Beyond the Border

New Business Cycle Indexes for Mexico Point To Economic Expansion

New composite indexes of leading and coincident economic indicators for Mexico suggest that Mexico began an economic recovery in the second half of 1995. The indexes were created by Dallas Fed economists Keith Phillips and Lucinda Vargas, and Victor Zarnowitz, director of the Center for International Business Cycle Research (CIBCR) at Columbia University. A more detailed discussion of the indexes will appear in the second-quarter 1996 issue of the Federal Reserve Bank of Dallas *Economic Review.*

A composite index of coincident economic indicators aggregates into one index the movements in various broad indicators of economic activity such as output, employment and income. Movements in the coincident index reflect the current state of the economy: growth in the index signifies that the economy is expanding, while persistent de-clines in the index show that the economy is in recession.
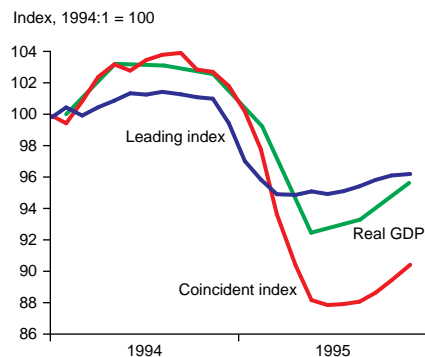
A composite index of leading economic indicators aggregates into one index the movements of series that generally reflect commitments or opinions about *future* economic activity. Examples of leading indicators include new orders for capital goods, building permits and business expectations.

In constructing the indexes for Mexico, the economists use traditional indicators that, in previous studies, proved to be important cyclical indicators in many countries. Other variables specific to the Mexican economy were also evaluated. All the components included in the indexes performed well using a simple set of criteria similar to that used by the National Bureau of Economic Research to evaluate components of the U.S. leading index.

The selected components of the coincident index are industrial production, insured employment, the unemployment rate (inverted), real manufacturing and trade sales, and an estimate of monthly real gross domestic product (RGDP). The components of the 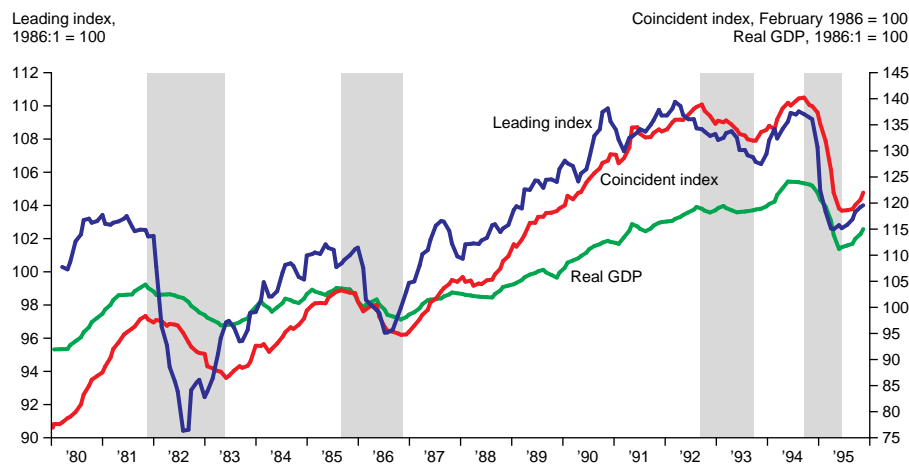leading index are average hours worked in manufac-turing, the real value of construction structures, an index of real stock prices, real labor costs (inverted), net insufficient inventories, the real peso/dollar exchange rate, the real oil price and imports of capital goods.

As shown in Chart 1, the leading index typically turns down prior to recessions and turns up prior to expansions. From their analysis of the performance of the leading index, Phillips, Vargas and Zarnowitz conclude that while volatility reduces its predictive ability, the leading index signals business cycle changes before movements in RGDP or the coincident index.

The Mexico leading index increased from May through November 1995, while the coincident index increased from July through November 1995 and RGDP increased in the third and fourth quarters (*Chart 2*). The probability that Mexico was in an economic expansion, based on changes in the leading index, was 82 percent in August, 92 percent in September and 97 percent in October and November.

Overall, movements in RGDP and the composite indexes suggest that Mexico began an economic recovery in July 1995 that should continue at least through April 1996. While economic indicators suggest a recovery is under way, activity is improving very gradually, especially compared with the sharp decline experienced in the first half of 1995.

—Keith Phillips

Chart 2
Mexican Economy Improves
In Second Half of 1995

Index, 1994:1 = 100

Chart 1
Leading Index Anticipates Business Cycle Turns

Leading index, 1986:1 = 100

Coincident index, February 1986 = 100
Real GDP, 1986:1 = 100

NOTE: Shaded areas represent recessions, as defined by declines in the coincident index.