Department of Economics University of Maryland

Economics 325
Intermediate Macroeconomic Analysis
Supplement 12
Professor Sanjay Chugh
Fall 2011

The following article appeared in the *Wall Street Journal* on October 28, 2011. It summarizes what seems to be known so far about the deal struck by European governments to help bail out the Greek debt crisis. The Dow Jones Industrial Average (one of the major U.S. stock market indicators) jumped up by nearly three percent on news of the deal on October 27 (the day the deal was announced).

As a side note, note that the stock-market pricing model we studied in Chapter 8 is conditional on **expectations** of news about the future, rather than **actual** events in the future – because events in the future are unknown in the present. Formally, the basic nominal stock-price expression from Chapter 8 is

$$S_t = E_t\left[\left(\frac{\beta u'(c_{t+1})}{u'(c_t)}\right)\left(\frac{S_{t+1}+D_{t+1}}{1+\pi_{t+1}}\right)\right],$$

where the $E_t(.)$ denotes the **mathematical expectation** of the pricing kernel and the future payoff of stock (normalized by the inflation rate between now and the future). As the values of the probability density function underlying the expectation operator change due to ongoing news about policy and other changes, the numerical value of the right-hand side changes, which causes "current period" stock prices (S_t) to change.

Thinking even more broadly – in any of our economic models, **which fundamentally are about time, any** result or idea that links period-t outcomes to period-(t+1) outcomes formally has the **mathematical expectation** of the t+1 outcomes as the conditioning factor.

In our models, the formal probability density function of future events is that the **probability is exactly equal to one** (hundred percent) that whatever is written on the right-hand side is going to occur for sure. We would need more mathematics (formally, statistics) to bring expectations into our analyses. But the idea is simply what's described above.

WALL STREET JOURNAL

EUROPE NEWS

OCTOBER 28, 2011

Cheers and Skepticism Greet European Deal

Dow Jumps 339.51 Despite Questions

BERLIN—Europe's new strategy to tame its debt woes invigorated global financial markets despite lingering questions over how the plan will work and whether it will be enough to end the two-year-old crisis.

A trader at the German Stock Exchange in Frankfurt on Thursday, where German stocks moved higher.

The Dow Jones Industrial Average rose 339.51 points Thursday, or 2.9%, to 12208.55. With the Dow up 11.9% so far in October, it's on track for its biggest monthly percentage gain in nearly 25 years. The U.S. gains followed a surge in stocks across Europe. Investors also piled into commodities and junk bonds. The euro surged 2% to $1.4188, its highest point since early September, after details of the plan were disclosed. Asian shares opened higher Friday morning, with Japan up 1.4% and South Korea gaining 1.6% in early trading.

European leaders, meeting through the night in Brussels into early Thursday, brokered a broad package of measures to retool their bailout fund, recapitalize the Continent's banks and reduce Greece's debt load. The deal marks the boldest attempt by Europe's leaders to bring a crisis that began in Greece in the fall of 2009 under control.

Europe's leaders offered few details, however, signaling that it would take weeks, if not months, to work out the fine print. The dearth of detail and uncertainty about when the plan will be implemented left many economists warning the market's reaction could be temporary.

Top European Central Bank officials were particularly skeptical. Jens Weidmann, the president of Germany's powerful Bundesbank and a member of the ECB's governing council, warned that Europe's leaders were embracing the same kinds of financial instruments to boost the effectiveness of their bailout fund that many blame for causing the financial crisis that began in 2008.

"The envisaged leverage instruments are similar to those which were among the origins of the crisis, because they temporarily masked the risks," Mr. Weidmann said in a speech in Munich.

Under the new plan, Greek debt held by private sector creditors will be cut by 50% with investors accepting a "voluntary" haircut. Europe's biggest banks, which have faced questions about their stability, would be required to boost their core capital ratios to 9%. The leaders also agreed to allow the €440 billion euro-zone bailout fund, the European Financial Stability Facility, guarantee the debt of some member countries.

Even though the deal out of Europe contained many holes, it managed to meet the lowered expectations of stock-market investors around the world. At least for now, the deal has calmed fears of a system-wide financial crisis in Europe.

Debt investors may be a tougher sell. Policy makers face an uphill battle to convince portfolio managers to buy European government bonds, as they have been burned by jagged price swings in the debt over the past two years. "Their investor base has shrunk considerably while their debt needs are going to be even larger in 2012 than in 2011," said Eric Pellicciaro, head of global-rates investments at BlackRock Inc.'s Fundamental Fixed Income team.

A chorus of world leaders and senior policy makers welcomed the deal, while cautioning that the new crisis framework needed to be fully implemented before Europe could claim victory.

President Barack Obama called the latest agreement "an important first step" but also acknowledged the unresolved details. "There's no doubt that it's progress," he told reporters. "So the key now is to make sure that there is strong follow-up, strong execution of the plans that have been put forward."

German Chancellor Angela Merkel tried to temper expectations late Thursday. "I don't think you can say one summit alone will do the trick. It's a long, drawn out process," she told reporters in Berlin.

French President Nicolas Sarkozy cut France's growth forecast to 1% from 1.75% for 2012 on Thursday, offering further evidence that the euro zone's second-largest economy is being hit hard by the global economic slowdown. Mr. Sarkozy said the government would unveil a new austerity plan of between €6 billion and €8 billion to shore up the country's public finances.

Investors have been particularly worried about Italy, the euro zone's third largest economy, in recent months. Rome has come under fire for not pursuing structural reforms or aggressively tackling its €1.9 trillion debt.

France and Germany have been pressuring Italy to cut its massive public debt and rein in its deficit but their demands have faced resistance in Rome.

European finance leaders have clinched a deal under which private investors agreed to take a 50% loss on Greek debt.

By offering guarantees, Europe's leaders hope to maximize the impact of the bailout fund. The stability facility will have two ways to deploy its assets. One part of the plan involves partially insuring new debt issued by euro-zone countries that would otherwise have trouble accessing financial markets on their own. This would be the case if a country becomes the focus of downgrade speculation, scaring off investors. The stability-facility insurance could help restore investor confidence, allowing a threatened country to remain on the market.

The second model involves creating an investment vehicle to allow private investors and cash-rich countries such as China to invest in the stability facility's bond-buying facility, boosting the amount of cash that the fund has to work with.

Among the uncertainties that may temper enthusiasm among investors in coming weeks is exactly how much of a commitment that EU officials will get from private investors and sovereign wealth funds for the plan.

"Despite the current euphoria," funding the expansion of the stability facility "may prove to be a tough sell" wrote Stewart Hall, senior currency strategist at RBC Dominion Securities.

In Beijing on Thursday, the Ministry of Foreign Affairs said China welcomes the conclusion of the euro-zone leaders' summit and believes it will be conducive to the global market. The ministry's spokeswoman, Jiang Yu, said China is willing to step up cooperation with Europe in various areas, but declined to comment if China would be investing in a special rescue fund.

If investors don't embrace the plans, the European Central Bank may be forced to maintain the emergency measures it has adopted to keep the debt problems from spreading. The ECB employed the most controversial of those measures, its bond-buying program, again on

Thursday, purchasing the debt of Italy and Spain. The purpose of the program is to keep borrowing costs of the two countries at sustainable levels. But influential voices within the ECB, in particular Germany, are eager to bring the program to a close.

Aside from the challenges posed by the rescue package itself, economists warned that Europe will also need to pursue politically tricky structural reforms to boost growth. Recent economic data suggest that the euro zone could be headed into another recession, further complicating efforts to shore up the region's weakest members.

—Sudeep Reddy, Brian Blackstone, Ulrike Dauer, William Horobin, Mary M. Lane and Tom Lauricella contributed to this article.

Write to Matthew Karnitschnig at matthew.karnitschnig@wsj.com