Federal Reserve officials are growing concerned the U.S. inflation rate won't budge from low levels, the latest sign of angst among central bankers about weakness in the global economy.

The Fed began 2014 hopeful that a strengthening U.S. economy would push very low inflation from 1% toward the 2% level that officials associate with healthy business activity. Three months into a year marked by unusually harsh winter weather, which appears to have damped economic growth, there is little evidence of such movement.

Fed officials expressed worry about the persistence of low inflation at a policy meeting last month, according to minutes of the meeting released by the central bank Wednesday. They discussed at the March 18-19 meeting whether to make a more explicit commitment to keeping short-term interest rates pinned near zero until they saw inflation move up, but chose instead to take a wait-and-see approach.

Low inflation is high on the agenda of global central bankers and finance ministers gathering in Washington this week for semiannual meetings of the International Monetary Fund. Bank of Japan officials are trying to overcome more than a decade of on-again-off-again deflation, and inflation in Europe is running close to zero.
"We think there is also a risk of deflation, negative inflation. And we think that if this were to happen, this would make the adjustment both at the euro level, and even more so for the countries in the periphery, very difficult," IMF chief economist Olivier Blanchard said of Europe on Tuesday, after the IMF released updated economic projections. "We think that everything should be done to try to avoid it."

On its face, flat consumer prices sound like a blessing that holds down household costs. But when tepid inflation is associated with small wage gains, excess business capacity and soft global demand, as now, economists see it as a sign of broader economic malaise that restrains investment and hiring. Exceptionally slow wage and profit gains also make it harder for household and business borrowers to pay off debt.

Fed officials believe the U.S. economy was soft in the early months of the year in part because of the weather, and they are now expecting a pickup. But if that doesn't happen, they could wait longer to start raising interest rates. Many central-bank officials and market participants don't expect rate increases until well into 2015.

"In light of their concerns about the possible persistence of low inflation, members agreed that inflation developments should be monitored carefully," the Fed minutes said.

IMF officials have been chiding European Central Bank officials, in particular, for failing to do enough to lift inflation in the euro area from well below 1%. Like the Fed, the ECB expects inflation to rise this year, but it is under greater pressure to act.

The IMF reduced its growth and inflation forecasts for 2014 and 2015 in projections released this week. It sees consumer-price inflation in developed economies this year of 1.5%, compared with 1.4% in 2013. It expects global growth this year of 3.6%, better than the 3% growth in 2013, but less than the 3.7% growth it projected in January.

Bruce Kasman, chief economist with J.P. Morgan Chase, said inflation is also softening in developing economies, most notably China. The development, he said, is taking pressure off central banks in places like India and Turkey to raise interest rates to prevent their economies from overheating.

"Six months from now, I think we'll see that inflation in the emerging markets is materially less than it was a year ago," Mr. Kasman said. For years since the financial crisis ended, critics have warned central bankers that their low-interest-rate policies risked pushing consumer prices much higher as they flooded the world financial system with money. But weak demand in many developed economies, combined with excess supply in places such as China, have hampered firms from raising consumer prices.

"Below-target inflation is a world-wide phenomenon, and it is difficult to be confident that all policy makers around the world have fully taken its challenge on board," said Charles Evans, president of the Federal Reserve Bank of Chicago, in a speech in Washington on Wednesday.

The Commerce Department's personal consumption expenditures price index, which is the Fed's favored measure of inflation, was up 0.9% in February from a year earlier. The Labor Department's consumer-price index, an alternative measure, was up 1.1%. 
Low inflation is high on the agenda of global central bankers and finance ministers gathering in Washington this week for semiannual meetings of the International Monetary Fund. Above, the Federal Reserve building in Washington.

The aluminum sector offers one stark view of the global tides holding down inflation. Aluminum prices are in the third year of a decline that has dented profits at the world’s top producers and caused them to cut capacity to try to end an aluminum glut that analysts say has lasted for more than a decade.

Since April 2011, at a time when stimulus measures in China and the U.S. were boosting metals prices, raw aluminum prices on the London Metal Exchange have dropped more than 35% to around $1,800 a ton. The average cost of making raw aluminum at a smelter is around $2,000 a ton, so many smelters around the world have been operating at a loss.

At some point, the oversupply will run its course, but it doesn’t appear to have happened yet. On Tuesday, Alcoa Inc., AA +3.75% the world’s top aluminum producer by revenue, said it swung to a net loss of $178 million, or 16 cents a share, from a profit of $149 million a year earlier, mainly because prices for raw aluminum fell 8% year-over-year. It also took a $255 million charge related to closing plants in Brazil, Australia and upstate New York. Alcoa said those closures eliminated 421,000 tons, or 10% of its overall capacity. Russia’s United Rusal 0486.HK +5.48% PLC, the world’s No. 1 producer by volume, is planning to reduce production by 330,000 tons, or 8%, in 2014.

Although Chinese government officials have pledged to reduce capacity, cuts have been resisted by local leaders eager to preserve jobs. Aluminum production in China is expected to increase 9% this year and 7% next year, according to Deutsche Bank.

In the U.S. and Europe, signposts of soft consumer demand also are evident. In Switzerland, executives at Swatch Group AG told The Wall Street Journal earlier this month that consumers were switching to lower-cost timepieces. In the U.S., companies such as Procter & Gamble Co. and Georgia Pacific Corp., among others, have been blitzing consumers with deals and coupons to lift sales.

Carnival Corp. is filling cabins on its cruise ships by reducing ticket prices—a situation the Miami-based company hopes is temporary. “As the economy improves and as demand is there, we should be able to get the pricing back without any problem,” Chief Financial Officer David Bernstein told analysts last month.

—John W. Miller and Ben Leubsdorf contributed to this article.

Write to Jon Hilsenrath at jhon.hilsenrath@wsj.com