FRANKFURT—Europe's insurers will likely get a reprieve of up to two years to fully implement a planned overhaul of rules governing the capital buffers they need to stay in business during times of stress, according to the sector's top regulator in the region.

The currently envisaged Jan. 1, 2014, starting date for fully implementing the detailed requirements on capital, risk and reporting in the European Union—dubbed Solvency II—is completely out of reach, said Gabriel Bernardino, chairman of the European Insurance and Occupational Pensions Authority, or Eiopa.

"Under the best scenario, Solvency II could start to be implemented either 2015 or 2016. It depends on the length of the legal and political process," Mr. Bernardino said in an interview. "At the end of the day, we'll probably go to 2016, but it is still to be seen."

Some delay was expected, but Mr. Bernardino is the first official to publicly discuss the timing in concrete terms. Eiopa advises the European Commission on technical issues regarding Solvency II, but the political decision on when to start the new regime will be made by the European Parliament, the commission and the European Council.

As a result of the financial crisis, banks and insurers alike face tougher regulation, although insurers have fared substantially better through the crisis than banks. Solvency II is the insurance industry's European equivalent of the widely discussed Basel III global requirements for banks.

The original deadline had been the cause of concern to insurers, who argued that information technology, risk management and reporting systems would need to be adapted to the new requirements. Some of the rules aren't yet clear.

Prudential PLC, the U.K.'s biggest insurer by market capitalization, has warned that it may move its headquarters from London to Asia due to the uncertainty over the solvency rules.
A State Street research note from April said the commission initially estimated that compliance with Solvency II would cost European insurers between €2 billion and €3 billion over a period of five years. According to the State Street note, some insurers are earmarking sums in excess of €100 million each for the project.

Insurers welcomed Mr. Bernardino's comments Wednesday. Roland Vogel, chief financial officer of reinsurer Hannover Re AG, said insurers have been criticizing deficiencies in the planned regulation and that it was important to discuss and include improvements. Still, he said, changes and delays cause "immense costs" given that the industry has prepared for the new regime for quite some time. He also said the political and legislative process needs to be more efficient.

The regime had been set to start Jan. 1, 2013, with full implementation set for the start of 2014. Fitch Ratings said last month that the January 2014 date for full implementation could be delayed by a year because of the lengthy legislative process in Brussels.

"We welcome a postponement as it allows to resolve the still-open questions and to sufficiently test the effects of any Solvency II rules prior to finalizing the Solvency II directive," said a spokesman for Allianz SE, Europe's biggest insurer by market capitalization.

Not all were of the same view. "Scor would like those insurance and reinsurance companies that will be ready, with an operational internal model, on 1 January 2014, to be able to officially move to the new Solvency II regime without waiting until 2015," said Denis Kessler, chief executive of French reinsurer Scor SE.

"These companies have invested considerable resources in order to respect the initial Solvency II schedule and to be ready in time. Scor has done its utmost to respect the initial schedule and has already submitted its internal model to ACP, the French prudential supervisory authority," Mr. Kessler said.

Earlier this month, in a letter to the commission, Mr. Bernardino urged European legislators to come up with a credible timetable for introducing the Solvency II regulations.

"From the political institutions there clearly is the idea and the firm will to come up with a concrete, credible timetable," Mr. Bernardino said when asked how the letter was received in Brussels.

"The Commission would like the European Parliament and the European Council to decide soon about the way forward in the negotiations on Solvency II, so that
the official starting date can be clarified once and for all," said commission spokesman Stefaan De Rynck Wednesday.

Mr. Bernardino said it needs to be clear whether some of the elements of Solvency II could be applied prior to the official start, in areas such as risk management, for instance. He also said Eiopa will carry out another stress test of the resilience of European insurers sometime next year, the first since 2011.

Last year's stress test found that the European insurance sector remains robust and has enough capital overall to withstand potential future shocks, even though 10% of the region's insurers failed the harshest of several stress-test scenarios, leaving the sector as a whole €4.4 billion short of its minimum capital requirement under Solvency II.