

Inflation Poised to Accelerate

A surge in everyday prices is one of many signs. Wholesale prices and long-bond yields are also trending upward. And the money supply is ballooning.

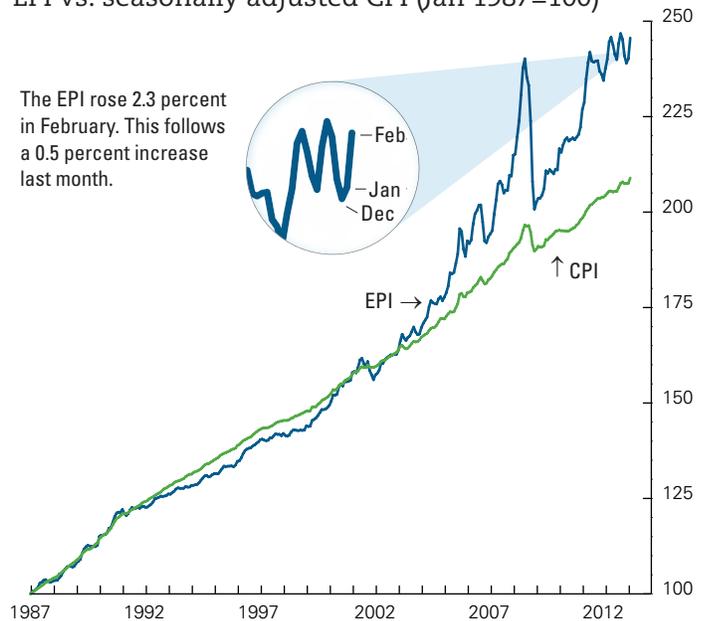
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The prices of frequently purchased goods and services jumped 2.3 percent in February, according to AIER's Everyday Price Index (EPI)—well over 25 percent on an annualized basis. This comes after a 0.5 increase the previous month, as Chart 1, right, shows.

The EPI is based on the same survey data the Bureau of Labor Statistics uses to create the Consumer Price Index (CPI), the official measure of prices. But AIER's index measures the prices of day-to-day purchases such as food and fuel, while the CPI includes major purchases such as cars and contractually fixed ones such as mortgages. This broader-based index climbed 0.7 percent in February, up 2 percent from a year ago. (For a month-by-month comparison, see Chart 2, below.)

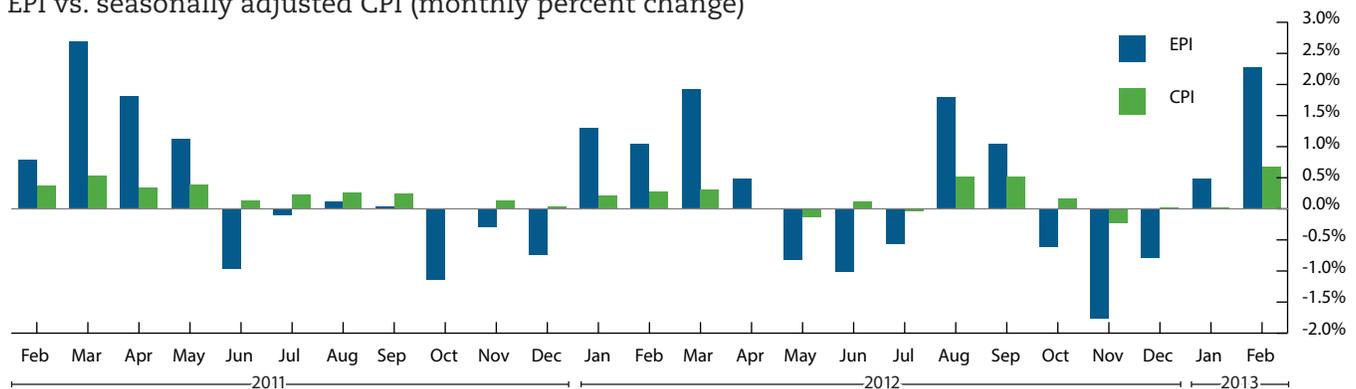
Fuel prices were the dominant factor in the

Chart 1: **Prices Over the Long Term**
EPI vs. seasonally adjusted CPI (Jan 1987=100)



The EPI is a proprietary index of AIER. The CPI is produced by the Bureau of Labor Statistics.

Chart 2: **The Inflation We Feel vs. the Inflation Reported**
EPI vs. seasonally adjusted CPI (monthly percent change)



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dramatic rise in February. The price of motor fuel alone surged 9.9 percent between January and February.

The price of regular gas at the pump has since fallen back as refineries came back on line. As of this writing, the retail price of gasoline averages \$3.65 per gallon, which is still above 2012 levels. Future fuel-price increases should be slower as we return to longer-term price trends. (See AIER's March *Inflation Report*, "Pressure Builds Beneath Prices.")

Motor fuel and transportation make up 20.5 percent of the average consumer's everyday expenses. (For a breakdown of all the components of all the components of the EPI, see table below.) This leads to fuel being more heavily weighted in the EPI than the CPI and accounts for much of the current difference between the two indices. The CPI is also seasonally adjusted, while AIER's measure is not. While helpful to economists and policy makers, seasonal adjustments don't change what consumers shell out. After seasonal adjustments, the price of motor fuel as reported in the CPI rose 9.1 percent in February.

How Daily Prices Stack Up (changes in the nine components of the EPI)

EPI	February 2013	
	Monthly Change %	12-month Change %
Food and beverages	0.02	1.64
Motor fuel and transportation	7.51	3.40
Household fuel, utilities, and supplies	0.34	1.52
Recreation services (incl. cable TV)	0.65	3.04
Communication (incl. telephone and internet)	0.55	0.84
Prescription drugs	0.27	0.76
Personal care products and services	0.12	1.18
Tobacco and smoking products	-0.24	2.09
Child care and nursery school fees	0.04	2.78

Food prices also receive substantial weight in the EPI, making up 38 percent of the average consumer's everyday expenses. At this time of year, the price of food usually goes down as crops begin to come to market. However, the food prices at the counter were effectively unchanged in February. Food products that were supposed to be cheap during this season were not.

A look at the CPI numbers explains why. According to the government index, the seasonally adjusted price of food rose in February. Fruits and vegetables rose by 1.4 percent, meats by 0.9 percent, and cereals and cereal products by 0.7 percent.

The quickening rate of inflation measured by this month's EPI is consistent with forward-looking measures. Inflationary forces are continuing to surface across many fronts.

Wholesale prices are posting an upward trend. Long-term bond yields are ticking up. The dollar is weakening. In the meantime, the Federal Reserve is juicing the monetary base at an alarming rate in an attempt to keep the recovery on track.

The implications of the Fed action over the long term remain to be seen. The central bank has long claimed that it can shrink the monetary base when the time comes. But that has yet to be proven.

Right now, inflation pressures remain modest, but at some point we should see some acceleration in price indices. Expect broad-based inflation measures like the CPI to run about 0.5 to 1 percent higher by year end. But that number could go even higher should the Fed policy go awry.

Wholesale Prices

Wholesale price information paints a consistent picture of rising costs at earlier points in the production cycle and raises the potential for future pressure on retail prices. In February, the Producer Price Index (PPI) for finished goods rose by 0.7 percent and core PPI—the PPI less food and energy—by 0.2 percent. The PPI for intermediate goods—goods in earlier stages of production—

rose by 1.3 percent. Excluding food and energy, intermediate core goods rose by 0.7 percent.

Normally, we observe higher price increases at the earlier stages of production, with smaller increases at the later stages. Productivity in the latter helps offset the impact of higher materials costs.

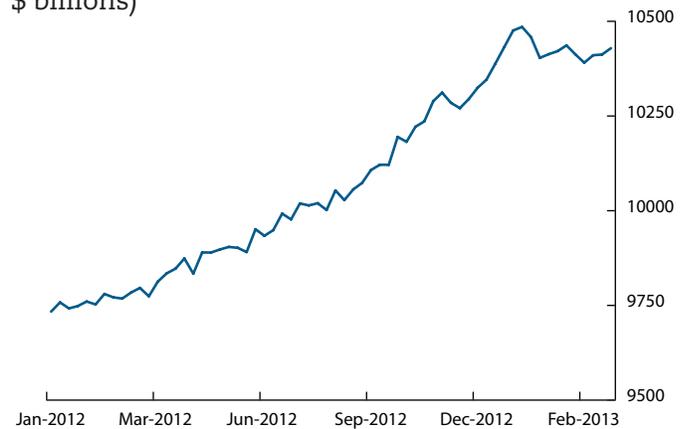
Intermediate goods inflation at 1.3 percent (over 15 percent annualized) and finished goods inflation at 0.7 percent (over 8 percent annualized) is consistent with that logic. But with slow productivity growth and high transportation costs related to fuel prices, current wholesale price inflation will be tough to translate into anything other than higher consumer price inflation later this year.

Is the Fed Panicking?

Monetary policy actions are critically linked to price levels and inflation. So when the Federal Reserve acts or reacts, we pay close attention. In the first quarter of 2013, the Fed responded dramatically to changes in the money supply as measured by M2, the money people spend for goods and services.

M2 is mostly currency, checking accounts, and savings accounts. It is the money that people normally turn to when they want to buy things. If there isn't enough of it around, credit conditions

Chart 3: **Money Supply Growth Stalls**
(averages of daily figures, seasonally adjusted, \$ billions)



Source: Bloomberg.

tighten and transactions slow. The economy slows. If there is too much of it, people buy more freely, prices get bid up, and inflation ensues. It is a careful balance.

In order to keep the recovery on track, the Fed has gone to extraordinary lengths to keep M2 growing smoothly and continuously. In 2012, it grew about 8 percent, close to its 10-year average. Yet, as Chart 3 shows above, since the first of the year, M2 has been trending downward. This is consistent with the slowdown in the first quarter and has implications for the economic recovery. As economic activity slowed, money sat idle in banks, and did not circulate as readily in the economy.

About the EPI

AIER's Everyday Price Index (EPI) measures the changing prices of frequently purchased items like food and utilities. We do this by selecting the prices of goods and services from the thousands collected monthly by the Bureau of Labor Statistics in computing its Consumer Price Index. The EPI basket contains only prices of goods and services that Americans typically buy at least once

a month, excluding contractually fixed purchases such as mortgages. Our staff economists weight each EPI category in proportion to its share of Americans' average monthly expenditures. In order to better reflect the out-of-pocket prices that consumers experience on a daily basis, the EPI does not seasonally adjust prices.

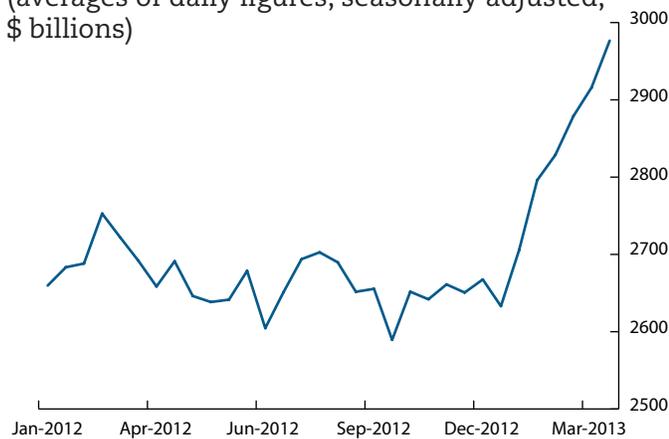
To learn more about our methodology, view the weights assigned to each component, and browse past EPI updates, visit AIER's EPI Methodology page at www.aier.org/epi-methodology.



No doubt the Fed wants to fix this. But it cannot directly increase the money in circulation. The only course available is to expand the monetary base—bank reserves and currency—and hope that it makes up for the lack of circulation of money. They effectively “push on the string” and hope that the increased reserves induce banks to lend more, stimulating the movement of funds out of reserves and into circulation, while increasing economy activity.

As shown in Chart 4 below, the Fed has been expanding the monetary base at a startling pace since the end of the year, at an annualized rate of nearly 60 percent. This renewed expansionary effort is a concerted attempt to avoid recession.

Chart 4: Monetary Base Explodes
(averages of daily figures, seasonally adjusted, \$ billions)



Source: Federal Reserve Bank of St. Louis.

Chart 5: Velocity of Money Tanks
(nominal GDP/M2)



Source: Federal Reserve Bank of St. Louis.

But the size of the move has all the earmarks of panic among Fed policy makers.

M2 has not responded.

The Fed’s problem is exacerbated by the fact that money is circulating ever more slowly through the economy. The rate at which money circulates in the economy is called *the velocity of money*.

For most of the last decade, before the financial crisis hit, the velocity of M2 was fairly constant—dollars changed hands at a fairly regular rate. (See Chart 5 at left.) With the financial crisis, dollars began to move more slowly. Velocity started to recover as the economy came out of recession. This is fairly normal. In early 2011, though, velocity began to fall again. The movement of dollars circulating in the economy has slowed.

This helps explain why the massive injections of reserves into the banking system have not resulted in more price inflation. Dollars have to move to create economic activity (and inflation). Reserves must move out into the economy in the form of checks and cash. However, reserves have not been expanded into M2 at a sufficiently high rate to ignite significant, widespread inflation. A sluggish world economy, interest paid by the Fed on reserves, and a falling velocity of money have all contributed to slow money expansion.

Still, the enormous reserves represent an inflationary risk when they start to move. All this money has to go somewhere.

Bond Market

Bond market investors are particularly sensitive to inflation and reveal their inflation expectations in their trades. Now investors are starting to demand higher interest rates to hedge against inflation for longer term bonds, as compared with earlier last year. While the shift is hardly dramatic, the spread between the yields on short-term bills (3-year T-Bills) and bonds of longer maturities have begun to widen a little since late last summer.

Another harbinger of accelerated inflation is the increasing yield spreads between inflation-indexed 10-year government securities and 10-year

government securities that are not protected for inflation. As Chart 6, right, shows, investors have been requiring a higher premium to buy long bonds that are not protected for inflation since the fourth quarter of 2011.

The current spread of roughly 2.5 percent is a good estimate of the market's assessment of future inflation rates. In February, the CPI was 2 percent over a year ago and the broadest measure of inflation, the Personal Consumption Expenditures Price Index was up 1.3 percent. The Fed has said it is targeting 2 percent inflation. At 2.5 percent, this spread does suggest that inflation is accelerating, although clearly not at a runaway pace.

Foreign Exchange

Exchange rates can affect domestic prices by changing the cost of imported goods. A weaker dollar can increase their cost, and a stronger dollar can lower them. It works the other way, too. Higher domestic inflation makes the dollar and dollar-denominated investments less desirable and weakens the dollar as investors move increasingly off-shore for investments. The dollar-inflation link is strong, and throughout the recovery, exchange rates have been highly correlated with the CPI inflation rate.

Steve Hanke, a professor of applied economics at Johns Hopkins, highlighted this in a recently published perspective on the current inflation situation. He argued that in 2007-2009, the year-over-year percent changes in the U.S. dollar-euro exchange rate have had a 75 percent correlation with the CPI inflation rate. When adjusted for lags, the correlation rises to 94 percent. This means that 94 percent of the variation in consumer price inflation could be explained by changes in exchange rates in that period.

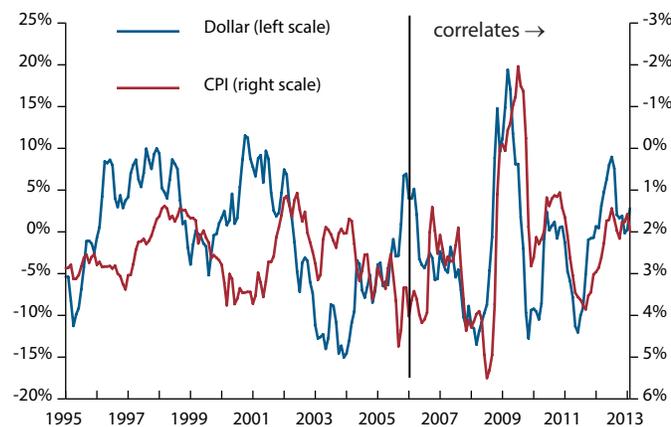
Our own comparative analysis of the CPI inflation rate and the trade-weighted dollar is shown in Chart 7 above. It suggests that the correlation Hanke describes only began around 2006. That's about the time that Ben Bernanke

Chart 6: Bond Spreads Signal Accelerated Inflation
(inflation-indexed 10-year government yield spreads; percent, weekly)



Source: Federal Reserve Bank of St. Louis, calculated by author.

Chart 7: Exchange Rates and Inflation Link
(trade-weighted dollar vs. seasonally adjusted CPI, year-to-year percent change)



Source: Federal Reserve Bank of St. Louis.

assumed office as Chairman of the Board of Governors of the Federal Reserve System. Under his direction, the Fed has stayed clear of foreign exchange market intervention for the most part, allowing the market to respond freely to market conditions.

U.S. GDP growth and corporate profits do not appear to be driving factors in the foreign exchange market right now. A lot of the movement in exchange rates reflects investors buying and selling currencies to move funds between countries to maximize after-inflation return. International investors expect higher inflation in the U.S.

Net purchases of securities in the U.S. by foreign private investors turned negative in January. This reduced demand for the dollar and weakened it on international markets.

The foreign exchange numbers look less dramatic to the casual observer because foreign central banks intervened by accelerating purchases of U.S. securities, especially U.S. government bonds, to keep their local currencies from appreciating too rapidly. Many countries are highly dependent on exports to keep their economies going and growing. Policy makers fear that the rising strength of their currencies will make their goods and services more expensive and slow their exports.

Foreign central banks are able to make an impact on currency values in the short term. But they do not have the resources of foreign private investors in the long run. Ultimately, the market will win out. Since early March, the dollar has gone into a holding pattern, and we expect that

ultimately the dollar will fall. That would result in further inflationary pressures for the U.S.

More important, though, is that these savvy investors see inflation coming. Even if the inflation rate ticks up just a few notches, that is enough to shift capital flows and exchange rates. The result is that the dollar has been declining against other major world currencies since last summer, which is bound to put upward pressure on commodity and consumer prices. These higher wholesale prices must eventually find their way into consumer prices.

All in all, we have a picture of early signs of inflation surfacing, combined with rising inflationary expectations in the bond and foreign exchange markets, and a U.S. central bank that is pouring dollars into bank reserves at an astonishing rate. While we do not see immediate signs of runaway inflation, we do see upward pressure on prices that will become more evident as the year progresses.