Index (CPI) rising at a 3 percent pace over the next five quarters, not much different from its trend over the past five quarters. The pessimists in the group see inflation moving just above 4 percent next year.

Understanding, let alone predicting, cyclical movements in the economy has frustrated economists for centuries. Surprisingly, the variations in business activity that tend to get the most attention — business cycles — are generally much smaller than the variations that occur over the course of a typical year, or the "seasonal cycle." Indeed, it has long been recognized that seasonal fluctuations are the dominant source of overall changes in business activity: Harvests are abundant in the fall, but obviously scarce during the winter. Industrial production drops off during the summer as workers take vacations, and spending is strong late in the year as shoppers prepare for the holidays. But seasonal fluctuations are presumed to be easily predicted and, moreover, to fall beyond the scope of economic policy. Thus, they are seen as being of little practical relevance.

Failure to predict and control the business cycle using conventional economic theory has led many economists to re-examine the seasonal cycle in hopes of shedding new light on the origin of busi-

**FIGURE 1
MEDIAN REAL GDP
FORECAST**

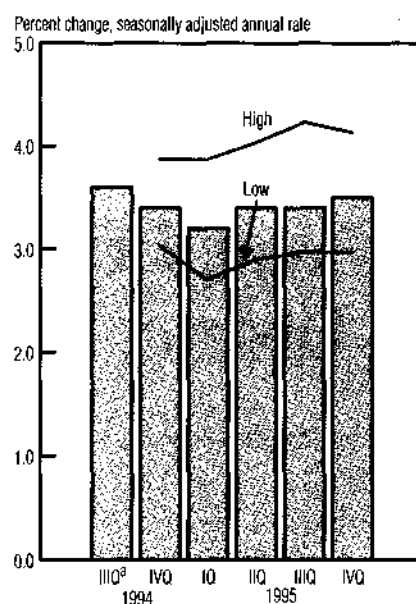


a. Preliminary data.

NOTE: High and low are the average of the three highest and lowest forecasts, respectively.

SOURCES: Fourth District Economists' Roundtable, Federal Reserve Bank of Cleveland, November 3, 1994; and U.S. Department of Commerce, Bureau of Economic Analysis.

**FIGURE 2
MEDIAN CPI
FORECAST**



ness cycles. In a very practical way, our understanding of the business cycle depends crucially on our understanding of the seasonal cycle. Because most economists employ data that have been "seasonally adjusted," or purged of their presumed seasonal movements, any mis-measurement of the latter guarantees a misinterpretation of the former. More generally, many of the same issues we struggle with in our search to understand and forecast the business cycle are also true at a seasonal frequency. So what is the source and propagation of these fluctuations? Jeffrey A. Miron of Boston University and the National Bureau of Economic Research (NBER) discussed his work on seasonal cycles and their shared traits with the business cycle.

Seasonal Cycles and Business Cycles

Jeffrey A. Miron,
Boston University and the NBER

Macroeconomists typically study business cycles, the short-term, irregular ups and downs in economic activity. These fluctuations are obviously of great interest, but they are not the only kind of short-term fluctuations. Another impor-

tant source of such variations is seasonal cycles, the regular ups and downs that occur on a yearly basis.

A first fact to note about seasonal cycles is that they are large in comparison to business cycles. In the United States, real GDP declines about 8 percent from the fourth quarter to the first quarter on average, or at a 32 percent annual rate. Thus, accounting for seasonal fluctuations has potentially substantial implications for the study of business cycles.

The second striking fact about seasonal cycles is that they display many of the same empirical regularities as business cycles. Over the seasonal cycle, real output and nominal money are highly correlated, production and sales move together closely, labor input appears insufficiently responsive to movements in output, and fluctuations in output across disparate sectors of the economy are highly correlated. These are the same stylized facts that characterize business cycles.

In addition, the amounts of seasonal and cyclical variation are correlated cross-sectionally. Specifically, countries and

TABLE 1 ECONOMIC ASSUMPTIONS OF THE FOURTH DISTRICT ECONOMISTS' ROUNDTABLE

What is the current growth rate of potential GDP?		What is the current natural rate of unemployment?	
	Percent of respondents		Percent of respondents
2.4-2.6%	44	5.4-5.6%	33
2.7-2.9%	33	5.7-5.9%	22
3.0-3.2%	17	6.0-6.2%	39
3.3-3.5%	6	6.3-6.5%	6

TABLE 2 MONETARY POLICY PREFERENCES EXPRESSED BY THE FOURTH DISTRICT ECONOMISTS' ROUNDTABLE

What federal funds rate do you prefer at the present time? (October rate = 4.76%)		What federal funds rate do you judge to be consistent with price stability?	
	Percent of respondents		Percent of respondents
4.5-4.99%	17	4.5-4.99%	19
5.0-5.49%	50	5.0-5.49%	38
5.5-5.99%	17	5.5-5.99%	0
6.0-6.49%	11	6.0-6.49%	25
6.5-6.99%	6	6.5-6.99%	6
		7.0-7.49%	13

NOTE: Percentages may not sum to 100 because of rounding.

SOURCE: Fourth District Economists' Roundtable, Federal Reserve Bank of Cleveland, November 3, 1994.

industries that display large amounts of seasonal variation also display large amounts of cyclical variation. The most natural explanation for this robust empirical finding is that the economic mechanisms that propagate seasonal cycles are similar to those that propagate business cycles. Thus, this finding suggests that one can learn about the nature of business cycles by studying seasonal cycles.

Study of the seasonal fluctuations in specific sectors of the economy has provided a number of interesting conclusions about the nature of aggregate fluctuations generally. For example, examination of the production behavior of the manufacturing sector suggests that cost shocks are an unimportant source of aggregate fluctuations. Continued attempts to integrate the study of seasonal cycles and business cycles appear to be a highly promising avenue for expanding our knowledge of both kinds of cycles.

The similarities between seasonal cycles and business cycles may be more than just an intellectual curiosity and may provide general insight into the origin of cycles. Several recent articles have suggested that the seasonal cycle and the

business cycle are intertwined, such that our estimation of one cannot be made independent of the other. That is, the seasonal cycle may be contingent on the current state of the business cycle. One such article was co-authored by Stephen G. Cecchetti of Ohio State University and the NBER, who talked with the Roundtable about his work.

■ Interactions between Seasonal Cycles and Business Cycles

Stephen G. Cecchetti,
Ohio State University and the NBER

Real-time analysis of the detailed components of industrial production suggests that interactions between seasonal and cyclical shifts are quite common. One example of such an interaction comes from the recent experience of firms in the paper and pulp industry. Near the end of the expansion of the 1980s, nonseasonally adjusted data showed that the industry was operating continuously at very high rates of capacity utilization. But because production had fluctuated seasonally in the past, reported seasonally adjusted numbers showed variation in output. In particular, declines were noted in seasonally adjusted output during the typically high production months.

Using disaggregated data on production, it is straightforward to show that seasonality is not the same at different stages of the business cycle. For example, seasonality in output in the oil industry, as measured by the variance in the seasonals, declines by nearly half from a typical recession to a typical boom. By contrast, going from a recession to a boom raises the seasonality of transportation equipment production by a factor of three and one-half!

What can we learn from this, and what problems does it pose? In a recent paper, my co-authors and I discussed how we can use this empirical evidence, together with information on inventory fluctuations, to help determine the structure of firms' production costs.¹ Our findings allow us to comment on a recent academic debate over the causes of business cycle fluctuations. If firms face increasing returns to scale, meaning that the marginal cost of producing an additional unit of output declines with the quantity produced, then it may be possible to explain business cycles by appealing to the idea that there are naturally high and low periods of activity stemming from the efficient use of resources. Although our evidence is consistent with this possibility in several isolated industries, it is not widely true, so we discount the possibility that the cycles are due to the optimal temporal bunching of economic activity.

Beyond the academic interest in these findings, they also have some practical importance. To the extent that business cycles and seasonal cycles are intertwined, standard seasonal adjustment techniques will not work. In fact, the use of government-supplied seasonally adjusted data may give an inaccurate impression of the nature of cyclical fluctuations. To see why, return to the paper and pulp industry example and note that if a business cycle downturn were to occur in the month following a naturally high season, then the turning point would be mistimed: One would think that the downturn began before it actually did. The lesson is to use seasonally unadjusted data whenever possible, keeping in mind the possibility that seasonally adjusted data may be easy to misinterpret.

■ Advice to Policymakers

As is generally the case, the Roundtable also turned its attention to the conduct of monetary policy. Since the group's previous meeting in May, short-term interest rates were nudged up by half a percentage point in a continuing effort that began last February to stem the economy's growing inflationary potential.

The panelists were generally of the view that the federal funds rate, the primary policy instrument of the Federal Reserve, was set too low (table 2). Half of the group preferred to see the funds rate in the 5 to 5½ percent range (about 50 basis points higher than its level on November 3), while another third preferred to see it moved above 5½ percent, presumably in response to the higher inflation rates the group is projecting.

In fact, 44 percent of the participants agreed that a funds rate of 6 percent or more would eventually be required to achieve the Fed's stated objective of

price stability, compared to less than 20 percent who believe that the October rate is sufficient to achieve that goal. This appears to be what the group expects from policy: Over the next four quarters, short-term interest rates are seen moving to 6 percent. We can infer from the panelists' forecasts of real output, coupled with their expectations for monetary policy, that they believe further restraint would dampen the expansion without necessarily inducing a recession. In other words, higher interest rates would successfully prevent an inflation surge while keeping business activity on track.

On November 15, the Federal Open Market Committee, the chief policy-making arm of the Federal Reserve, took a decisive step in that direction, pushing the fed funds rate up ¾ of a percentage point, to 5½ percent. But if the nation's central bankers hope to reduce inflation from its recent 3 percent trend, then slightly higher short-

term rates may be necessary, at least according to a large proportion of the Roundtable participants.

Whether or not the Federal Reserve follows that advice undoubtedly depends on how the economic data unfold in the months ahead. The Roundtable will reconvene on March 31, 1995.

■ Footnote

1. See Anil K. Kashyap, David W. Wilcox, and Stephen G. Cecchetti, "Do Firms Smooth the Seasonal in Production in a Boom? Theory and Evidence," unpublished manuscript, October 1994.

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