The Fundamentals that Drive the Eurex European Equity Index and Interest Rate Futures Markets

Introduction

The purpose of this report is to provide a deeper understanding of the fundamental factors that drive the European equity index and the interest rate futures markets. Market participants who fully understand these fundamentals should be more successful in their trading and hedging activities.

This report covers Eurex's equity index and interest rate futures markets, which are just part of Eurex's overall product complex. The chart on the right illustrates the sharp growth in the combined open interest of the Eurex equity and interest rate derivatives markets. Eurex had about 50 million outstanding equity and interest rate contracts as of February 2012.

The most popular Eurex equity index futures contract is the EURO STOXX 50® Index Futures, which has open interest of about 2.5 million contracts in futures and about 37 million contracts in options. The Eurex fixed income products include the EURO-Buxl, EURO-Bund, EURO-Bobl and EURO-Schatz Futures products, which together have open interest of more than 3 million futures contracts.

The Eurozone

When trading the Eurex equity index and the interest rate markets, it is important to understand the economic, political, and geographic backdrop of these markets. The euro area, which is commonly referred to as the "eurozone," is the group of 17 countries that have agreed to use the euro as their national currency (see the list on the next page). The eurozone is a subset of the European Union (EU), which is the political group of 27 European countries that have agreed to a range of common political governance measures. The EU took a big step forward toward streamlining and strengthening the governance process by ending eight years of wrangling and finally implementing the Treaty of Lisbon as of December 1, 2009.

Of the 27 countries in the European Union, 10 do not use the euro. Those countries in theory, however, are obligated to enter the eurozone under the 1992 Maastricht Treaty, which set out the terms for European Monetary Union (EMU). However, UK and Denmark have explicit opt-out provisions that allow them to remain out of the eurozone indefinitely. Sweden claims an opt-out from the eurozone based in part on a public referendum vote in 2003 in which voters rejected the euro.

Eurex Equity & Interest Rate Open Interest



The "euro group" is the name of the group of finance ministers from the eurozone countries that periodically meet to discuss fiscal, currency, and regulatory issues. The euro group represents the interests of the eurozone countries that fall under the purview of the finance ministers' portfolio. The president of the euro group is currently Jean-Claude Juncker.

Eurozone Enlargement—EU finance ministers in August 2010 approved Estonia as the 17th member of the eurozone effective January 1, 2011. There are other EU countries that are on a path toward eventually joining the eurozone and adopting the euro. Denmark's government, for example, has said in the past that it favors joining the eurozone, but the government would first have to hold a public referendum to approve joining the eurozone.

Table of Contents

1. The Eurozone
2. The Euro
4. Fiscal Challenges
5. European Central Bank
6. ECB Monetary Policy
7. Economic Data Impact
10. Equity Index Futures
11. EURIBOR Futures
12. EURO-Bund Futures
13. EURO-BTP Futures
14. Information Sources

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Still, the Eurozone debt crisis has made countries much more wary of joining the eurozone due to the currency and monetary policy inflexibility that comes with adopting the euro and due to the likelihood of being called upon to bail out the weaker members of the eurozone.

Eurozone economy—The eurozone economic bloc is a major player in the global economy, as seen in the table on the next page. The eurozone's population of 331million is larger than the U.S. population of 310 million and is more than 2½ times larger than Japan's population of 128 million. Despite the eurozone's larger population, however, its GDP of 9.2 trillion euros is about three-quarters the size of the U.S.'s GDP of 11.9 trillion euros. Still, that makes the eurozone the second largest economy in the world behind the U.S. The eurozone's per capita GDP of €27,700 is well below the U.S. figure of €38,300 and is slightly above Japan's per capital GDP of €27,300.

Industry (manufacturing and construction) accounts for more of the eurozone GDP (24.5%) than the U.S.'s GDP (20.0%) but less than Japan's GDP (27.1%). This makes the eurozone economy more sensitive to the global business cycle since the manufacturing and construction industries are tied much more closely to the business cycle than service industries. In addition, exports are much more important to Europe than to the U.S. Specifically, exports in the eurozone account for 22.6% of GDP, almost double the U.S. figure of 12.5%. This makes the eurozone economy more sensitive than the U.S to foreign demand for exports and to exchange rate fluctuations.

European households earn substantially less disposable income than U.S. households (18,600 euros vs 28,800 euros, respectively), but they are much better savers. Eurozone households save 13.9% of their disposable income versus only 8.5% for U.S. households. European households hold fewer financial assets than do U.S. households (308% vs 419% of disposable income, respectively), but they also enjoy a lower debt level (99% vs 117% of disposable income, respectively).

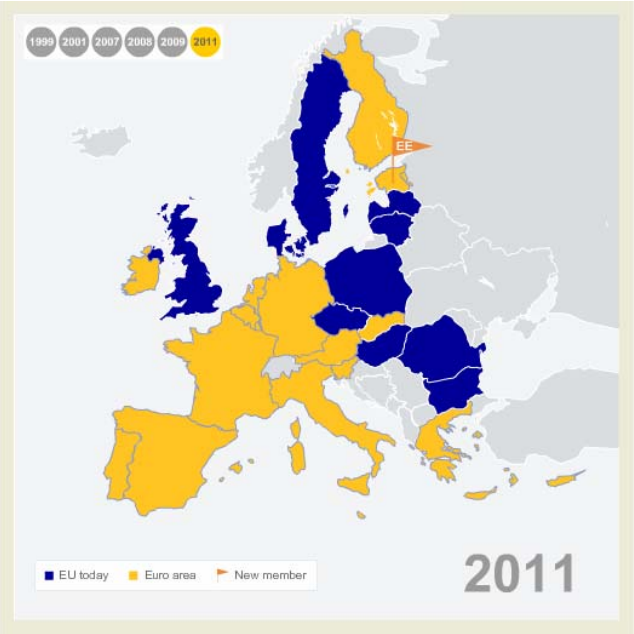
The Euro

The euro is the common currency used by the seventeen eurozone countries. Several other states that are not members of the eurozone or the European Union also use the euro. Monaco, San Marino, and the Vatican all use the euro under a formal agreement with the EU. Andorra, Kosovo and Montenegro have also officially adopted the euro as their national currency, although that usage has not been officially sanctioned by an agreement with the EU.

The euro came into existence on January 1, 1999, and bank notes were introduced on January 1, 2002. In its relatively short history, the euro has become the world's second largest reserve currency and the second most traded currency after the dollar.

The euro as a common currency offered several advantages to the eurozone countries: reduced transaction costs through the elimination of currency conversion costs, elimination of exchange rate risks, security of purchasing power, and product price transparency for consumers within the eurozone.

The Eurozone vs European Union



Source: European Central Bank

Eurozone countries (17 countries): Estonia, Germany, France, Italy, Spain, Netherlands, Belgium, Austria, Greece, Ireland, Finland, Portugal, Slovakia, Luxembourg, Slovenia, Cyprus, Malta (Estonia was just admitted as of January 1, 2011).

European Union countries not in Eurozone (10 countries): Denmark, Sweden, UK, Poland, Czech Republic, Bulgaria, Hungary, Romania, Latvia, Lithuania.

The underlying strength of the euro is a key issue for global investors. Global investors will only put their cash into the euro-denominated European stock and bond markets if they have confidence that the value of the euro will be preserved. In this regard, the euro has been a success, at least it was until the sovereign debt crisis exposed the eurozone's structural fiscal defects. The euro showed some weakness in the first few years of its existence in 1999-2001, but has since shown strength and is currently near US$1.34 per euro.

The general success of the euro can be directly attributed to the respect earned by the European Central Bank through its tough but sensible monetary policy. The ECB adopted the hawkish approach of the German central bank—the Bundesbank—which was well-known for its no-nonsense monetarist approach to

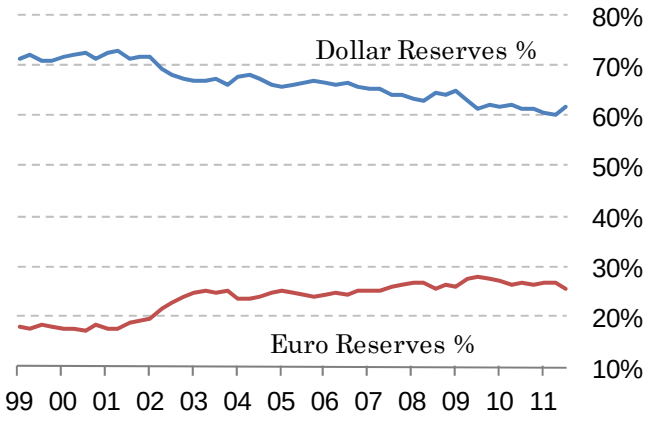
Euro Performance (US$ per Euro)



Key Characteristics of Eurozone versus the United States and Japan

	Units	Eurozone	EU	U.S.	Japan
Population, GDP, Labor					
Population	millions	331	502	310	128
GDP	PPP, EUR trillions	€ 9.2	€ 12.9	€ 11.9	€ 3.5
GDP per capita	PPP, EUR thousands	€ 27.7	€ 25.7	€ 38.3	€ 27.3
Labor Productivity	Eurozone = 100	100.0	91.2	128.3	83.9
Value Added by Economic Activity					
Agriculture, Fishing & Forestry	% of total	1.7%	1.7%	1.0%	1.4%
Industry (including construction)	% of total	24.5%	24.7%	20.0%	27.1%
Services	% of total	73.8%	73.6%	79.0%	71.5%
Saving & Investment					
Gross Saving	% of GDP	18.5%	18.1%	11.6%	24.9%
Gross Fixed Capital Formation	% of GDP	19.1%	18.5%	15.5%	20.5%
Households					
Gross Disposable Income per Capita (HHGDI)	PPP, EUR thousands	€ 18.6	€ 16.8	€ 28.8	€ 17.4
Gross Saving	% of HHGDI	13.9%	12.1%	8.5%	11.3%
Financial Assets Held	% of HHGDI	308%	na	419%	458%
Gross Debt Outstanding	% of HHGDI	99%	na	117%	102%
Government					
Expenditure	% of GDP	50.5%	50.3%	38.0%	40.4%
Surplus (+) or Deficit (-)	% of GDP	-6.0%	-6.4%	-10.6%	-8.7%
Gross Debt Outstanding	% of GDP	85.3%	80.0%	77.4%	180.4%
External					
Exports of goods & services	% of GDP	22.6%	15.5%	12.5%	15.9%
Imports of goods % services	% of GDP	22.0%	15.9%	15.9%	14.6%
Current Account Balance	% of GDP	-0.4%	-0.8%	-3.2%	3.6%
Source: European Central Bank Statistics Pocket Book (2010 data)					

Global Central Bank Currency Reserves — Percent held in U.S. Dollars vs Euros



policy and its anti-inflation resolve. This anti-inflation resolve is critical for fostering market confidence in the euro as a store of value.

Global central banks are confident enough about the euro that the percentage of global reserves held in euros climbed to a record high of 27.8% in Q3-2009, although that figure fell off slightly to 25.7% by Q3-2011 due to the eurozone debt crisis. The U.S. dollar is still the world's dominant reserve currency since 61.7% of world reserves are held in dollars. However, global central banks are trying to slowly diversify their risks by moving some of their reserves away from dollars. The euro has been the main beneficiary of that diversification effort. After the euro, the British pound and the yen are used much less as reserve currencies with only 3.9% and 3.8% shares of global reserves, respectively. That means there is no serious challenger at present to the euro as the world's second favorite reserve currency despite the recent European debt crisis.

The fact that a large amount of the world's reserves are being held in euros is good news for the European government bond market since those reserves are usually parked in euro-denominated European government bonds. This tends to keep European bond yields down and that is a favorable factor for the European economy.

Eurozone Fiscal Challenges

The euro is different from the usual type of currency because it is not the currency of a single nation-state, but rather is the currency of a group of nation-states.

The eurozone countries have agreed to a common monetary policy, which was necessary to create a common currency. However, the eurozone countries are still separate nation-states that have separate national government budgets and fiscal policies.

The eurozone countries recognized this problem when they formed the currency union and they all agreed to the Stability and Growth Pact, which specifies that national annual budget deficits cannot exceed 3% of GDP and that national debt cannot exceed 60% of GDP. However, there was initially no serious enforcement mechanism for these ceilings.

The lack of an effective budget deficit enforcement mechanism did not present any major problems for the eurozone in the first ten years of its existence. However, the global financial crisis and recession that began in late 2008 caused government budget deficits to soar and that laid bare the euro's Achilles heel of the lack of fiscal unity.

During spring 2010, an all-out European debt crisis emerged when it became clear that Greece, Portugal, and Ireland were all in serious financial trouble and would require a bailout. Ireland's fiscal trouble stemmed mainly from the government's need to backstop the Irish banking system, which had collapsed. There were fears of the complete collapse of the eurozone itself if any of the troubled countries defaulted on their debt and were forced to leave the eurozone. The contagion in late 2011 even spread to Spain and Italy, which was a particularly dangerous turn of events since Italy has as much as 1.9 trillion euros of debt. The sovereign debt crisis caused severe stress in the European banking system.

After two years of crisis, Eurozone officials by late 2011 finally started to get a handle on containing the eurozone debt crisis. Eurozone officials accelerated to July 2012 the operation of the permanent 500 billion euro "European Stability Mechanism," which will add more bailout firepower. Eurozone officials also agreed on a new fiscal treaty that enshrines debt limits in national laws and places automatic sanctions on fiscal violators. Eurozone officials in late February 2012 approved a new 130 billion-euro bailout package for Greece that removed at least the immediate threat of a Greek default. Meanwhile, the European Central Bank in late 2011 cut its refinancing rate by 50 basis points to 1.00% and flooded the banking system with 36-month liquidity, thus allevi-

ating the severe stress on the European banking system. The ECB's 36-month loans also helped to bring down government bond yields for the troubled eurozone countries.

European Central Bank

The European Central Bank (ECB) is responsible for administering monetary policy in the eurozone. Other ECB duties include holding foreign reserves, conducting foreign exchange operations, and promoting the smooth operation of bank payment systems. The ECB coordinates and controls the eurosystem, which includes the national central banks (NCBs) of the respective eurozone nations such as the Bundesbank and the Bank of France.



ECB Eurotower in Frankfurt, Germany

The ECB by treaty is guaranteed independence from other institutions in the EU and from the member states. The ECB's primary mandate is to "maintain price stability." This is a narrower and more hawkish mandate that the U.S. Federal Reserve, which is charged not only with price stability but also with maximizing employment.

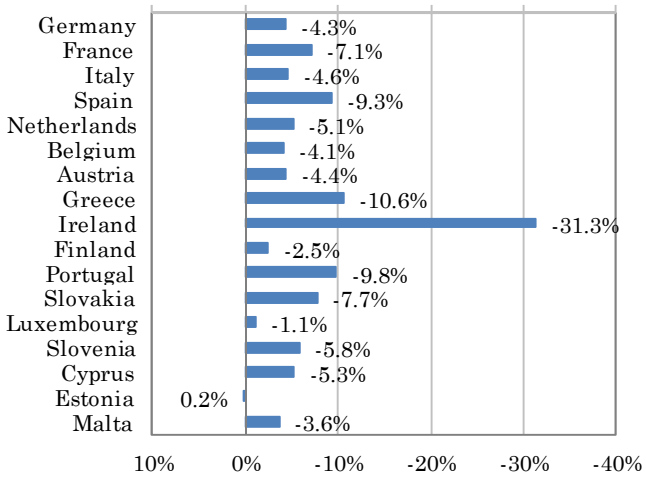
The decision-making bodies of the ECB are the Governing Council, the Executive Board, and the General Council. The Governing Council is the main body that formulates monetary policy and decides on key ECB interest rates. The Executive Board is in charge of executing the policies determined by the Governing Council and handles the day-to-day operations of the ECB. The General Council issues reports on convergence and contributes to the ECB's collection of statistical data and its reporting activities.



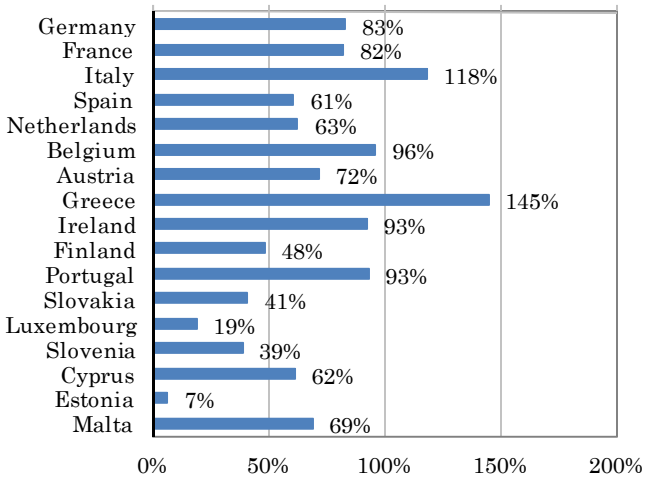
ECB Governing Council meeting

The ECB Governing Council consists of the six members of the Executive Board, plus the governors of the national banks of the seventeen eurozone countries. The ECB Governing Council usually meets twice a month. At the first meeting of the month, which is usually held on the first Thursday of the month, the Governing Council makes its monthly monetary policy decision. This decision is typically announced to the public at around 1:45 PM Central European Time (CET), which equates to 7:45 AM U.S. Eastern time and 8:45 PM Tokyo time, depending on fluctuations in daylight saving times. Shortly after the conclusion of the meeting, the ECB President holds a press conference to explain the ECB's decision and its general policy stance. ECB Council members generally follow the unwritten rule to refrain from commenting about monetary policy in the week before an ECB policy meeting. The markets do not pay any attention to the second Governing Council meeting of the month, which focuses mainly on internal business issues.

2010 Government Budget Deficit as % of GDP



2010 Government Debt as % of GDP



Source: European Commission (latest available data as of Feb 2012)

The president of the ECB is currently Mario Draghi, who was formerly an ECB Council Member and the head of the Italian central bank. Mr. Draghi took over from former ECB President Jean-Claude Trichet on November 1, 2011. Mr. Draghi's 8-year term lasts until October 2019.

ECB Monetary Policy

In pursuing its overall monetary policy goals, the ECB has a set of policy instruments that include conducting open market operations to adjust reserves, offering standing facilities for banks, and requiring banks to hold minimum reserves to back their loans.

ECB Governing Council Members (23)	
Executive Board Members (6)	
Mario Draghi	ECB President
Vítor Constâncio	ECB Vice-President
Jörg Asmussen	Exec. Board Member
Benoit Cœuré	Exec. Board Member
José Manuel González-Páramo	Exec. Board Member
Peter Praet	Exec. Board Member
National Central Bank Governors (17)	
Luc Coene	Belgium
Jens Weidmann	Germany
Patrick Honohan	Ireland
Georgios Provopoulos	Greece
Miguel Fernández Ordóñez	Spain
Andres Lipstok	Estonia
Christian Noyer	France
Ignazio Visco	Italy
Athanasios Orphanides	Cyprus
Yves Mersch	Luxembourg
Josef Bonnici	Malta
Klaas Knot	Netherlands
Ewald Nowotny	Austria
Carlos Costa	Portugal
Marko Kranjec	Slovenia
Jozef Makuch	Slovakia
Erkki Liikanen	Finland

Table note: Members as of Feb 2012. Please see ECB website at www.ecb.int for any changes.

The ECB conducts its main refinancing operations to adjust the level of reserves in the banking system and to keep the overnight interest rate near its target, with the ultimate purpose of controlling the money supply and maintaining price stability in the economy.

The ECB typically conducts its main refinancing operations at the "main refinancing rate," which is the ECB's key policy rate. This policy rate provides a function similar to that of the Federal Reserve's federal funds target rate and the Bank of Japan's target for the unsecured overnight call rate. The ECB's main refinancing rate is currently at 1.00%, the same level as seen in the aftermath of the financial crisis.

The ECB through its open market operations seeks to target the overnight market interest rate, which is called the EONIA® rate (an acronym for the "euro overnight index average"). The EONIA rate is the rate at which banks lend funds to each other on an unsecured basis in the interbank market and is comparable to the federal funds rate in the U.S. The EONIA rate has recently averaged about 0.35%.

There are two other important ECB rates to watch: the deposit rate and the marginal lending rate. The ECB's deposit rate is the interest rate the ECB pays banks for depositing excess reserves with the ECB in its *deposit facility*. The deposit rate, which is currently at 0.25%, usually acts as a floor for the overnight market interest rate since banks can deposit their excess reserves in this facility and thus do not have to lend those reserves to other banks at a rate lower than the deposit rate.

The marginal lending rate is the rate that banks pay to the ECB to borrow reserves from the ECB's *marginal lending facility*. The marginal lending facility is similar to the Federal Reserve's discount window in the U.S. The marginal lending rate is a penalty rate that is set above the main refinancing rate. The ECB's marginal lending rate, which is currently at 1.75%, typically acts as a ceiling on overnight rates.

The ECB during 2008/09 was forced to adopt an emergency monetary policy to deal with the global financial crisis and the ensuing recession in Europe. The ECB progressively cut its main refinancing rate by an overall 325 basis points from 4.25% in September 2008 to 1.00% by May 2009 (see chart on the next page). The ECB also injected a massive quantity of reserves into the banking system, which

caused the ECB's assets on its balance sheet to balloon by about 500 billion euros (see the chart of ECB assets on the right).

The ECB in late 2008 also announced its "non-standard" policy of temporarily providing all the liquidity that banks required, as opposed to its usual policy of rationing credit to achieve its policy goals. In order to provide this liquidity, the ECB temporarily used 6-month and 12-month lending operations. In a separate support measure, the ECB from May 2009 through June 2010 purchased 60 billion euros of covered bonds in an effort to support the covered bond market. These are bonds that banks issue to provide mortgages and loans to public entities.

In order to address the European debt crisis specifically, the ECB in May 2010 started buying the sovereign bonds of Greece, Ireland and Portugal to try to keep yields down and keep their bond markets functioning. In August 2011, the ECB then started buying the bonds of Italy and Spain, causing the ECB's balance sheet asset level to soar to more than 2.5 trillion euros.

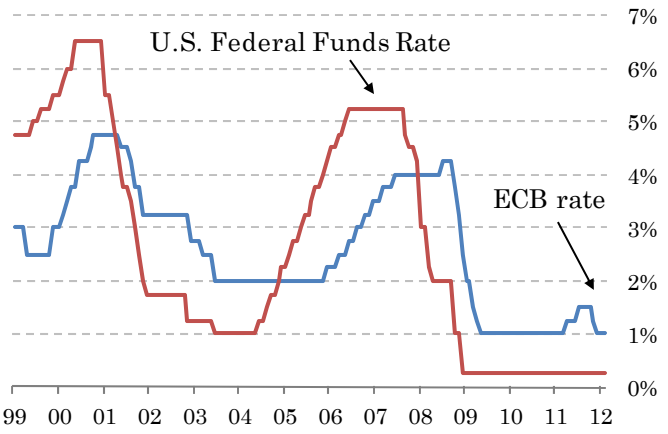
The ECB in the first half of 2011 raised its refinancing rate by a total of 50 basis points to 1.50% to address increasing inflation risks. However, the stress on the European banking system continued through 2011. Then Mario Draghi became ECB President in November 2011 and he immediately engineered 25 basis point rate cuts at the ECB's meetings in November and December, pushing the refinancing rate back down to 1.00%. The ECB also announced two unlimited 36-month bank loan operations for December and February that flooded the European banking system with longer-term liquidity.

Eurozone Economic Data

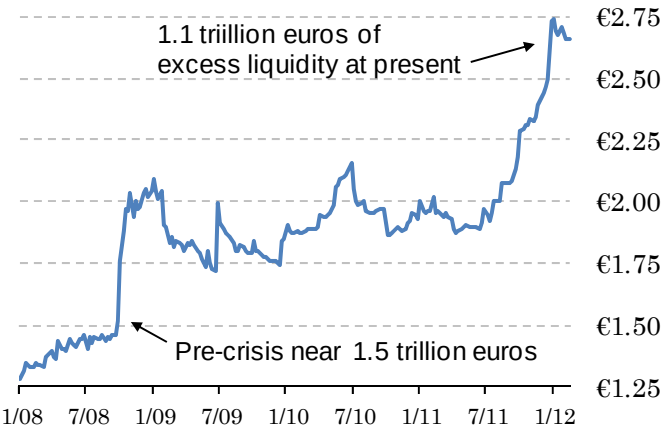
The economic data compiled by the EU and the national governments has improved significantly in the past decade in terms of quality, quantity and timeliness. Eurostat is the primary EU entity that is responsible for compiling macroeconomic data on the member countries. Eurostat's web site (see ec.europa.eu/eurostat/) contains a wealth of information on European economic data.

The chart to the right illustrates that just four countries—Germany, France, Italy and Spain—account for more than three-quarters of eurozone GDP. Market participants, therefore, pay the most attention to

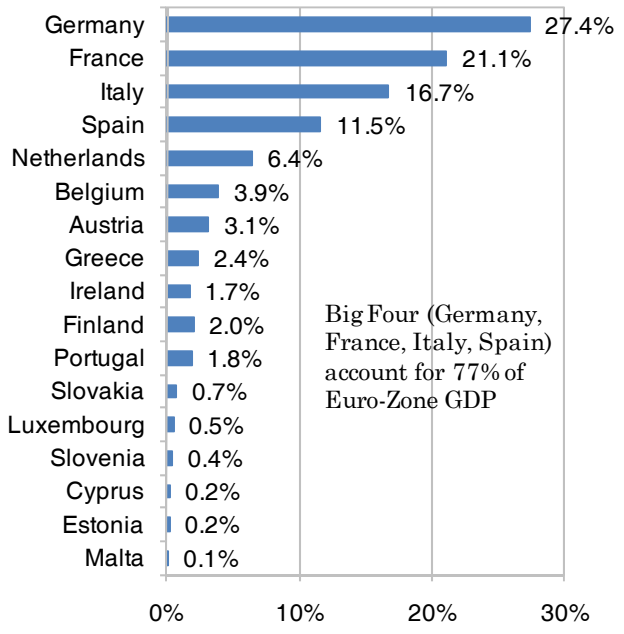
ECB Refinancing Rate vs U.S. Federal Funds Rate



ECB Balance Sheet Total Assets (trillion euros)



National GDP as % Share of Total Eurozone GDP



the national economic data from these top four countries as well as to the overall Eurozone data. Market participants do not pay as much attention to the national economic data from the smaller eurozone nations.

The table below illustrates the reaction of the European stock and bond futures markets to key economic reports for the 3-year period from January 2009 through December 2011. The fourteen indicators shown in this table are the indicators that have the most impact on the EURO-Bund Futures market, according to a comprehensive report from the Royal Bank of Scotland entitled: "What Moves the European Bond Market?" (March 2007). The table shows the average of how much the Eurex EURO STOXX 50® Index Futures and EURO-Bund Futures moved in the 10 minutes following the release of the economic report in question.

It is perhaps surprising that eight of the fourteen economic reports with the most impact on the European equity index market are U.S. reports and not European reports. This finding is consistent with other academic studies on the issue. Three reasons have been offered to explain this phenomenon: (1) the U.S. economy is the world's largest economy and therefore has the largest impact on the global and European business cycles, (2) eurozone economic data tends to be released later than the U.S. data, and (3) there is some correlation between monetary policy responses from the ECB and the Federal Reserve, meaning that U.S. economic data that influences a change in Federal Reserve policy can also influence ECB policy.

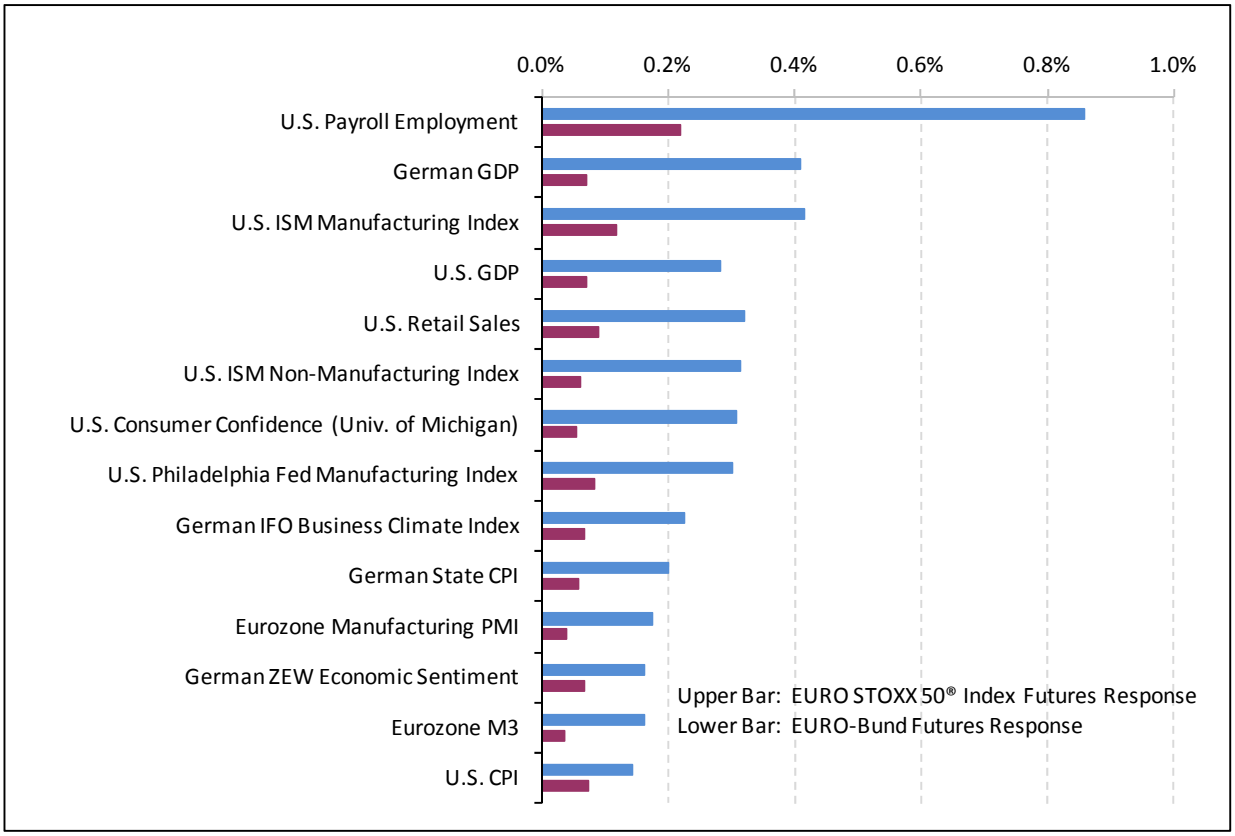
The national governments and Eurostat have taken steps to ensure that economic data is safeguarded and is not leaked before the official release time. An academic study published by the ECB entitled "Which News Moves the Euro Area Bond Market," found that over the course of the study period (1999-2005) there was "no compelling evidence of macroeconomic statistics being released early or of alleged leakages, with one notable exception, the German unemployment figures." In recent years, allegations of leaks of European economic data have disappeared.

European Market Impact (10 minutes) from Top Market-Moving Economic Reports

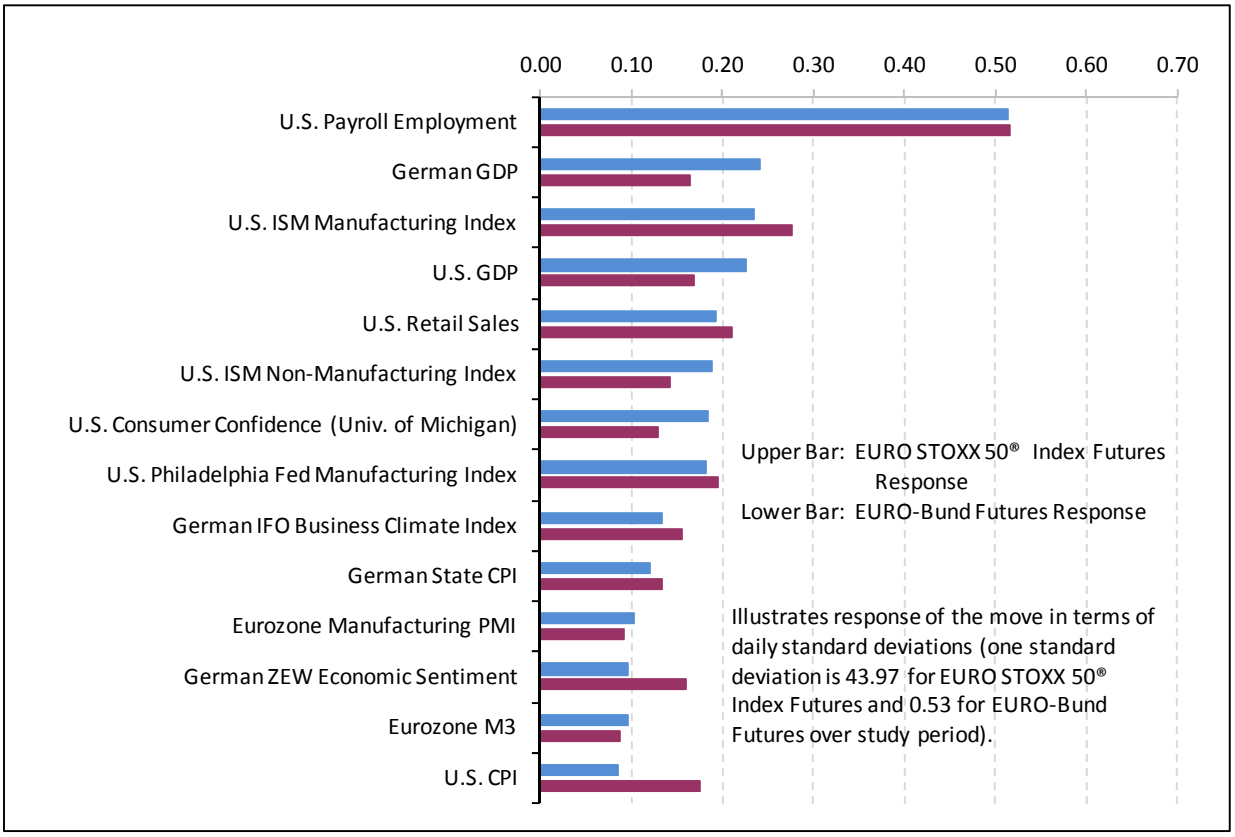
Economic Indicator	EURO STOXX 50(R) Index Futures			EURO-Bund Futures		
	10-Minute Change			10-Minute Change		
	Points	Percent	Std Devs	Points	Percent	Std Devs
U.S. Payroll Employment	22.58	0.86%	0.51	0.28	0.22%	0.52
German GDP	10.63	0.41%	0.24	0.09	0.07%	0.16
U.S. ISM Manufacturing Index	10.34	0.42%	0.24	0.15	0.12%	0.28
U.S. GDP	9.94	0.28%	0.23	0.09	0.07%	0.17
U.S. Retail Sales	8.47	0.32%	0.19	0.11	0.09%	0.21
U.S. ISM Non-Manufacturing Index	8.27	0.31%	0.19	0.08	0.06%	0.14
U.S. Consumer Confidence (Univ. of Michigan)	8.08	0.31%	0.18	0.07	0.05%	0.13
U.S. Philadelphia Fed Manufacturing Index	7.97	0.30%	0.18	0.10	0.08%	0.19
German IFO Business Climate Index	5.92	0.23%	0.13	0.08	0.07%	0.16
German State CPI	5.28	0.20%	0.12	0.07	0.06%	0.13
Eurozone Manufacturing PMI	4.58	0.18%	0.10	0.05	0.04%	0.09
German ZEW Economic Sentiment	4.28	0.16%	0.10	0.09	0.07%	0.16
Eurozone M3	4.25	0.16%	0.10	0.05	0.04%	0.09
U.S. CPI	3.81	0.14%	0.09	0.09	0.07%	0.17
Average across all reports:	8.00	0.30%	0.18	0.10	0.08%	0.18

Table Notes: 1. Covers economic reports released from January 2009 through December 2011.
2. "Std Devs" column shows the point-change response in terms of the number of standard deviations. One daily standard deviation over the period averaged 43.97 points for the EURO STOXX 50® Index Futures and 0.53 points for EURO-Bund Futures (i.e., standard deviation of the daily returns over the period times the average nearest-futures price over the period).

European Market Impact (10 minutes) from Top Market-Moving Economic Reports (in % terms)



European Market Impact (10 minutes) from Top Market-Moving Economic Reports (in std deviations)



Eurex Equity Index Futures

Eurex offers a wide range of equity products, including equity options, single stock futures, equity index futures and options, dividend derivatives, volatility index derivatives, and Exchange-Traded Fund derivatives. This report will highlight the actively-traded EURO STOXX 50® Index Futures contract, which currently has open interest of about 2.5 million contracts and an average daily volume of about 1.3 million contracts.

The EURO STOXX 50® Index is a market-cap weighted index of 50 blue-chip European companies. Even though the index has only 50 companies, it includes just over 50% of the free-float market capitalization in the larger EURO STOXX 600® Index, meaning it provides an effective representation of the overall European stock market. The index is heavily weighted toward companies based in France and Germany, which together account for about 62% of the index's market capitalization.

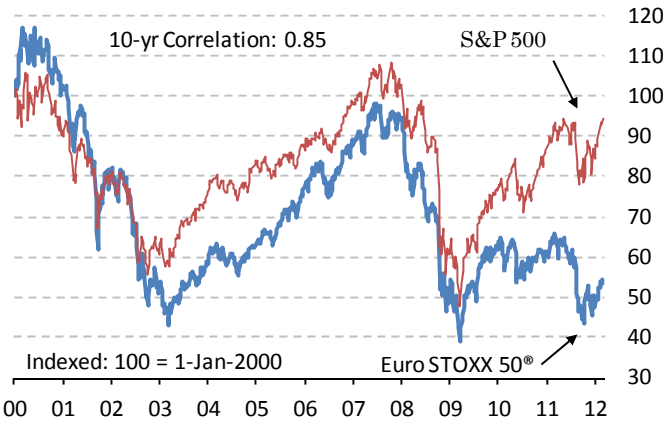
The two charts on the right show how the EURO STOXX 50® Index has performed over the past decade on a relative basis against both the S&P 500 and Japan's Nikkei 225 Index. Over the past ten years, the EURO STOXX 50® Index has shown a correlation of 0.85 with the S&P 500 and 0.64 with the Nikkei 225, based on weekly returns.

Like all the world's stock markets, the EURO STOXX 50® Index plunged during the global financial crisis, but then rebounded higher by 72% from the post-crisis low. Since spring 2010, the index has traded sideways to lower due to the European debt crisis and general concerns about global economic growth. Despite those concerns, the consensus is that European corporate earnings will grow by 9.6% in 2012 and the forward price/earnings ratio for the index is currently at the low level of 9.8.

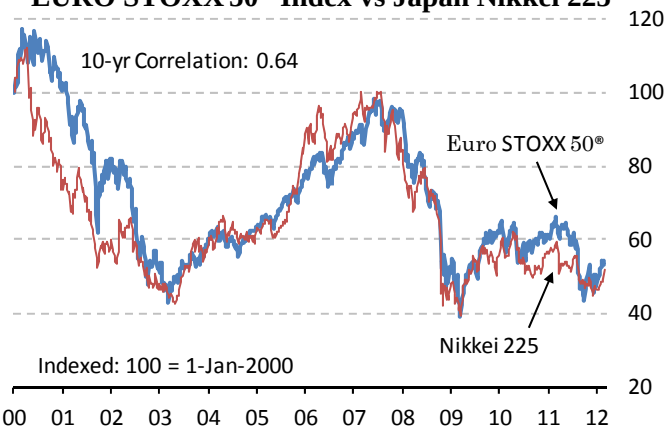
EURO STOXX 50® Index—Top 10 Members

Company	Weight	Country	Sector
Total SA	6.4%	FR	Energy
Sanofi-Aventis	5.0%	FR	Health Care
Siemens AG	4.4%	GE	Industrials
BASF	3.9%	GE	Chemicals
Telefonica SA	3.8%	SP	Telecom
Banco Santander	3.6%	SP	Banks
ENI	3.2%	IT	Oil & Gas
Bayer	3.2%	GE	Chemicals
SAP	3.0%	GE	Technology
Unilever	2.8%	UK	Food & Beverage

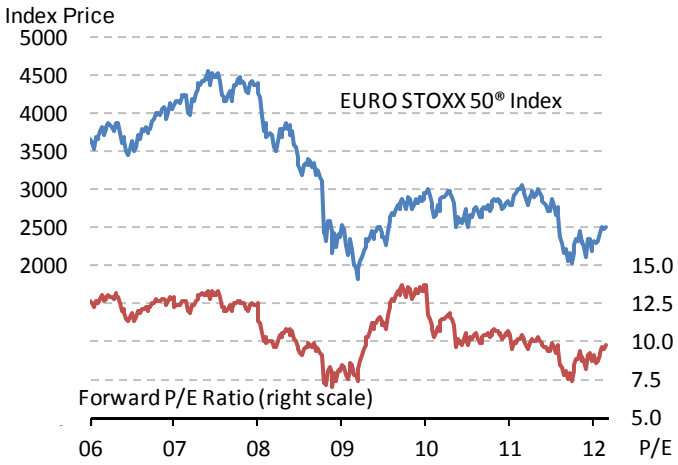
EURO STOXX 50® Index vs U.S. S&P 500 Index



EURO STOXX 50® Index vs Japan Nikkei 225



EURO STOXX 50® Index vs Forward P/E Ratio



Eurex EURIBOR Futures

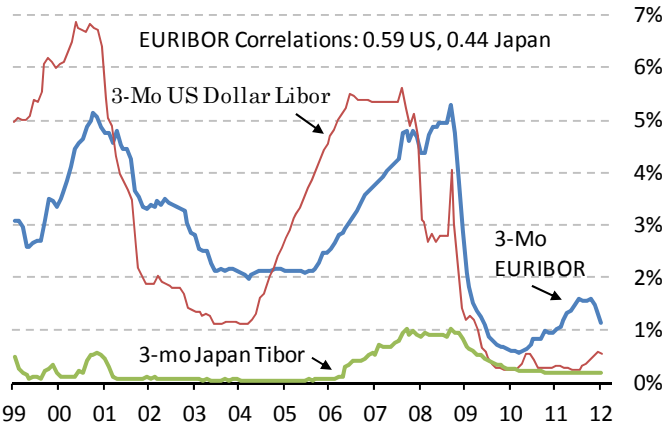
Eurex offers futures and options on the 3-month EURIBOR rate, which is the acronym for the European Interbank Offered Rate. The EURIBOR rate is the rate that banks charge to lend money to each other on an unsecured basis in the interbank market. The EURIBOR rate is also the benchmark used for many other loans and derivatives.

The main factor driving the 3-month EURIBOR rate is the ECB's monetary policy and the ECB's targets for the refinancing rate and EONIA overnight rate (see charts on the right). Over the past decade, the 3-month EURIBOR rate has traded at a median of 15 basis points above the ECB's refinancing rate. As the ECB changes its monetary policy and moves its refinancing rate, the EURIBOR rate generally tends to follow suit with the fairly predictable spread of about 15 basis points above the refinancing rate. However, when the market is expecting the ECB to raise its refinancing rate, the EURIBOR rate tends to trade at a higher spread to the refinancing rate, as seen during the 2007-08 period. The EURIBOR rate is currently trading 3 basis points above the refinancing rate.

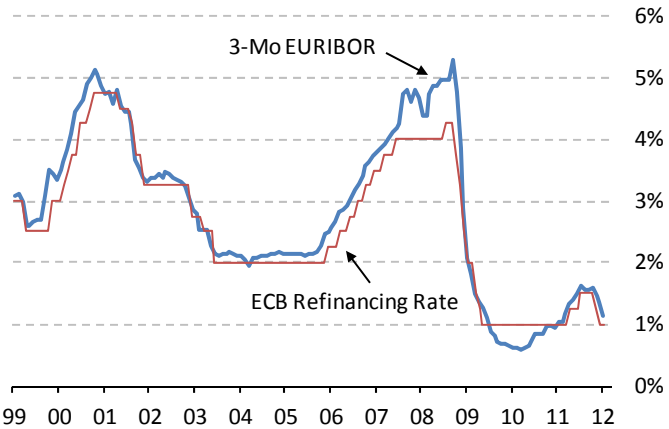
The Eurex EURIBOR Futures contracts provide valuable information about where the market expects the 3-month EURIBOR rate to be in the future. The chart to the right plots the yield (i.e., 100.00 minus futures price) of the EURIBOR contracts stretched out into the future along the horizontal axis, starting with the current March 2012 futures contract and ending with the March 2016 contract. This chart illustrates that the market currently expects the 3-month rate to remain below 1.00% through 2013. However, the market is then expecting the 3-month EURIBOR rate to rise as the ECB slowly raises interest rates in response to the expected improvement in the European economy and increased inflation risks in 2014 and beyond.

The European 3-month EURIBOR rate is comparable to the U.S. dollar 3-month LIBOR rate and Japan's 3-month TIBOR rate. The chart at the top of the page shows how the 3-month EURIBOR rate and the 3-month dollar LIBOR rate in the past decade have traded in roughly the same cycle with a correlation of 0.59, while the Japanese 3-month TIBOR rate has traded far below the EURIBOR rate.

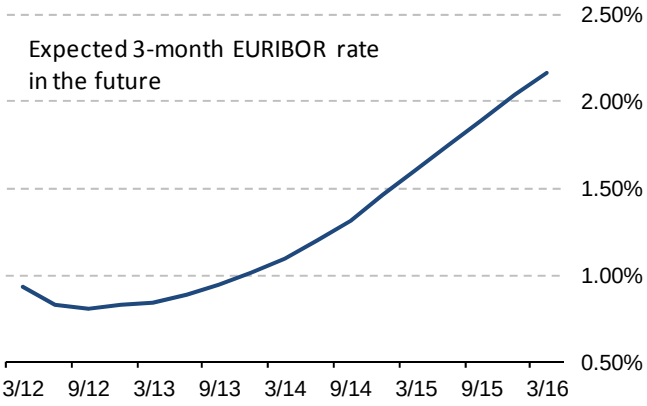
3-Month EURIBOR Rate vs U.S. and Japan Rates



3-Month EURIBOR Rate vs ECB Refinancing Rate



3-Month EURIBOR Futures Strip Curve



The 3-month EURIBOR rate was above 5% in mid-2008 but then plunged to the 0.75% area in the aftermath of the 2008/09 financial crisis. The 3-month EURIBOR in the first half of 2011 rose in response to the 50 basis point rate hike by the ECB, but then fell back after the ECB's 50 bp rate cut in late 2011. The 3-month EURIBOR rate is currently at 1.03%.

Eurex German Fixed Income Futures

Eurex offers a full complement of German government fixed-income products including 30-year EURO-Buxl® Futures, 10-year EURO-Bund Futures, 5-year EURO-Bobl Futures, and 2-year EURO-Schatz Futures, as well as options on those futures products. The "Euro" in the names of those products refers to the fact that German government bonds are now denominated in euros rather than in deutschemarks, as they were prior to European Monetary Union in 1999. In the fixed-income complex, the Eurex also offers 10-year EURO-BTP Italian Government Bond Futures and Swiss Confederation Bond Futures.

European government bond prices are driven by a variety of factors including inflation expectations, ECB monetary policy, and the supply of bonds sold by the government, among others. Short-term bond yields such as the 2-year yield are tied more closely to the ECB's policy target rates. Longer-term 10-year yields, on the other hand, are driven more by inflation expectations. The spread between the 10-year and the 2-year German government bond yields is shown in the chart at the bottom of the page. This spread, which is one way of defining the steepness of the yield curve, can be traded with Eurex futures products. The German 10-2 yield curve spread currently remains very steep at about 160 basis points because the ECB continues to peg short-term rates at a very low level in order to deal with the aftermath of the 2008/09 financial crisis and the ongoing European debt crisis.

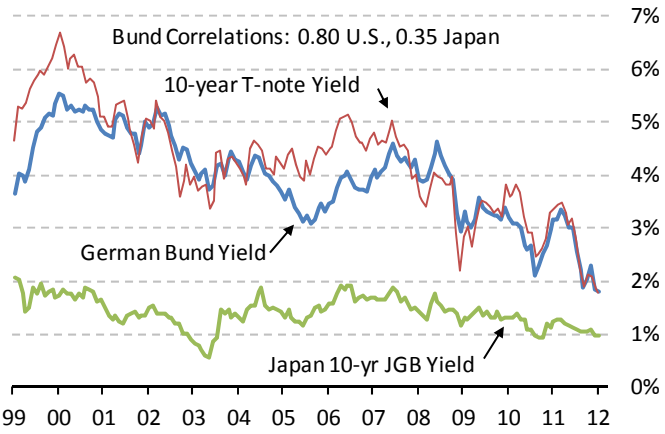
The middle chart on the right shows how the German 10-year yield has tracked the U.S. 10-year T-note yield fairly closely in recent years due to the similarity of the European and U.S. business cycles and of ECB and Federal Reserve monetary policy. The chart also shows how the Japanese 10-year JGB yield has been far below the German yield in the past decade because the Japanese economy continues to experience sub-par economic growth and deflation threats. The German 10-year government bund yield has shown a correlation based on monthly returns of 0.80 with U.S. T-note yields since 1999 and a correlation of 0.35 with Japanese 10-year JGB yields.

The chart at the top of the page shows how German 10-year EURO-Bund Futures prices have rallied sharply since late-2008 when the global financial crisis began with the bankruptcy of Lehman Brothers in September 2008. German 10-year EURO-Bund Futures prices rallied sharply in 2011 due to the eurozone debt crisis, the weak eurozone economy, modest core inflation pressures, and the ECB's extremely easy monetary policy.

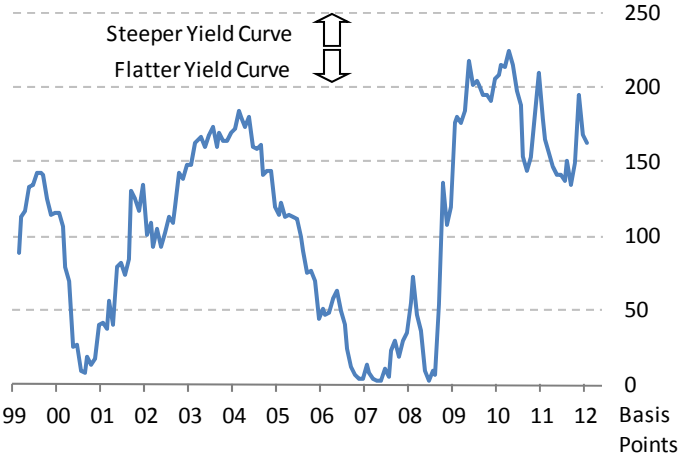
Eurex German 10-yr EURO-Bund Futures Prices



German 10-yr Bund Yield vs U.S. and Japan Yields



German 10-year Minus 2-year Gov't Yield Spread



Eurex EURO-BTP Italian Bond Futures

Eurex's EURO-BTP Italian Government Bond Futures contract calls for the delivery of the sovereign bonds of Italy with a remaining maturity of 8.5 to 11 years and an original term of no more than 16 years. EURO-BTP Futures have a contract value of 100,000 euros and a coupon of 6%.

The Italian government bond yield typically trades at a premium above the German yield because Italian bonds are perceived by the market to have higher risk than German bonds. The chart in the middle on the right provides an overlay of German and Italian 10-year bond yields. German government bond yields are typically the lowest in the eurozone because of the size of the German economy and the German government's reputation for fiscal rectitude relative to most of the other countries in the eurozone.

The chart at the bottom of the page shows how the spread of the Italian 10-year bond yield has soared above the German yield in the past three years due to the financial crisis and Italy's poor budget situation. This German-Italian spread can be traded with the Eurex EURO-Bund and EURO-BTP Futures contracts.

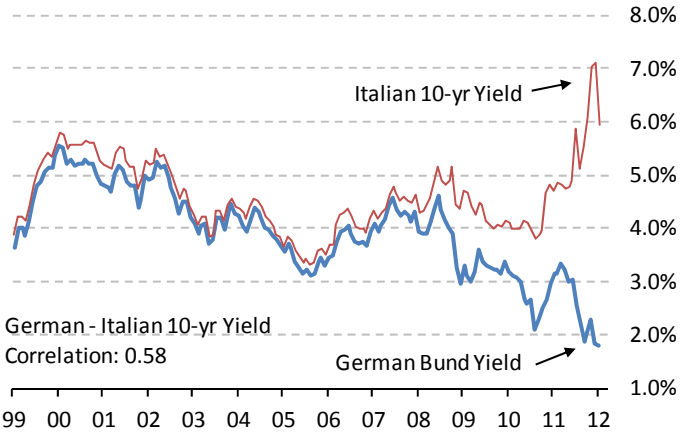
The European Commission reported Italy's budget deficit in 2010 at 4.6% of GDP, which was larger than Germany's deficit of 4.3%. Moreover, Italy already carries much more cumulative debt than Germany, which increases the risk of default. The European Commission reported Italy's cumulative government debt through the end of 2010 at a very hefty 118% of GDP, the second highest in the eurozone behind Greece at 145%. By contrast, Germany's cumulative government debt through 2010 was significantly lower at 83% of GDP. The risk on Italian bonds is also higher than on German bonds because the Italian economy has been weaker than Germany's economy. The market consensus is that Italy's GDP in 2012 will fall by –1.2% versus expectations for +0.2% GDP growth for Germany.

The higher risk attributed to Italian bonds can also be seen in the current 5-year credit default swap (CDS) price of 410 basis points for Italy, which is more than four times higher than the German CDS price of 87 basis points. The credit default swap price indicates the cost of insuring sovereign bonds against default.

EURO-BTP Italian Government Bond Futures Prices



German vs Italian 10-year Government Bond Yields



Italian Minus German 10-Year Gov't Bond Yield



In terms of credit ratings, Germany has the top AAA rating for its long-term debt from all of the rating agencies. Italy, on the other hand, has a long-term debt rating of BBB+ from Standard & Poors, which is only two notches above the BBB– level that is considered the lowest investment grade rating.

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