

Europe

Strategy Matters

Portfolio Strategy Research

Testing equity valuations part 1: Is the low bond yield deceiving us?

The gap between dividend yields and real bond yields is close to a forty-year high in Europe and the equity risk premium is close to its highs. This makes equities look attractive. But, compared with history an unusually large part of this is driven by the very low level of nominal bond yields on the back of QE and the European political situation. We argue that the risk/reward of European equities still look attractive on a 12-month horizon when we adjust for the level of bond yields while it is more balanced on a three-month horizon.

Equities still have upside to fair value on current earnings...

One concern often mentioned is that even though equities look attractive relative to bonds, this might be simply because bond yields are very low and not because equities are attractive in their own right. The table below shows that upside potential to fair value for the Stoxx 600 remains across a number of scenarios for rising bond yields. Relative to current bond yields the upside is 21%; If we include bond yields in the periphery in our estimates the upside is 7%; Increasing bond yields all the way to fair value would lower the upside to 4%. This upside is relative to fair value on *current earnings* and would rise over time as the base level of earnings increases.

...and look attractive on a 12-month horizon

In our view, European equities look attractive on a stand-alone basis for investors with at least a one-year horizon, whereas the risk/reward is more balanced on a three-month horizon. We argue that current valuations offer some degree of cushion against tail risks, which admittedly remain high. We estimate a 14% chance that the real total return will be minus 10% or worse over the next 12 months. This is below the historical average risk of 19%.

Allowing for higher bond yields leaves upside potential for equities

Upside to fair value on current earnings for bond yield and ERP scenarios					
ERP		Bond Yield		Stoxx 600	
Scenario	Level (%)	Scenario	Level (%)	Fair Value	Upside (%)
Cyclically adjusted	7.2	Current	1.5	329	21
Cyclically adjusted	7.2	Local bond yields	2.1	289	7
Cyclically adjusted	7.2	Cyclically adjusted	2.2	283	4
Normalised	3.5	Normalised	5	342	26

Source: Datastream, Haver Analytics, Goldman Sachs Global ECS Research estimates.

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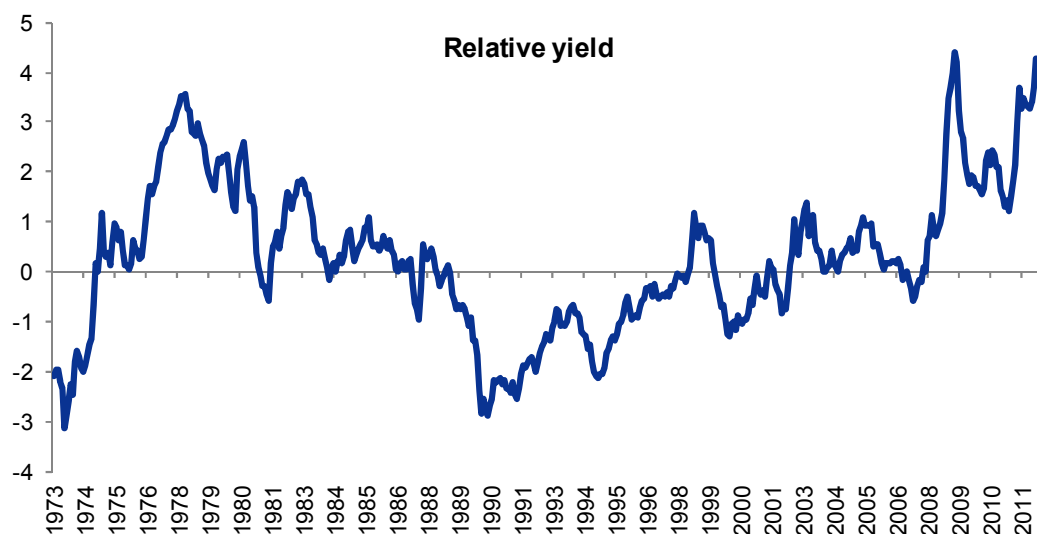
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Forecasting returns when bond yields are low

The gap between the dividend yield on European equities and the German 10-year real bond yield is very close to a 40-year high (Exhibit 1). This signals strong prospects for equities for long-term investors, in our view. We articulated this view in our March 21, 2012 *GOAL – Global Strategy Paper No. 4: The Long Good Buy; the Case for Equities*. We also see potential for equities to outperform corporate credit in the medium term as outlined in our September 27, 2012, *Strategy Matters* report.

Exhibit 1: The relative yield in Europe is close to a 40-year high.

The relative yield is the difference between the dividend yield and the real bond yield, where we define the real bond yield as the difference between the 10-year nominal German bond yield and 10-year historical average German inflation.

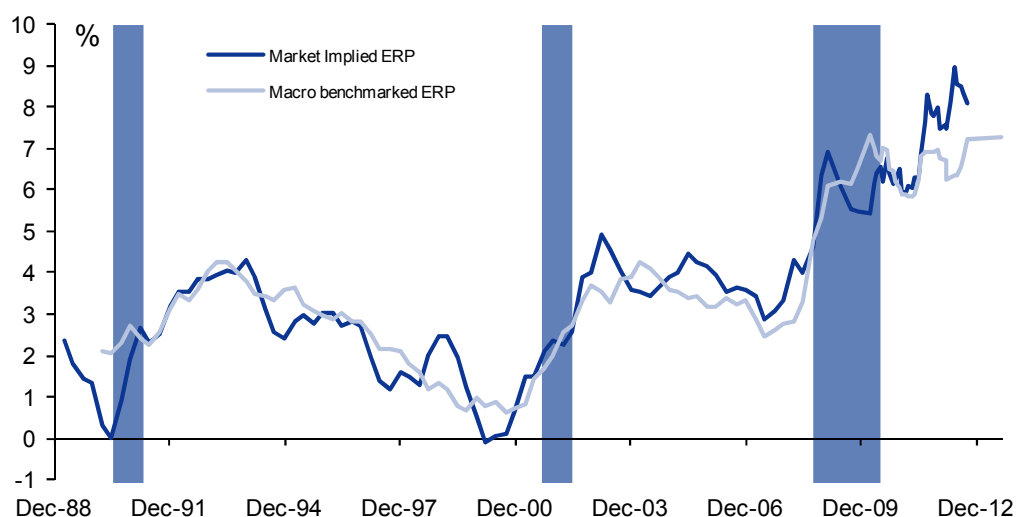


Source: Datastream, Haver Analytics, Goldman Sachs Global ECS Research.

The large yield gap reflects that the risk premium priced in European equities remains close to its historical highs. The risk premium implied by the market is not only high in an absolute sense but also 90 bp above our macro benchmarked ERP. We think of the macro benchmarked ERP as a cyclically adjusted ERP measure capturing where the ERP should be given the current state of the economy (Exhibit 2).

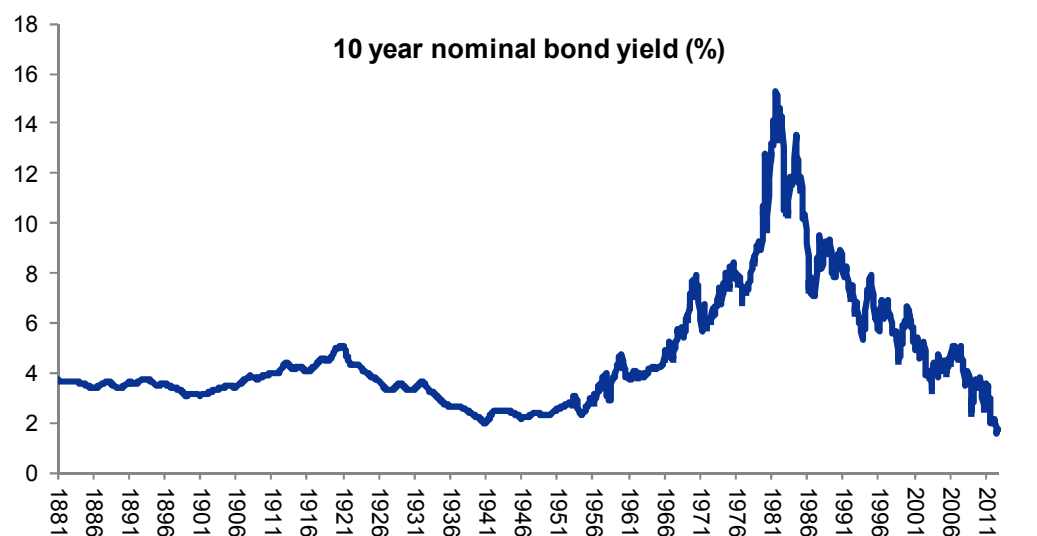
While these measures of valuations are supportive for equities, an unusually large part of their high levels is driven by the very low levels of current bond yields. In this report we analyze whether the support for equities remains, once adjustments are made to take into account the current low yield environment. We argue that the risk/reward for equities remains attractive on a 12-month view, whereas it is more balanced over shorter horizons.

This report is the first of a three part series where we analyze the key challenges to the valuation case for equities. The second part will look at relative returns between equities and bonds in a low yield environment, and the third part will look at the use of cyclically adjusted P/E's in the aftermath of the financial crisis.

Exhibit 2: The market-implied ERP remains 90 bp above our macro benchmarked ERP

Source: Goldman Sachs Global ECS Research.

To illustrate how extreme the current bond yield environment is, Exhibit 3 shows that 10 year nominal bond yields in the US over the last few months have been at their lowest levels for the last 130 years. In Germany we only have a 40-year history, but are close to the lows of 1.17%, and the UK markets are trading close to the 300-year low of 1.52%.

Exhibit 3: US 10-year nominal bond yields around their lowest level for the last 130 years

Source: Robert Shiller data, Goldman Sachs Global ECS Research.

One concern in this context is that our risk premium measure is calculated relative to a weighted average of German (75% weight) and UK (25% weight) 10-year government bond yields, whereas the Stoxx Europe 600 also contains many companies from the periphery, which currently has much higher bond yields.

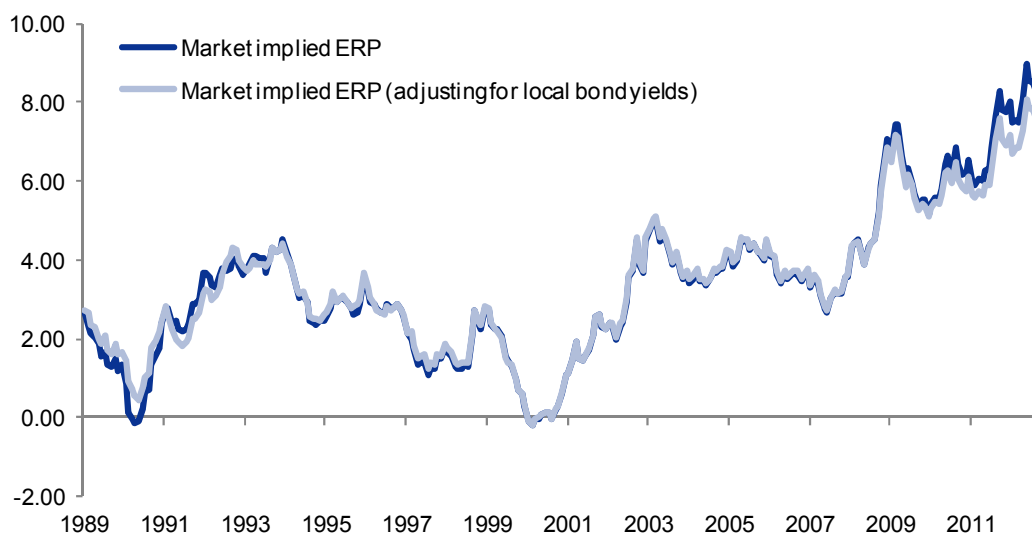
We think that the weighted average of German and UK yields is the right benchmark to use, as government bonds in the periphery currently have high yields exactly because they are

not considered risk free by investors and therefore should not be part of a risk free benchmark.

However, it is still interesting to know to what extent the high equity risk premium that we measure is due to our choice of risk free rate. **To address this, Exhibit 4 shows a comparison over time of our market-implied ERP (the same as in Exhibit 2) and an alternative measure of the market implied ERP, which is based on a weighted average 10-year bond yield, where the weight of each country's bond yield is the share of that country's equity market in the European equity index.**

The gap between these two measures is now close to all-time highs, but at 62 bp it is still small in the context of the overall ERP.

Exhibit 4: The impact on the ERP of including peripheral bond yields is small

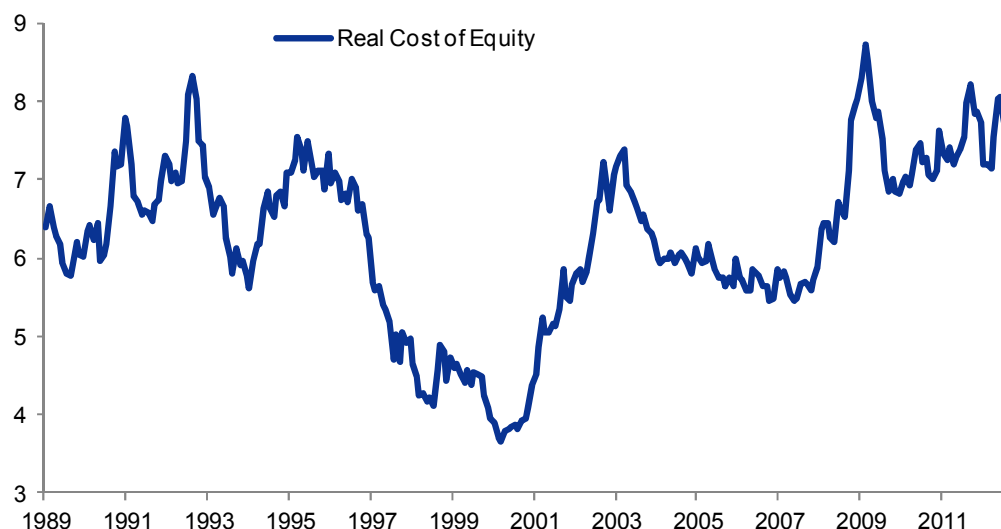


Source: Goldman Sachs Global ECS Research.

Another way to adjust for the low bond yields is to focus on the overall real cost of equity¹ instead of the equity risk premium. Exhibit 5 shows that the real cost of equity normalised somewhat during the rally over the summer, but at 7.36% it remains more than 100 bp above the 6.24% average seen since 1989.

¹ We define the real cost of equity as the ERP + 10-year nominal bond yield – 10-year historical average inflation.

Exhibit 5: The real cost of equity discounted by the market is close to its high since 1989
 Real cost of equity estimated using our GS DDM model².



Source: Goldman Sachs Global ECS Research.

To assess the upside potential for equities relative to current earnings given the bond yield environment, we look at four scenarios in Exhibit 6.

- **Cyclically adjusted ERP and current bond yield:** This scenario assumes that bond yields stay at current levels while the market implied ERP in Exhibit 2 declines to a level consistent with our cyclically adjusted (macro benchmarked) measure of where it should be in the current economic environment. This gives 21% upside potential.
- **Cyclically adjusted ERP and local bond yields:** As mentioned earlier, part of the high ERP is because it is measured against low German and UK bond yields. To address this we assume that the right bond yield to use is instead a weighted average of the local bond yields, where the weight of each country is the share of that country's equity market in the European equity index. This is the weighting that we used in Exhibit 4. We still assume that the ERP moves to the cyclically adjusted (macro benchmarked) level. This gives 7% upside potential.
- **Cyclically adjusted ERP and bond yield:** Another way to address the low bond yields is to assume that as the ERP moves to its cyclically adjusted (macro benchmarked level), bond yields should also adjust to their cyclically adjusted fair value. We use our bond strategists' Sudoku model to assess this level. This gives 4% upside potential.
- **Normalisation:** Whereas we believe the other scenarios are all reasonable estimates of where equities could trade now, *this scenario looks at where equities could trade on current earnings if macro conditions were normalised*. The upside potential in this scenario should therefore be thought of as a measure of the pressure that current economic conditions put on the market's willingness to pay for current earnings. We think of a normalised ERP as being somewhere in the range of 3.0% – 3.5 % and a normalised level of 10-year interest rates as being in the range of 4.5% – 5.0%. The table below uses the most conservative ends of these ranges: 3.5% ERP and a 5%

² See our February 6, 2009 report *Finding 'Fair Value' in Global Equities; Part 1* and our March 23, 2009 report *Forecasting returns: 'Fair Value' Part II* for details on our GS DMM model.

interest rate. This gives a real cost of equity of 6.3%; very close to the 6.24% long-run average from Exhibit 5. The upside potential in this scenario is 26%.

Together, these scenarios show that if equity markets were to normalise their link to bond markets, while bond yields remained at current levels, the upside potential would be substantial. Conceptually, this captures a situation in which the current supportive factors of bond markets flow through to equity markets as well. This is clearly more likely in a scenario whereby QE eases broad financial conditions than in a scenario where low bond yields reflect a flight to quality due to European political concerns. The equity market would be close to fair value if both the ERP and bond yields were to return to their current macro underpinnings, but longer term, as we approach a more normalised environment, the valuation upside potential remains substantial.

Of these scenarios we see the cyclically adjusted scenario as the most likely in the near term and the normalised scenario as the most likely in the very long run, as it is likely to be the same factors which have pushed both the ERP and bond yields away from their fair values on both a cyclically adjusted and long run normalized basis.

Exhibit 6: Allowing for higher bond yields leaves upside potential for equities

Upside to fair value on current earnings for bond yield and ERP scenarios					
ERP		Bond Yield		Stoxx 600	
Scenario	Level (%)	Scenario	Level (%)	Fair Value	Upside (%)
Cyclically adjusted*	7.2	Current**	1.5	329	21
Cyclically adjusted	7.2	Local bond yields***	2.1	289	7
Cyclically adjusted	7.2	Cyclically adjusted****	2.2	283	4
Normalised	3.5	Normalised	5.0	342	26

*We use our macro benchmarked ERP as our measure of a cyclically adjusted ERP

**This is a weighted average of the UK 10 year gov. bond yield (25%) and the German 10 yr. gov. bond yield (75%)

***This is an average of local European gov. bond yields weighted by the country weight in the European equity market

****This uses fair value estimates of UK and German 10 year gov. bond yields from our Sudoku fair value model

Source: Goldman Sachs Global ECS Research estimates.

To give an idea about the sensitivity around these measures of fair value, Exhibit 7 shows a sensitivity analysis of the fair value for the Stoxx Europe 600 on current earnings for different levels of the bond yield and the ERP.

It is important to emphasise that the fair values in both our scenarios and our sensitivity analysis are measured relative to current earnings. Over time, equities could therefore prove a good investment even if they currently traded at fair value, as the base level of earnings grows and dividends are accrued. With the equity market trading on fair value, it should in the long run deliver a return in line with the cost of capital, which in our normalisation scenario is 8.5% per year.

Exhibit 7: The potential upside from normalisation of bond yields and the ERP is high

Fair values from GS DMM for Stoxx Europe 600 based on current earnings, and different levels of the ERP and a weighted bond yield with 75% weight on the German 10-year bond yield and 25% weight on the UK 10-year bond yield

		Equity Risk Premium										
		2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%	6.5%	7.0%	7.5%
Nominal risk-free rate	0.5%	4493	2630	1802	1338	1044	843	698	589	505	439	386
	1.0%	2630	1802	1338	1044	843	698	589	505	439	386	342
	1.5%	1802	1338	1044	843	698	589	505	439	386	342	305
	2.0%	1338	1044	843	698	589	505	439	386	342	305	275
	2.5%	1044	843	698	589	505	439	386	342	305	275	249
	3.0%	843	698	589	505	439	386	342	305	275	249	227
	3.5%	698	589	505	439	386	342	305	275	249	227	208
	4.0%	589	505	439	386	342	305	275	249	227	208	192
	4.5%	505	439	386	342	305	275	249	227	208	192	177
	5.0%	439	386	342	305	275	249	227	208	192	177	164
	5.5%	386	342	305	275	249	227	208	192	177	164	153

Cyclically adjusted valuation scenario

Normalisation scenario

Source: Goldman Sachs Global ECS Research estimates.

The current upside potential has to be judged against the risks. Tail risks from the European sovereign situation remain, even though the ECB's OMT programme represents a significant step forward in limiting them. The US fiscal cliff also remains a major concern, especially in the near term.

However, we think it is important that the current valuation offers a significant cushion against these risks, especially for investors with at least a one year investment horizon. In our October 17, 2011 report *Measuring risks: Valuation vs. Volatility Part 1*, we argued that valuation was at least as important a signal as current realised volatility about the risk of future poor investment outcomes. Exhibit 8 estimates the risks of a total return of minus 10% or worse for European equities over a one-year investment horizon. **Given the attractive dividend yield, this risk is now estimated at 14%; significantly below its long-run average of 19%.** This estimate is based on the historical relationship between loss events of this size over a 12-month investment horizon and the dividend yield and 2-month realized volatility at the point of initiation of the 12 month investment horizon.

There is clearly a risk that the European sovereign situation results in an extremely poor outcome for European equities, and the risk of such an outcome is therefore probably higher than normal. However, the analysis in Exhibit 8 suggests that the risk of poor, but not catastrophic, outcomes is not particularly high.

Given this, and the upsides estimated in Exhibit 6, we consider European equities attractive for investors with a 12-month investment horizon. On a three-month horizon, however, the risk/reward looks much more balanced.

Exhibit 8: Valuation and volatility signal a low risk of a real loss of more than 10% for a one-year investment horizon in European equities

Estimated probability of a loss of more than 10% in real total return terms from an investment in European equities with a 12-month horizon, based on the current dividend yield and the 2-month realised level of volatility

			<div>→</div> 2 month realised volatility							
Level			6.7	7.4	8.6	11.2	12.3	20.7	27.4	
%tile			0.05	0.10	0.25	0.50	0.58	0.90	0.95	Dif.
<div>↓</div> Dividend yield	2.1	0.05	0.36	0.37	0.38	0.41	0.42	0.50	0.56	0.20
	2.4	0.10	0.29	0.29	0.30	0.33	0.33	0.41	0.48	0.19
	2.9	0.25	0.21	0.21	0.22	0.24	0.25	0.32	0.38	0.17
	3.4	0.50	0.13	0.13	0.14	0.15	0.16	0.21	0.26	0.14
	3.6	0.54	0.11	0.11	0.12	0.13	0.14	0.19	0.24	0.13
	5.0	0.90	0.02	0.02	0.02	0.02	0.02	0.04	0.06	0.04
	5.3	0.95	0.01	0.01	0.01	0.02	0.02	0.03	0.04	0.03
Dif.			0.35	0.36	0.37	0.39	0.40	0.47	0.52	

Source: Goldman Sachs Global ECS Research estimates.

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Reg AC

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