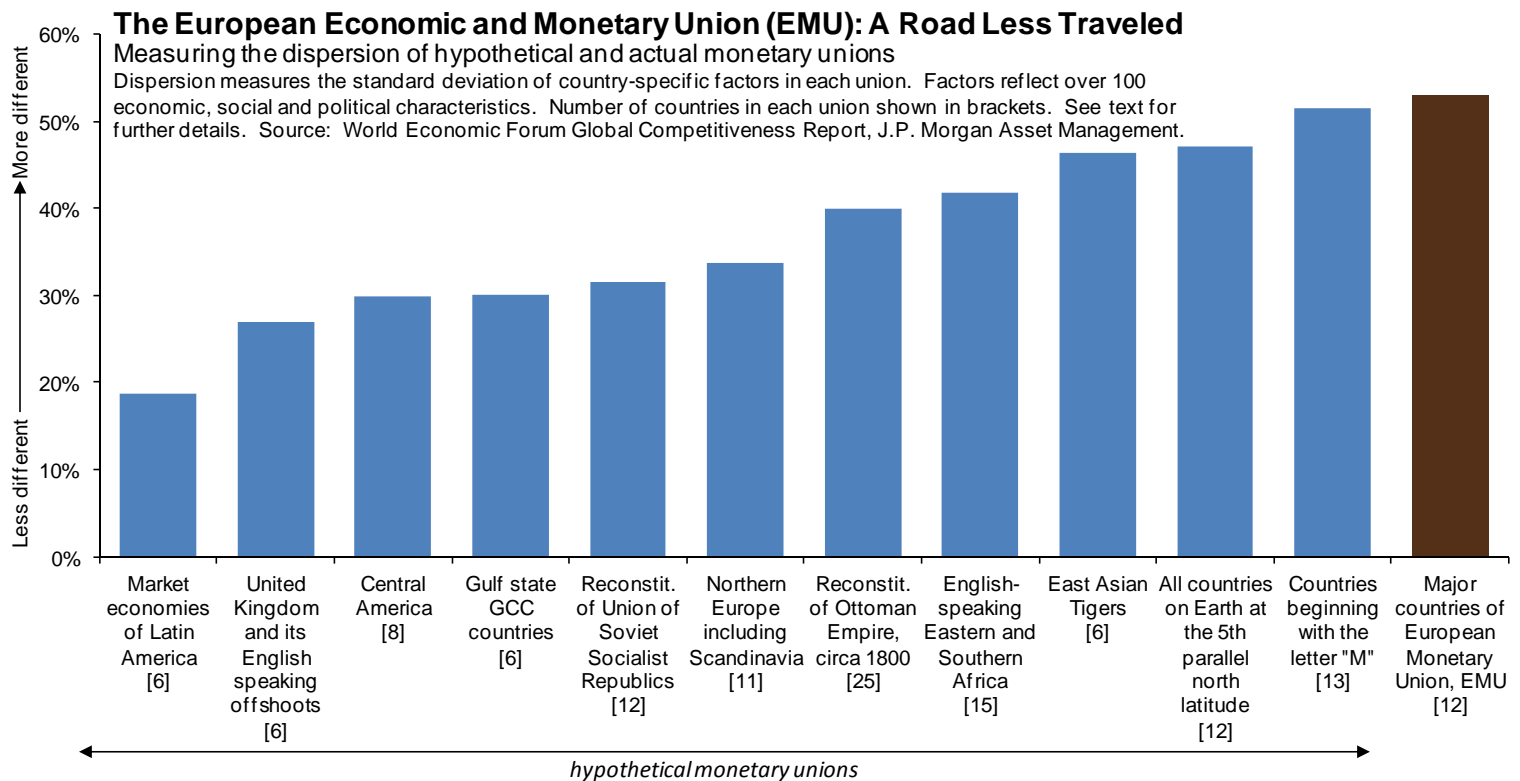


Topics: how lonely a road is Europe traveling; Graham-Dodd and Shiller US equity valuation measures; casual reading

Europe and the road less traveled. As we wait for the next round of fiscal transfers from North to South, European Central Bank rescue operations, IMF firewall expansions, foreign capital flight, deferral of tighter bank capital standards, elections, Bundesbank resignations, protests, rising unemployment and generally miserable economic data in the European Periphery, it's worth remembering something broader about what Europe is up to. There is no small amount of economic hubris associated with the European monetary project, and the chart below shows why. Multinational monetary unions are rare (*see Appendix*). Some regions debate adopting them, like the Persian Gulf, but decide not to, preferring to retain independent monetary policy. Europe went ahead anyway, despite large differences between member countries. Just how different? **Countries in the European Monetary Union are more different than just about any other monetary union you could imagine:**



What does this chart show?

- The best way I know of to compare countries is via the World Economic Forum Global Competitiveness Report. This compilation rates 142 countries on over 100 factors related to labor and goods market efficiency; government institutions (property rights, corruption); macroeconomic soundness (debt, deficits); health and education; business sophistication (local supplier quality/quantity); and capacity for innovation (quality of scientific research institutions, R&D spend, patent grants).
- Using this raw data, I imagined what other monetary unions might exist, and how different their constituents would be. The chart shows the country dispersion for hypothetical unions comprised of the UK and its English-speaking offshoots (US, Can, Australia, Ire, NZ); and of countries in Central America, Latin America, the Gulf, Northern Europe, Africa and Southeast Asia (*see Appendix for details*). **All of these hypothetical monetary unions have lower country dispersion measures than the European Monetary Union. And yet, these regions have resisted the temptation to form one.**
- I even reconstituted the old Soviet Union by combining the Russian Federation with 11 former republics, and the Ottoman Empire, by combining 25 countries which now inhabit its 18th century borders. I also added a random monetary union comprised of the 12 countries on Earth located at the latitude of the 5th parallel (north), and another union comprised of the 13 countries on Earth whose names start with the letter "M". Even these groupings exhibited less dispersion than the EMU.

And still, Europe soldiers on, even as the rest of the world avoids monetary union in circumstances more favorable to it. **What remains are political questions regarding how much inflation and fiscal transfer Germany can sustain; if a true fiscal union can be created, seen by some as indispensable to the Euro's future (see Bordo 2011); and how much austerity countries like Spain can take.** As this is a road less traveled, it's hard to know how it will turn out. It's a tough road, and the chart helps explain why. Europe's problem is not just one of public sector deficit spending differences, but also of deeper, more fundamental differences across its various private sector economies. Whether it's equities, credit or real estate, EMU valuations need to be considerably more attractive than US counterparts to justify investment given the challenges of the European project.

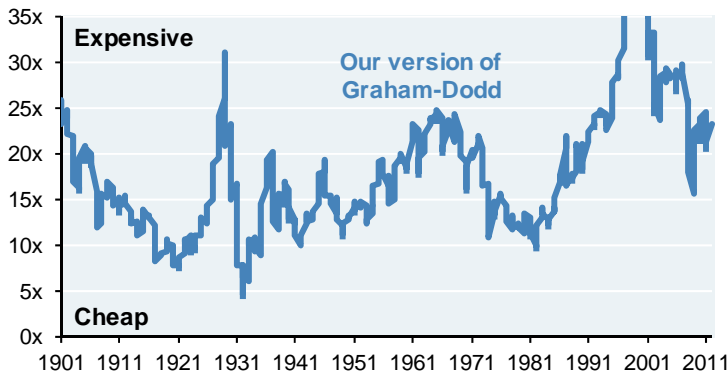
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US equity valuations: how do Graham-Dodd and Shiller P/Es work, what are the inherent assumptions?

Despite all the numbers, equity valuation is more art than science. There are a lot of different tools that investors use, and I find that there's room for many of them, as long as you know what's inside. Some clients have asked me about the Graham-Dodd approach to equity valuation, and the implication that S&P 500 earnings are now expensive relative to history. Graham-Dodd uses smoothed, backward-looking earnings to value the market, rather than current or forward earnings estimates. The idea is to capture the earnings power of a given market and also dampen business and economic cycle noise. Chart I is our take on the Graham-Dodd model, using a 10 year lookback. Chart II also shows the Robert Shiller approach, which generates similar results.

S&P 500 Price-to-10 year average reported earnings

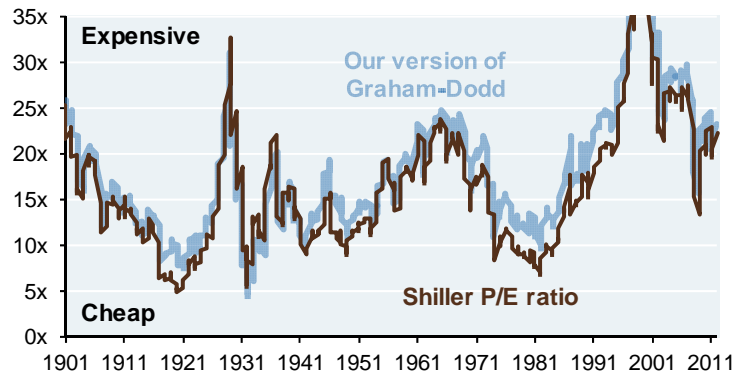
Chart I, Multiple



Source: Robert J. Shiller, Standard & Poor's.

S&P 500 Price-to-10 year average reported earnings

Chart II, Multiple



Source: Robert J. Shiller, Standard & Poor's.

There are 2 assumptions inherent in these models that are worth thinking about:

- What's the best way to compare multiples across time when inflation has been so different?
- What are the implications of using the last ten years as a proxy for the future?

On the first point, note that the lowest post-war P/E multiples occurred during the 1970's, when inflation was high. This makes some sense, since I would presumably pay a lower multiple for a given earnings stream if inflation were much higher¹. When inflation is lower, earnings are worth more to me, so I would pay a higher multiple for them, as long as there is no risk of outright deflation. To adjust for inflation, we adopt an approach used by Empirical Research Partners, and invert the P/E ratio in Chart I into an earnings yield (Chart III). The benefit of an earnings yield is that we then can subtract inflation to derive a "real earnings yield required by the market" (Chart IV). After doing so, current valuations do not appear as expensive as in Chart I.

The bottom line: the vantage point of history looks very different if you assume that inflation changes your required return for investing in equities.

Nominal S&P 500 10-year trailing earnings yield

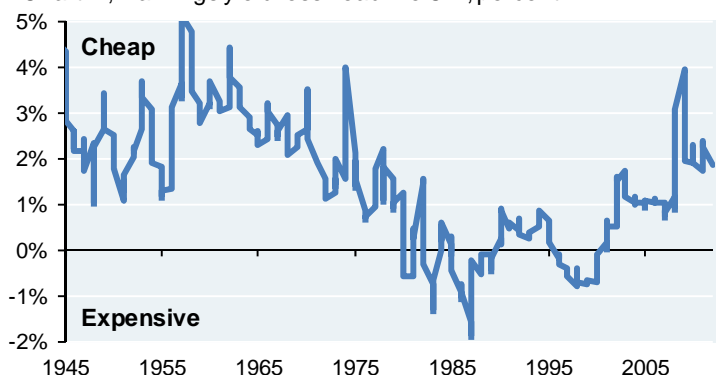
Chart III, Percent



Source: Robert J. Shiller, Standard & Poor's.

Real S&P 500 10-year trailing earnings yield

Chart IV, Earnings yield less headline CPI, percent



Source: Robert J. Shiller, Standard & Poor's, Empirical Research Partners.

¹ One reason P/E multiples are often lower when inflation is high: inventories cannot be replaced at historical cost, rendering income statements less reliable.

Topics: how lonely a road is Europe traveling; Graham-Dodd and Shiller US equity valuation measures; casual reading

On the second point, when using backward-looking models, consider what you are looking at. Such models (particularly those linked to credit markets) performed miserably in 2007, since it had been 17 years since the last consumer-led recession, and the preceding market history did not show any signs of stress. Similarly, it is worth wondering if the last 10 years of earnings history is a good proxy for the future. As shown below in Chart V, there have been plenty of sharp earnings declines since 1873. But the most recent one outstripped anything we have seen before; one does not have to be a Pollyanna to assume that future earnings declines would probably be more like the ones that preceded it.

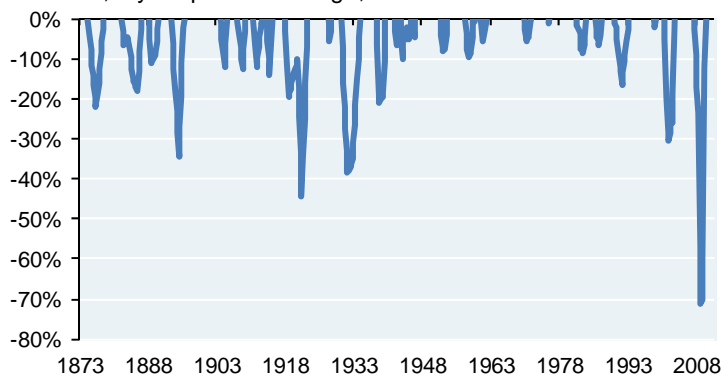
Furthermore, keep in mind that the S&P 500 is a dynamic index. Since the year 2001, almost half the index (240 companies) has been dropped and replaced. Notable deletions: Lehman, General Motors, Bear Stearns, Washington Mutual, Wachovia, Circuit City, Merrill Lynch, AMBAC, Fannie Mae, CIT Group and MBIA (amazingly, AIG is still in there). As a result, the earnings capacity of *current* S&P 500 constituents is likely to be more resilient than the *actual* S&P constituents over the last decade, particularly since the S&P weight to highly-leveraged financials has declined from 22% in 2007 to 14%.

One final issue: *reported* vs. *operating* earnings. I understand the desire by many investors to value the market based on reported earnings rather than higher-level operating earnings, given how some companies dump a lot of quasi-operating items below the line. But over the last decade, reported earnings have fallen to a record low of 83% of operating earnings. I think it is reasonable to assume that this ratio returns to something like 88%.

So, let's bring back the Graham-Dodd 10-year backward-looking P/E ratio from Chart I, and make some adjustments. The red dot in Chart VI shows our Graham-Dodd P/E after: (a) using the current S&P 500 constituency rather than the historical one to derive average earnings; (b) assuming that the 2008-2009 earnings recession was only as severe as the worst earnings recessions from 1873 to 2002; and (c) using a reported-to-operating earnings ratio of 88%. After doing so, backward-looking valuations look more or less in line with the historical average multiple.

S&P 500 reported earnings drawdowns

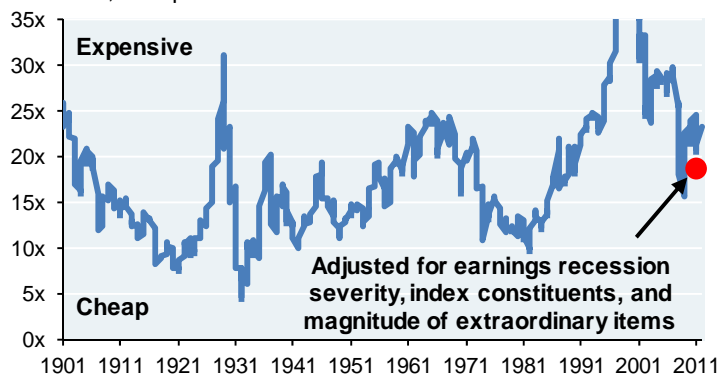
Chart V, 2-year percent change, annualized



Source: Robert J. Shiller, Standard & Poor's.

S&P 500 Price-to-10 year average reported earnings

Chart VI, Multiple



Source: Robert J. Shiller, Standard & Poor's, J.P. Morgan Asset Management.

This is a lot of adjusting, and each step can be strenuously debated. If you believe that the prior decade is a good template for the future, then the Graham-Dodd chart should probably not be tinkered with. I am not sure this is such a good assumption. We have concerns about the reliance of earnings on easy monetary policy, and on the degree to which the lowest wage compensation in decades is flattering profits. But after the largest technology, credit and housing bubbles in US history, I am prepared to assume it will take a while before the public and private sector conspire to repeat them. If so, the less-traveled road of two severe earnings recessions over the last decade may have less relevance, and a Graham-Dodd approach may modestly underestimate the run rate of future earnings. After another quarter of decent S&P profits in Q1 2012, we remain much more concerned about US public sector dynamics than private sector ones. Hence, this week's casual reading recommendation...

Casual reading. Our firm's chairman and CEO Jamie Dimon held a session last week at which members of Congress, corporate CEOs and members of the Committee For a Responsible Federal Budget discussed the long term deficit outlook and the US economy. We prepared a brief paper on the market implications of US debt dynamics for this gathering. If you would like to see a copy, please contact your J.P. Morgan team.

Michael Cembalest
J.P. Morgan Asset Management

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Some notes on the Monetary Union chart and associated topics

- “Major countries of the EMU” include Germany, France, Italy, Spain, Netherlands, Greece, Belgium, Portugal, Austria, Slovakia, Finland and Ireland. This group accounts for 98.5% of Eurozone population and GDP. Excluded to avoid small-country distortions: Slovenia, Estonia, Cyprus, Luxembourg and Malta. When they’re included, the results are similar. Results are also similar when Greece is excluded; the dispersion in Europe is not just about Greece.
- Some of Europe’s higher dispersion scores relate to the link between pay and productivity (#7.06); the efficiency of the legal system in settling disputes (#1.10); anti-monopoly policy (#6.03); wastefulness of government spending (#1.08); judicial independence (#1.06) and quality of scientific research (#12.02).
- “Market Economy of Latin America” is a category that excludes Venezuela and Argentina for reasons we can discuss some other time. If you owned shares in companies that were nationalized in either country, you know what I am talking about.
- In the 1860’s, Belgium, Italy, Switzerland and France created the Latin Monetary Union. Greece (!) formally joined in 1876, but was expelled in 1908 for currency debasement. Among the reasons the LMU failed: a glut of silver reduced the value of LMU coins relative to gold, and the LMU did not control the printing of paper money, forcing some countries to finance higher spending of other members (Italy). The LMU ended in practice with the onset of WWI and the need to finance military expenditures with paper money.
- Sweden, Denmark and Norway created the Scandinavian Monetary Union in 1873, which functioned well in both political and economic terms until member countries suspended convertibility at the beginning of WWI. The most successful monetary union in European history appears to be one between Belgium and Luxembourg, which lasted from 1922 until Euro integration in 1999. In both cases, member countries were in an economic sense **much more homogenous** than in the Latin Monetary Union or today’s EMU.
- 120 million people in 8 French-speaking West African countries have been using the CFA Franc for more than half a century. The CFA Franc is pegged to the Euro, and France guarantees its convertibility in exchange for holding ~50% of the region’s foreign exchange reserves. Some analysts believe the CFA Franc is overvalued, creating incentives for perpetual capital flight, and advantageous terms for French exporters selling goods into West Africa. Studies I have seen suggest that CFA membership has **hindered growth performance** in CFA members relative to other sub-Saharan countries.
- The microstate islands of the Caribbean have successfully been using a currency union since the establishment of the Eastern Caribbean Currency Union in 1965. Combined population: 616,000.

Sources include: “Does the euro need a fiscal union? Some lessons from history”, Bordo, Jonung and Markiewicz, Apr 2011

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