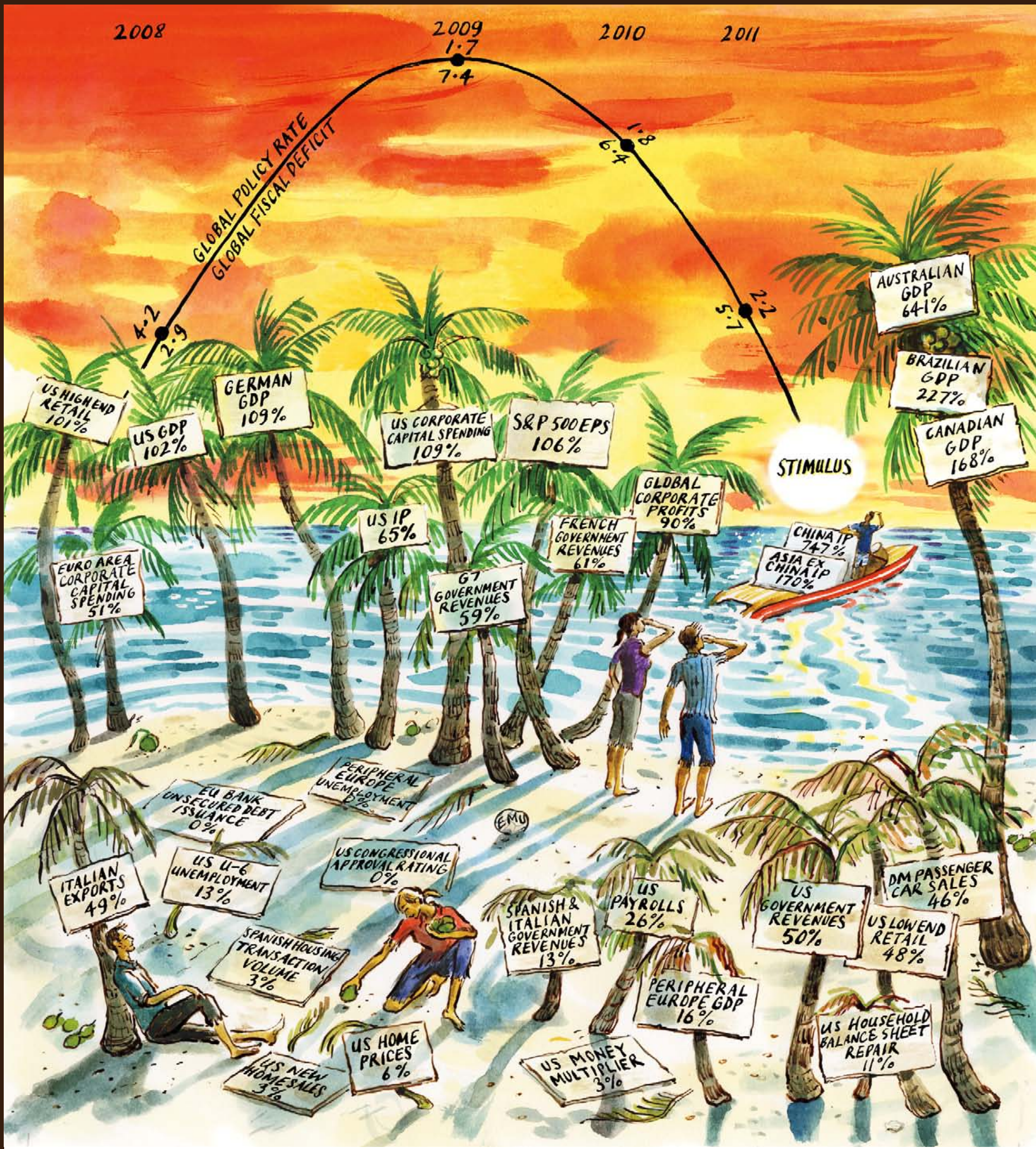
EYE ON THE MARKET

OUTLOOK 2012

J.P. Morgan Private Bank



The post-stimulus economy

2012 marks a transition away from extreme global monetary and fiscal stimulus, as illustrated by the setting sun. The private sector recovery will mostly have to make it on its own from here. The news is better in the US than in Europe or Japan. Asia is expanding, but tighter policy rates are bringing growth back to earth. The height of each tree shows the recovery in each variable relative to its decline during the recession. See inside cover for more details.

J.P. Morgan

In the wake of the recession, a lot of stimulus was added to the global economy. The level of global policy rates and fiscal deficits defines the trajectory of the sun. Fiscal tightening is scheduled almost everywhere for 2012. On monetary policy, while inflation appears to be cresting, this more often prevents planned policy rate increases, rather than ushering in another period of substantial easing. More monetary policy responses in Europe are likely, but they are mostly intended to prevent a collapse of the Monetary Union as banks and governments de-lever.

The height of each tree shows how much each variable has recovered, relative to its prior decline. For example, S&P profits, high-end retail and German GDP have now recovered almost all of what they lost during the recession, while US home prices and European peripheral employment are still close to their post-recession lows. The three comparison points for computing the recovery are the pre-cycle peak; the lowest level of the last four years; and the current value. One exception: US household balance sheet repair is computed as the decline in real per household debt from the peak.

Commodity countries like Canada, Brazil and Australia, whose GDP in aggregate is much larger than Southern Europe, recovered rapidly. The speedboat is Asia, whose production and output suffered only minor declines, and which have long since eclipsed pre-recession levels. However, credit and policy rate tightening have caused a slowdown to the Asian speedboat and the rest of the emerging world, compared to the booming growth rates of 2010. The deflated volleyball is the European Economic and Monetary Union. See sources and definitions at the end of this publication.

MARY CALLAHAN ERDOES
Chief Executive Officer
J.P. Morgan Asset Management

As we turn the page and head into a new year, it is important for us to reflect on the current landscape, and to give you our best thinking on where the world is heading.

The past twelve months were filled with unprecedented events. We witnessed Arab Spring uprisings and subsequent governmental changes, a devastating earthquake and tsunami in Japan, the first ever downgrade of U.S. debt, a continuously evolving European sovereign debt crisis, and the formal conclusion of a near decade-long conflict in Iraq.

Amidst such transformational events around the world, we recognize that our job of sifting through all of this and finding appropriate investment opportunities for the future is even more important. Our Chief Investment Officer Michael Cembalest, in partnership with our investment teams across the world, has created an insightful framework for understanding and assessing the global opportunities and risks that we can expect in the coming year.

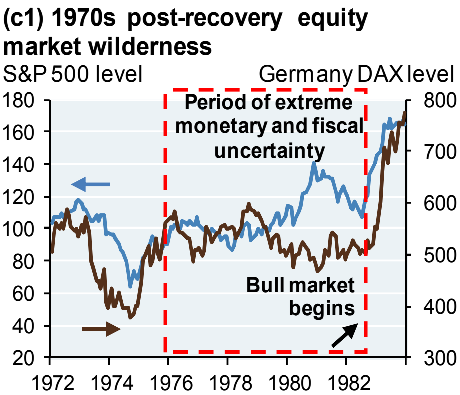
I hope you enjoy the clever cover picture Michael commissioned to capture on one page the progress that has been made (or lack thereof) since the global recession of 2008–2009.

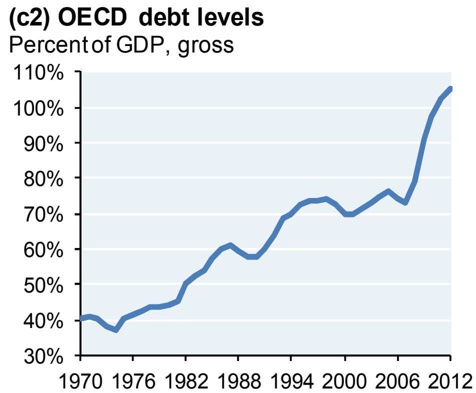
We wish you a healthy and happy new year. And most importantly, we thank you for your continued trust and confidence in J.P. Morgan.

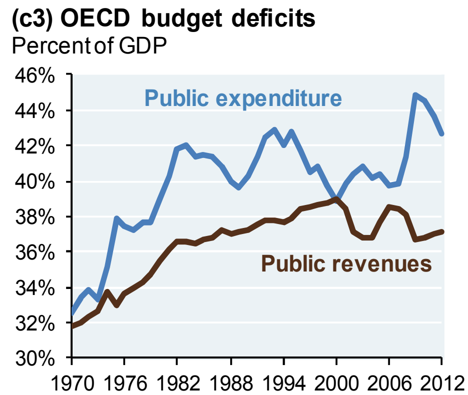
Most sincerely,

Mary C. Erdoes

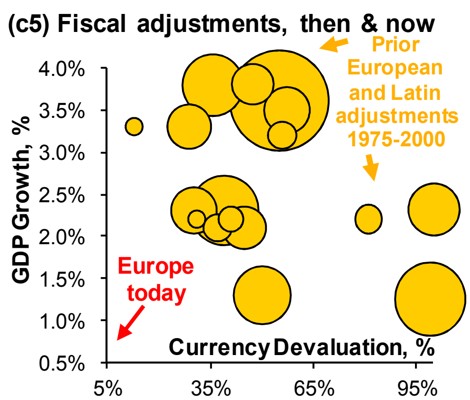
The **Post-Stimulus Economy** isn't all bad (there are as many tall trees on the cover as short ones), but its risks and uncertainties have not declined that much from a year ago. One historical frame of reference we have been using is shown in the first chart: a prior period of monetary and fiscal uncertainty during which markets were volatile, and sideways. The bull market began in 1982 when there was a clear path forward, even though a lot of the prior mess hadn't been completely dealt with. Where are we this time in terms of monetary and fiscal uncertainty? While fiscal deficits are being reined in and household balance sheets are healing, the long-term debt questions of the West remain mostly unanswered as of December 2011 (c2, c3).

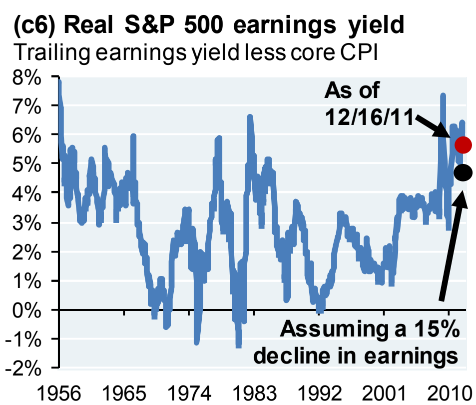






With fiscal stimulus coming to an end and with only modest monetary policy easing in the pipeline (see inside cover for more details), **the private sector will increasingly have to make it on its own**. The US is showing some resilience (c4), while Europe and Asia are showing more signs of a slowdown. The big issue for 2012 will be how deep the European recession turns out to be. Prior sovereign debt crises were almost always solved by a combination of currency devaluation, higher growth and aggressive monetary easing (c5). In contrast, Europe is taking the **path of most resistance**: no growth, no devaluation, lots of austerity and the decision to turn the ECB into a Bad Bank repository.





Equity markets are aware of this, priced as cheaply as they have been in decades (c6). Even assuming a 15% earnings decline*, the S&P 500 would still be priced at the cheap end of history. Factoring in valuation, volatility and the risks (both known and unknown), our equity weightings are modestly lower than normal; the US is our largest regional position, and we remain very underweight Europe. In this document, we walk through our views on Europe, the US and Asia, and our investment priorities for 2012. It's a narrative in pictures; when many things are at their widest extremes in decades (equity valuations, government debt, central bank balance sheets, depressed labor incomes, housing inventory, etc.), pictures are better than words. In the appendix, some thoughts on Iran, and a history of European austerity and its connection to social unrest.

On the December EU summit. The European debt bubble will be unwound more slowly given the decision by the ECB and member central banks to finance just about every asset held by EU banks. Bilateral lending facilities for sovereigns may also be expanded if necessary. The risk of a 2012 Europe meltdown may have melted, but what remains is a slow burn from a recession, a credit contraction and investors possibly selling all they've got to the ECB and other non-economic buyers.

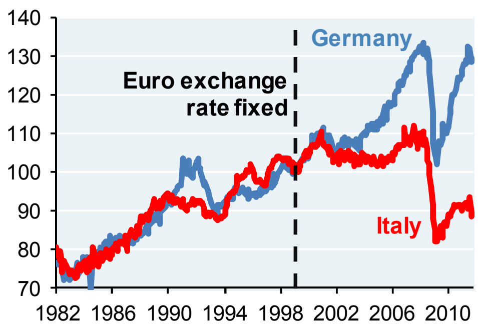
Michael Cembalest
Chief Investment Officer

* In Q4 2011, the percent of negative S&P 500 earnings pre-announcements matched its 2001 and 2008 peak. Another sign: companies reporting before Alcoa beat consensus earnings for the last 9 quarters, while in Q4, they trailed estimates by 2%.

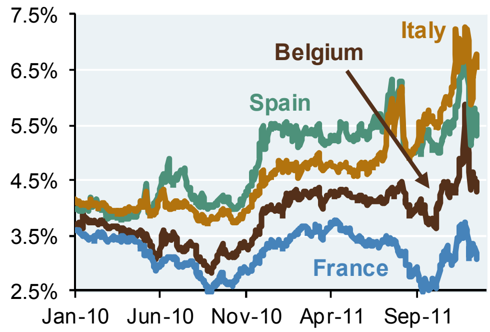
EUROPE: soul-searching into a recession

A year ago, we noted that Jacques Delors (a principal architect of the Euro) said that Europe needed "to find its soul". As of the time of this writing, they are still looking for it. In Delors' latest interview, he conceded that the Euro was flawed from the start. One of our most frequently used charts (c7) shows how: look at the gap in industrial production between Germany and Italy, which began like clockwork with the European Monetary Union. In prior notes, we highlighted how European North-South disparities in growth and employment have never been larger than they are now, even during the era of frequent devaluation and inflation in Southern Europe. A project designed to foster integration has ended up jeopardizing it.

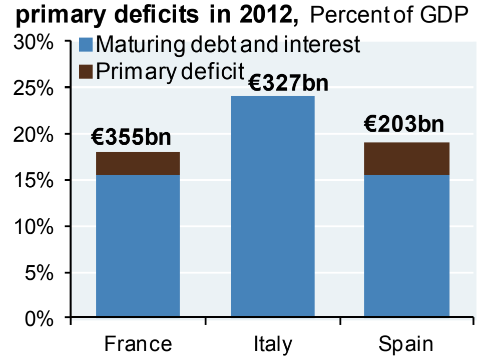
(c7) Death in Venice
Industrial Production Index, 1998 = 100, sa



(c8) Sovereign 10-year yields
Percent

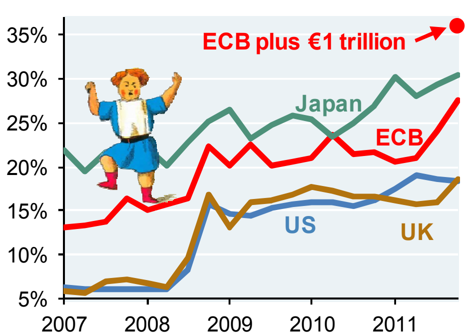


(c9) Maturing debt, interest due and primary deficits in 2012, Percent of GDP

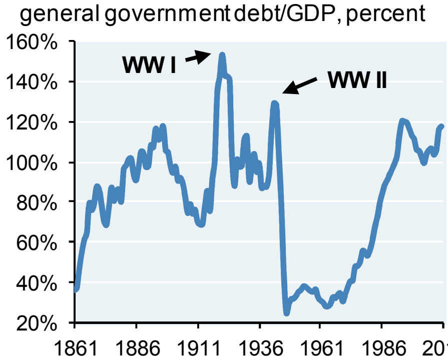


I will avoid the endless diagnoses of the problems, and skip to the endgame: a mid-flight redesign of the Euro since markets have lost confidence in it (c8). While Greece, Ireland and Portugal are wards of the state, 2012 borrowing needs of larger countries are in question as well (c9). In Q1 2012 alone, Italy must issue 112 billion in bills and bonds. The ECB balance sheet (c10) may have to grow by 1 trillion to support sovereigns (c11) ***and*** under-capitalized, under-reserved banks (c12, c13), despite opposition from Germany[1]. This is not just a sovereign/banking crisis, as noted by the rise in corporate debt, particularly in Spain and Portugal (c14). Chart c5 shows that *external* devaluation is the road typically taken. Europe is taking the *internal* devaluation route, but so far, Ireland is the only country that has made progress (c15). As for Ireland, we'd be more optimistic if it weren't for a crippling 140% debt to GNP ratio, a consequence of its decision to bail out EU depositors in Irish banks.

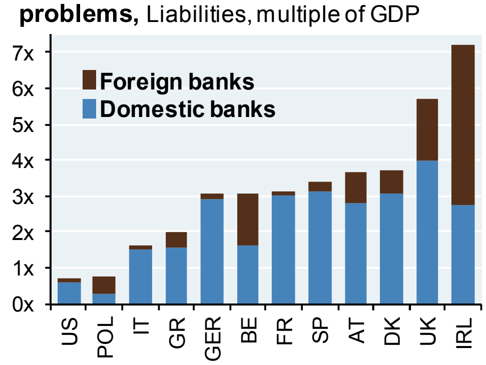
(c10) Central bank balance sheets
Percent of GDP



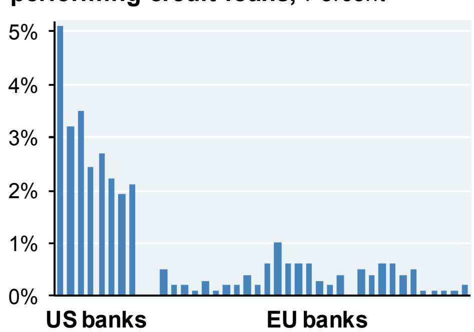
(c11) Italian debt/GDP, Total gross general government debt/GDP, percent



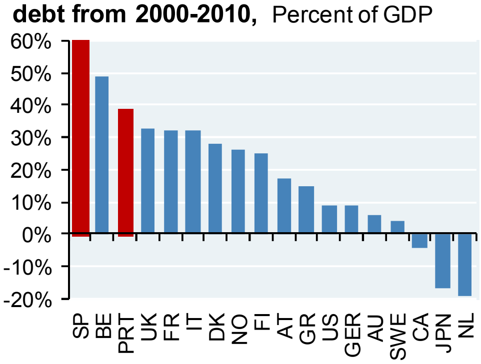
(c12) Europe: bigger banks, bigger problems, Liabilities, multiple of GDP



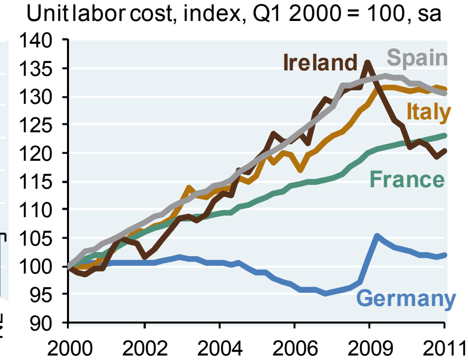
(c13) Loan loss provisions on performing credit loans, Percent



(c14) Change in non-financial corp. debt from 2000-2010, Percent of GDP



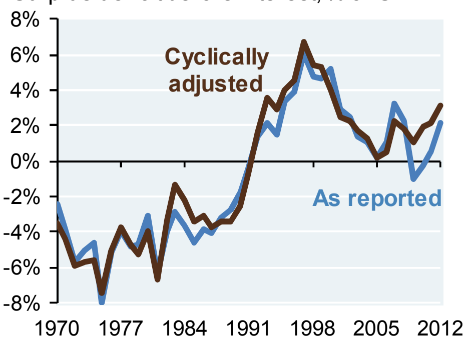
(c15) Long road to convergence
Unit labor cost, index, Q1 2000 = 100, sa



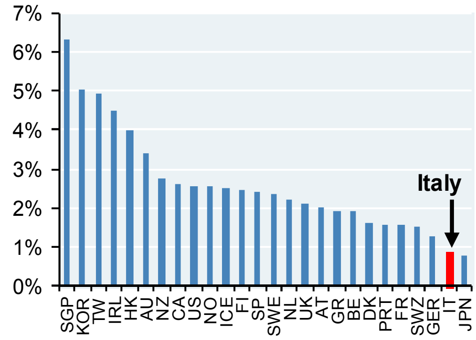
[1] The boy stamping his feet in the ECB chart is from Die Geschichte vom Suppen-Kaspar (Struwwelpeter).

The irony of Italy in the eye of the storm is that since 1991, its primary budget has been in surplus (c16). However, Italy has no choice given its debt burden of 1.9 trillion Euros (c11), a by-product of its 1980's fiscal crises. Italy has paid a price for this austerity (and its low productivity), generating almost the lowest growth rate in the OECD over the last 20 years, ahead of only Japan (c17). It's going to take a lot of work to convince markets that Italy is solvent, and that its debt is declining. We don't think it is: c18 shows an optimistic and pessimistic case, although neither represents possible extremes. We assume near-term funding costs of ~6%, which as Italian debt matures, bring its overall average cost of debt from 3.9% to 4.4% by 2014.

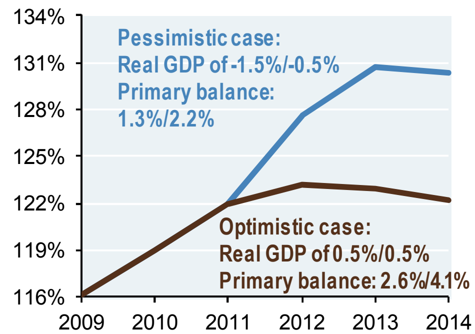
(c16) Italian primary balance
Surplus/deficit before interest, % of GDP



(c17) 20-year growth rates, 1991-2011
Percent



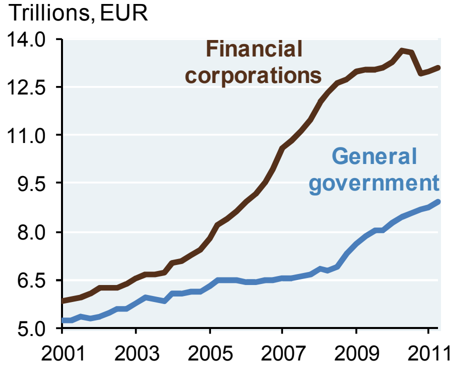
(c18) Can Italy's debt stabilize?
Government debt, percent of GDP



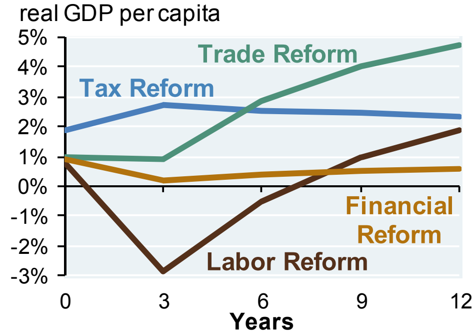
Will Maastricht 2.0 "work", promising deficit limits that turn Italy and Spain into a Mediterranean Germany?

- Germany's long-term plan appears to be: a heavy dose of austerity to reduce sovereign debt trajectories; commitments to run German fiscal policy; a Franco-German governance framework to enforce it; after all of that, a lot more help from the ECB; a lower Euro; and then, eventually, some kind of federalism (Eurobonds or other quasi-permanent transfers).
- **It's a risky strategy given the risk of a prolonged recession**, superimposed on a region with 20 trillion in sovereign and financial sector debt outstanding (c19). Spain's economy, for example, is in free fall. See **Appendix A** for charts on how bad things are in Spain, and a history of austerity and unrest in Europe over the last century.
- **It's not clear that the only difference between Germany and Italy/Spain is a slate of structural reforms**. Even if reforms *are* put in motion, they have a short-term growth cost, particularly when applied to labor markets (c20). So far, Italy's proposed adjustment is based more on higher taxes than lower spending; there has been less of a focus on addressing Italy's yawning productivity gaps vs. Germany, which are also noticeable in France (c21). On the matter of France, it is difficult to believe that it will live by a 0.5% structural budget deficit limit; as shown a couple of weeks ago, it flies in the face of French budgetary history.
- **Investors are unconvinced**: in 2011, US money market funds cut exposure to EU banks in half, and dollar bond issuance by EU banks fell by 70%. Stress tests applied to EU banks, whose gross leverage is 26:1, are seen by many investors as unrealistic (e.g., the latest round stressed sovereign debt, but not household or corporate debt). As the EFSF, the IMF and other non-economic buyers increase exposure, private investors may see this as an opportunity to exit (see Appendix C for some history).
- Europe will try to finance *budget* deficits through the use of bilateral and ECB facilities. But they don't address the region's large *current account* deficits which finance domestic consumption, particularly in France, Italy and Spain.
- **A lot of master plans look good on paper; so did Maastricht 1.0**. Our sense is that Germany and other AAA countries will not be able or willing to bear the ultimate cost[2]. If so, Mr. Delors will have to look for Europe's soul someplace other than Berlin.

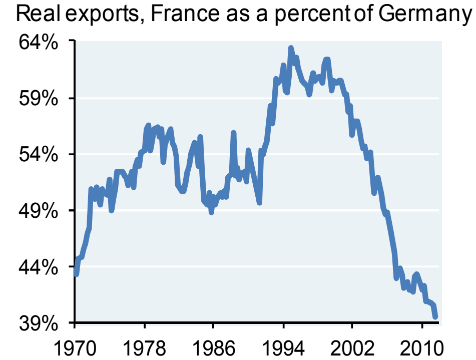
(c19) Outstanding debt in Euro Area
Trillions, EUR



(c20) Growth response to structural reforms, Cumulative percent change in real GDP per capita



(c21) Vive la difference!
Real exports, France as a percent of Germany



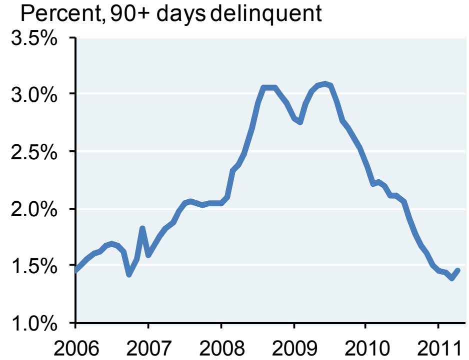
[2] Debt to GDP levels in France (85%) and Germany (81%) are already elevated. Based on estimates of growth and gov't deficits, the German ratio is projected to decline, while the French one peaks at 87% in 2014. After including pro rata shares of existing and future bilateral guarantees, assumed guarantees of Central Bank SMP purchases and risk of deficit slippage, both ratios rise well over 90%.

UNITED STATES: some decoupling from Europe and Asia, and the kindness of strangers

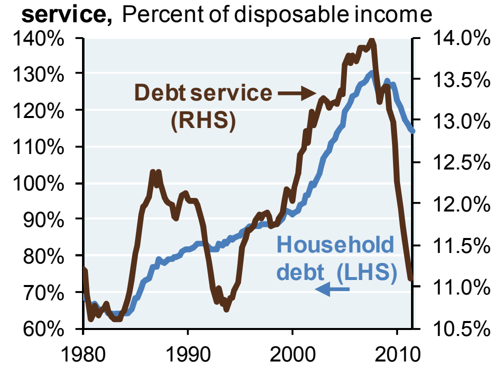
The US has generated better than expected news recently, including surveys of manufacturing (c22), light truck sales, consumer spending, etc. Household balance sheets continue to heal, noted by the decline in credit card delinquency rates (c23). But the strong spending data is a bit of a mystery. Some of it can be explained by the decline in debt *service* (rather than debt *levels*; c24). But housing isn't contributing much of a boost, given negative pricing trends and massive shadow inventory (c25). There's also the question of how much spending can rise when disposable income is weak (c26); the income measure below *includes* government transfers, and would look much weaker without them (c57 vs. c58). Perhaps the fact that the wealthiest 10% account for 30%-40% of spending explains its resilience. It looks like parts of the labor market are recovering (c27); if job losses in construction, government and finance stop getting worse, the jobs picture would look much better. Labor incomes are at multi-decade lows relative to corporate sales and GDP, but prospects for the large number of unemployed may be getting better on the margin, based on jobless claims, manpower surveys, the household survey, and a survey of small business (NFIB).

(c22) Some better news from manufacturing surveys, Index, sa

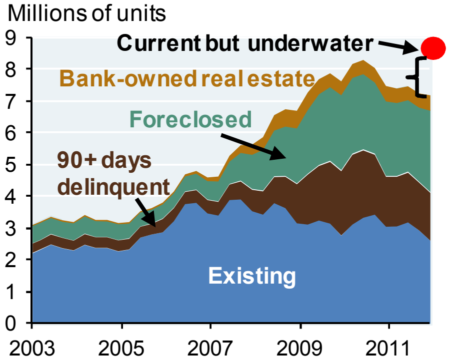
(c23) Credit card delinquencies
Percent, 90+ days delinquent



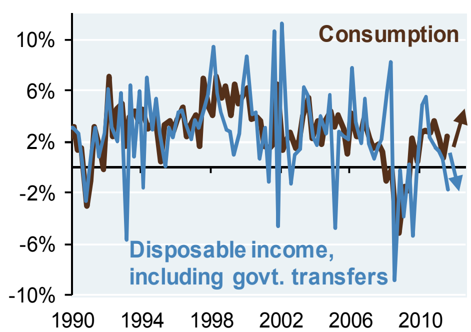
(c24) Household debt and debt service, Percent of disposable income



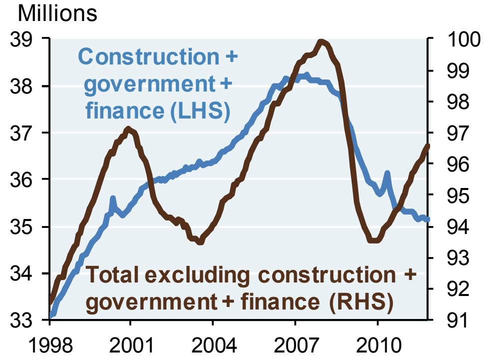
(c25) Shadow housing inventory
Millions of units



(c26) Spending vs. income
Percent change, QoQ, real, annualized, sa

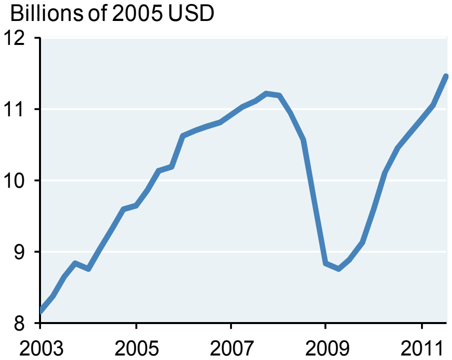


(c27) Bipolar labor market
Millions

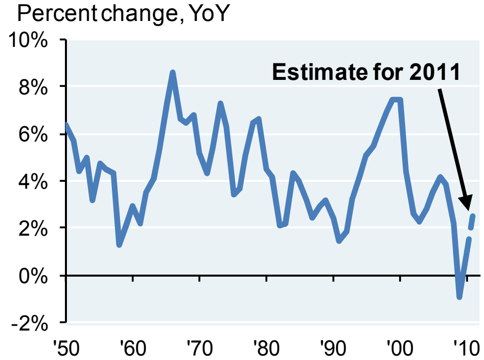


This year's 8% jump in capital spending (c28) was not a surprise. Since 2009 was the first year since 1932 in which the net capital stock declined (c29), the rise was catch-up for a period of underinvestment. We have seen conflicting surveys regarding capex intentions for 2012, with some higher (Citi) and some lower (ISM). We expect a positive contribution from the business sector in 2012, and an economy-wide growth rate of ~2.25%. Commercial and industrial loan growth has been rising (c30), offsetting continued weakness in residential loan demand, which supports some optimism on business spending for next year.

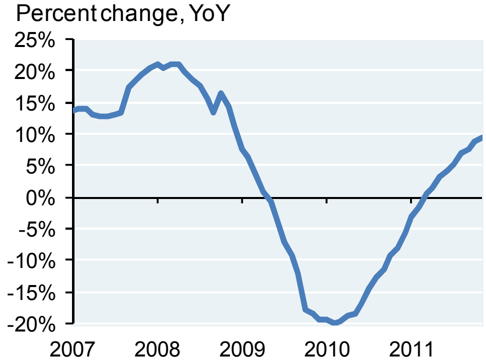
(c28) Capital spending recovery
Billions of 2005 USD



(c29) Capital stock
Percent change, YoY



(c30) C&I loan growth
Percent change, YoY

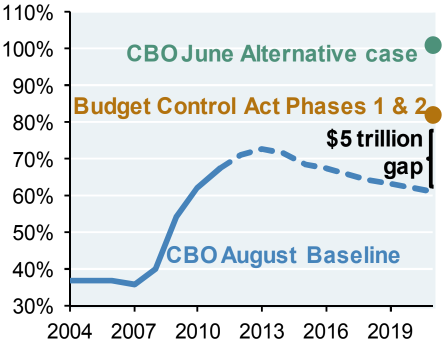


The elephant in the room: US government debt

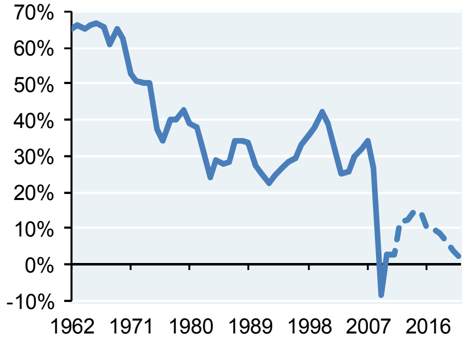
The failure of the Super Committee to agree to a deficit reduction plan cannot be dismissed by saying, “at least they will have mandatory sequestered cuts instead”. The Super Committee was supposed to be the *beginning* of a process, not the end. If it ends here, the government debt burden is not stabilized (c31), and another $5 trillion in deficit reduction over 10 years would still be needed to reach the sustainable debt levels projected in the latest CBO estimate. The problem: almost all government revenues are already spoken for through mandatory programs or interest (c32), and the 2012 budget deficit is still projected at 6%-8%. As a result, there is not that much “fiscal democracy” left, as described by Eugene Steuerle of Brookings, leaving most members of Congress with little to do but fight over the scraps that remain. US gross debt to GDP passed 100% for only the second time in its history last month (c33). The last time this happened, the US was fighting a two-front war and preparing a land invasion of Japan (“Operation Downfall”). As Walt Kelly’s Pogo once said, “**We have met the enemy, and he is us**”.

An extension of the payroll tax cut that is not fully funded reduces the austerity burden next year (c34), and leaves the Federal debt issue to be dealt with in the future. So far, the US Treasury has survived based on **the kindness of strangers**: foreign central banks increasing their holdings (c35), and purchases by the Fed (c36). It pays to be the world’s reserve currency (c37), which is helping prevent the kind of market revolt that sent European debt markets reeling. However, with the backdrop below, I am reminded of the following remark from late MIT economist Rudiger Dornbusch: “*Crisis takes a much longer time coming than you think, and then it happens much faster than you would have thought*.”

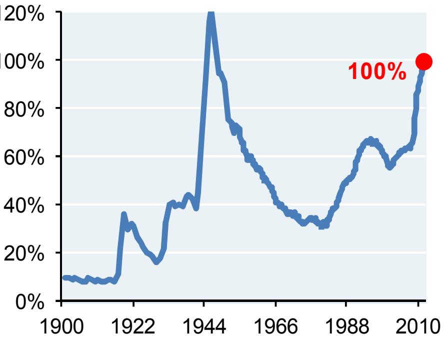
(c31) Long-term debt scenarios
Net debt to GDP, percent



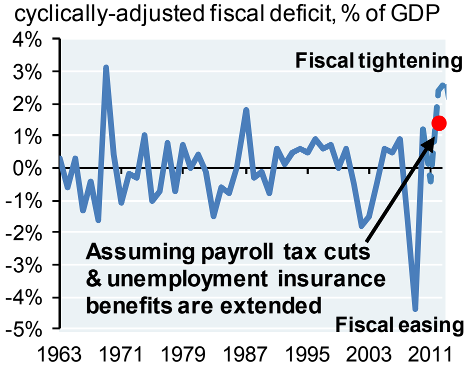
(c32) Percent of gov't. revenue not committed to mandatory spending



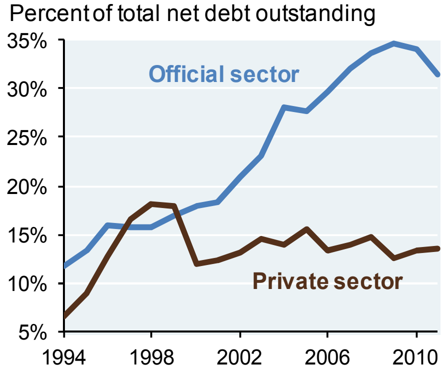
(c33) The US reaches its Pogo moment, Gross debt to GDP, percent



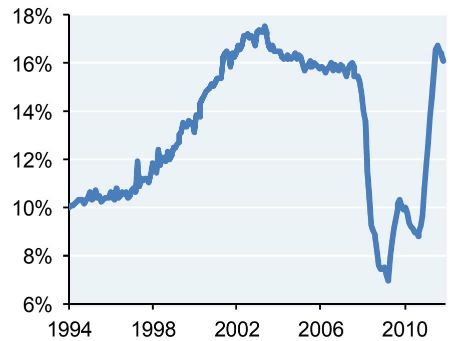
(c34) Fiscal adj. in 2012, Change in cyclically-adjusted fiscal deficit, % of GDP



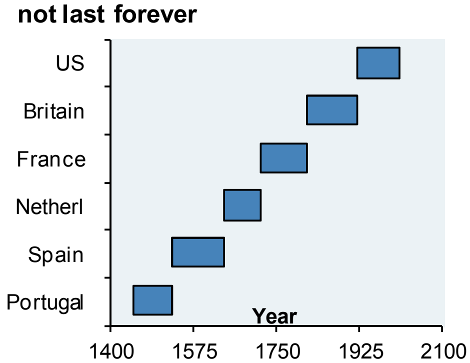
(c35) Foreign holdings of US debt
Percent of total net debt outstanding



(c36) Fed holdings of US debt
Percent of total net debt outstanding



(c37) Reserve currency status does not last forever



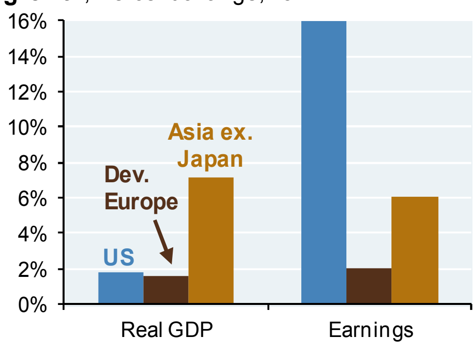
(c38) Quarterly state tax revenue growth, Percent change, YoY

Some good news for municipal bond buyers: state tax revenues have picked up after some tax rate increases, and states have also been shrinking their payrolls and capex plans to balance budgets. This has a broader economic cost, but in isolation, supports the credit risk of many state and local issuers, particularly general obligation and essential service revenue bonds.

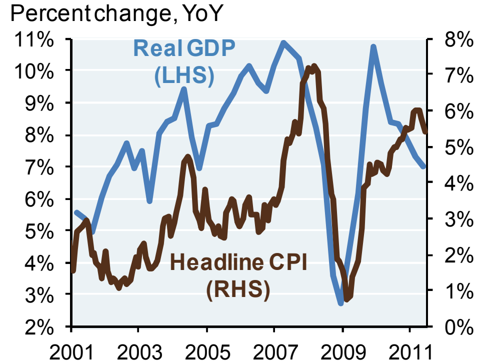
ASIA: finding out what growth looks like without all the stimulus

2011 should have been a good year for Asian financial assets; after all, Asia generated the best combination of real GDP growth and corporate profits growth of the three major regions (c39). We had positioned for this, but were not rewarded for it, as Asian equities underperformed. The first problem: Asia over-stimulated, bringing policy rates net of headline inflation to zero. While the recovery in GDP growth was V-shaped, it also brought with it much higher inflation (c40). Blunt policy measures were then needed to rein it in. China is one illustrative example: money supply growth had to fall by more than half (from 30% to 13%) in order to bring inflation under control (c41). The good news is that inflation is now in retreat, with the latest reading close to 4%. The rate of Chinese RMB appreciation will probably slow, as it did from July 2008 to July 2010 when growth slowed down.

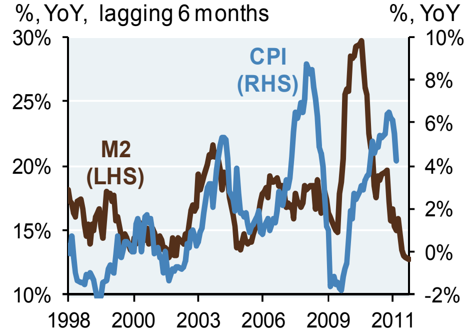
(c39) 2011 real GDP and earnings growth, Percent change, YoY



(c40) Asia over-stimulated
Percent change, YoY

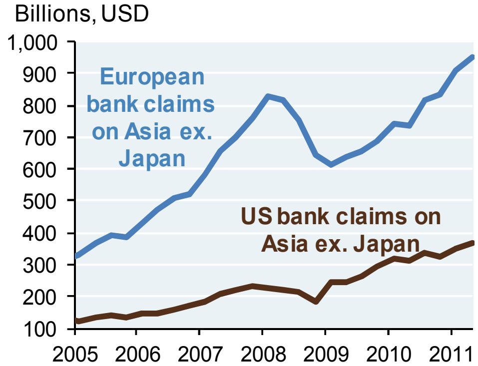


(c41) Chinese inflation comes down as money supply tightens
%, YoY, lagging 6 months %, YoY

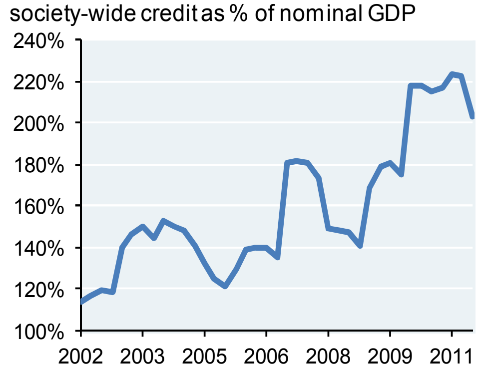


The second problem is European bank deleveraging, which runs the risk of a credit contraction in Asia, as the region was the primary beneficiary of the expansion in EU and UK bank balance sheets (c42). While organic growth in Asia is real, in places like China, growth has become more reliant on more and more credit (c43). The impact of monetary tightening, credit tightening and slower growth in Europe can be seen in the decline in Chinese exports and manufacturing surveys (c44).

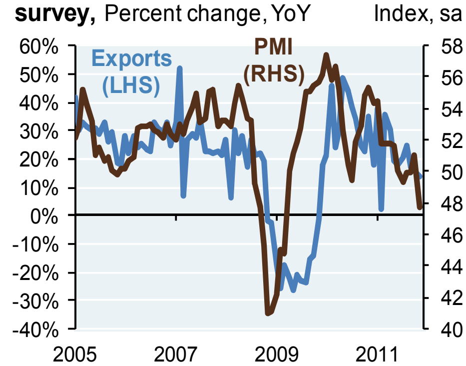
(c42) Bankenstein's Monster
Billions, USD



(c43) Heavy reliance on credit, China's society-wide credit as % of nominal GDP

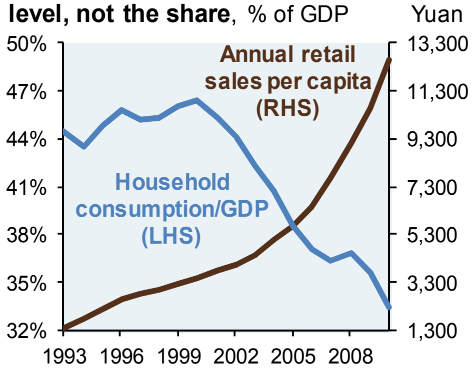


(c44) Chinese exports & manufacturing survey, Percent change, YoY Index, sa

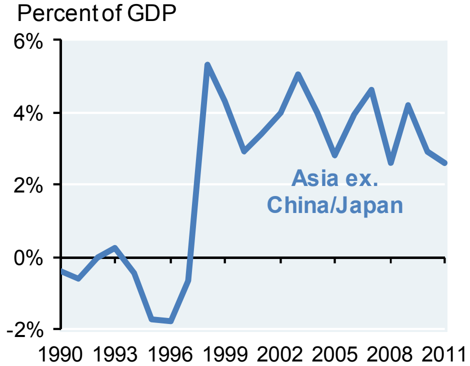


We are still optimistic on the region for the long haul. Consumer spending in China is growing at a rapid pace: pay attention to growth rates in spending, rather than its share of GDP (c45). The region has been running current account surpluses for years, reducing sensitivity to external shocks (c46). Reduced financing from Europe will be felt, but can be made up by domestic sources given high saving rates. We expect 2012 to be an improvement over 2011, even at lower projected growth rates (c47).

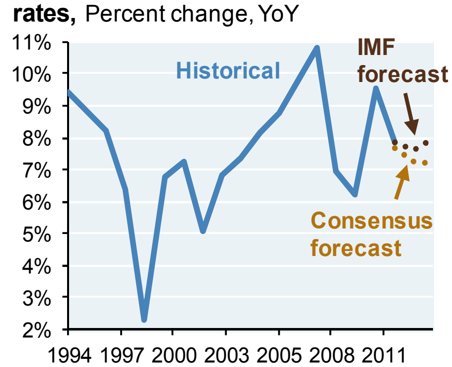
(c45) Chinese consumer: watch the level, not the share, % of GDP Yuan



(c46) Asia's current account balance
Percent of GDP



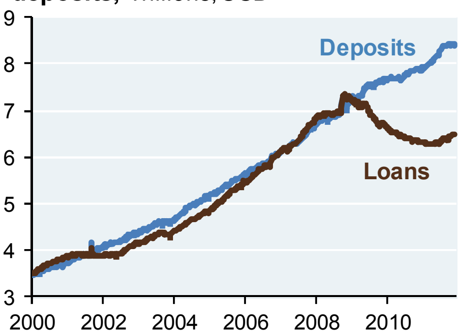
(c47) Asia ex. Japan real GDP growth rates, Percent change, YoY



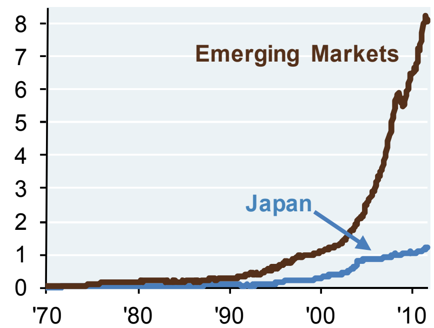
INVESTMENTS

Concerns about the world's imbalances have resulted in more idle cash than I have seen in 25 years. The first 3 charts below look at some of it, parked in US commercial bank retail deposit accounts, central bank and sovereign wealth funds, and corporate balance sheets. A related example: $700 billion in unspent leveraged buyout, real estate and venture capital commitments as of Q3 2011. Measures of short interest and market sentiment also show extreme levels of pessimism. Putting *some* investment capital to work today seems reasonable; the investments described below are where we are focusing in 2012. On a portfolio basis, our equity weightings are below normal, for all the reasons explained in the prior sections.

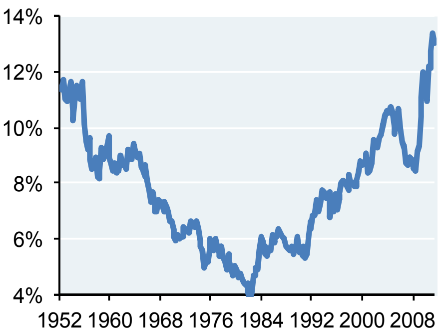
(c48) US commercial bank excess deposits, Trillions, USD



(c49) Foreign exchange reserves
Trillions, USD



(c50) US corporate cash balances
Cash and equivalents / tangible assets



Multinational equities, technology and equity income funds

The grids below show characteristics of select global and European multinational stocks. These companies have dividend yields of 3%-5%, valuations at 10-11x 2012 earnings, and international revenue exposure. There are a lot of ways to gain exposure to these companies, which we think should comprise a large part of any 2012 equity portfolio. On technology, the sector no longer trades at any premium to the broad market. While growth expectations have come down in a world of deleveraging, the pricing of technology stocks might be one of the cheapest options on a better outcome (c53). Stock selection is critical: over the last 4 years, return differentials between individual stocks have been greater in technology than healthcare, materials and financials.

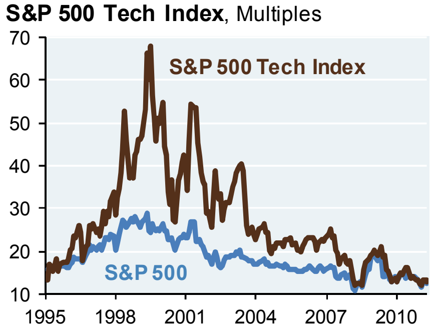
(c51) Global Multinationals
Average characteristics

Market Cap ($bn)	131.5
Forward P/E	11.0x
Dividend Yield	3.2%
Historical P/E	13.7x
% from 52-Week High	-13%
% of Revenue Exposure outside Home Country	69%

(c52) Oversold European Multinationals
Average characteristics

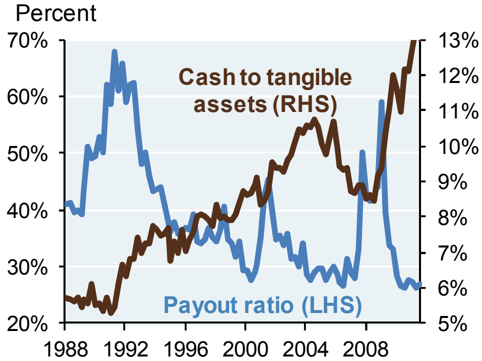
Market Cap ($bn)	93.3
Forward P/E	9.8x
Dividend Yield	4.8%
Return on Equity	29%
Net Debt to EBITDA	0.7
% of Revenue Exposure outside Europe	51%

(c53) Forward P/E of S&P 500 and S&P 500 Tech Index, Multiples

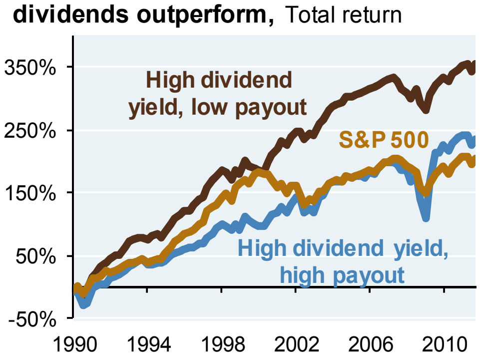


Another part of our equity portfolio includes equity income funds. Dividend stocks have to be chosen carefully, since their P/Es are high relative to history, particularly in the US utility and consumer staples sectors. The scope for dividend increases is rising given corporate cash balances (c54). One preferred strategy focuses on companies with high dividend yields, but low dividend payout ratios (c55); these companies have outperformed, perhaps due to the ability to reinvest in their core businesses.

(c54) Scope for dividend increases
Percent

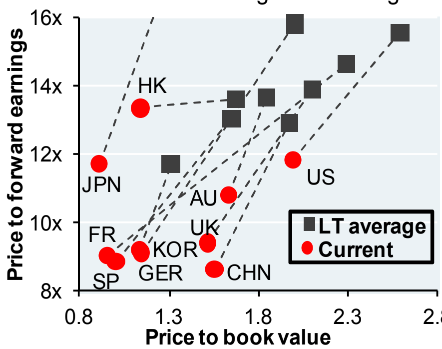


(c55) Companies that can afford high dividends outperform, Total return

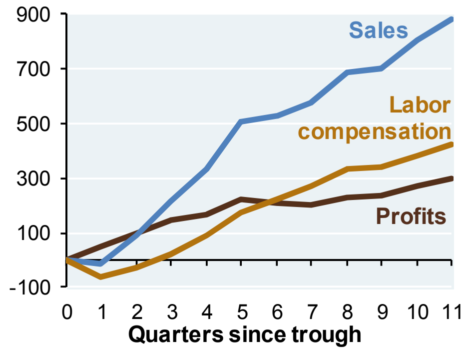


Equity valuations: low and likely to stay that way in 2012
Valuation multiples have fallen sharply from their historical averages (c56), on both a price-to-book and price-to-earnings basis. However, we are not optimistic about multiple expansion until the imbalances of this cycle are reduced. One example of why: consider where profitability has come from in the US. In contrast to prior cycles (c57), current cycle profits have been boosted by very low labor compensation (c58). Given the fiscal, social and political issues this creates, it's hard to pay a very high multiple for this kind of profits boom. A resolution of the US long-term budget deficit would be very bullish for P/E multiples.

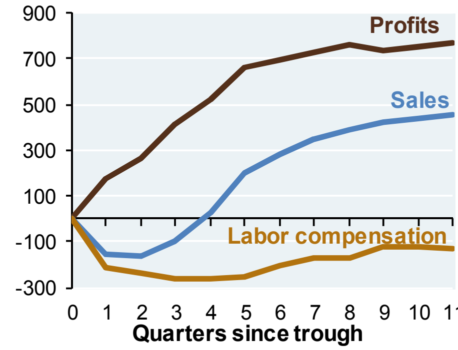
(c56) The men who fell to earth
P/E and P/B ratios vs. long-term averages



(c57) Past 5 recoveries
Billions of 2005 USD



(c58) Current recovery
Billions of 2005 USD



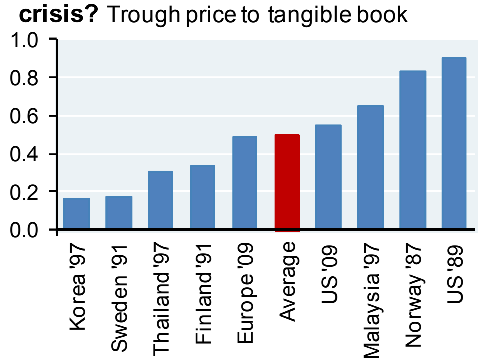
Europe: no appetite yet for a contrarian call, and looking for bank loan sales instead
A warning to skeptics like us: markets are underweight Europe, valuations are low (particularly banks, c59), and the larger toolkit announced at the EU summit will slow the rate of deleveraging. However, our view is that while buying equities and credit in the *middle* of a recession has proved fruitful for forward-looking investors (see October 21, 2009 EoTM for more details), investing at the *beginning* of a recession rarely is. Secondly, while European bank valuations are low, they are not that different from levels reached in prior banking crises (c60). A contrarian call for 2012 would be an overweight to European equities. **This is not a call we are ready to make (yet), and remain underweight Europe, and overweight the US**.

Here's what we are focused on instead: purchases of loans from deleveraging European banks, which rely way more on volatile, wholesale funding[3] than their counterparts in the US or Japan (c61). Here are some recent transactions from our managers:

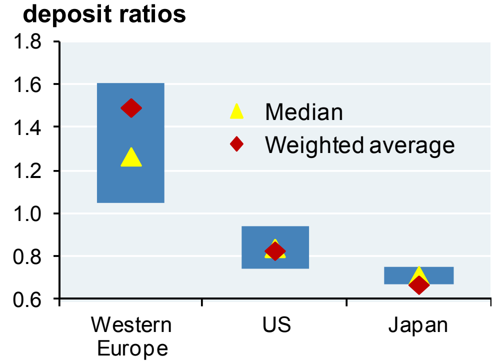
- Spain: performing consumer loans at a discount of 50%
- Netherlands: 7,200 performing consumer loans at 64 cents on the Euro, sold by a failing bank
- 2 billion Euros in non-performing commercial mortgage loans in the UK, Germany and 6 other countries at a 58% discount
- UK: performing residential mortgage loans at a 36% discount to par

(c59) European banks
Price-to-book ratio, Eurostoxx Banks Index

(c60) How bad can banks get in a crisis? Trough price to tangible book



(c61) G-3 banking sector loan to deposit ratios



To be clear, **we do not have a view on when/if the constituency of the Eurozone might change.** It is not clear that anyone would have enough inside knowledge of Germany's real breaking point to know; or even if Germany itself has figured this out. Nor do we have a very strong view on the bilateral $-Euro pair for 2012. Our concerns are focused on European equities and sovereign credit, which we believe may suffer more underperformance vs. other regions.

[3] A recent Bridgewater Associates report estimated that European banks own around $4 trillion in dollar-denominated assets, and that 90% of these assets are funded on a wholesale basis (compared to their domestic Euro-denominated assets, which are funded 30% with wholesale money). While the Fed recently lowered the cost of a dollar liquidity facility made available to EU banks, eventually, many of these assets will probably migrate to other private sector owners.

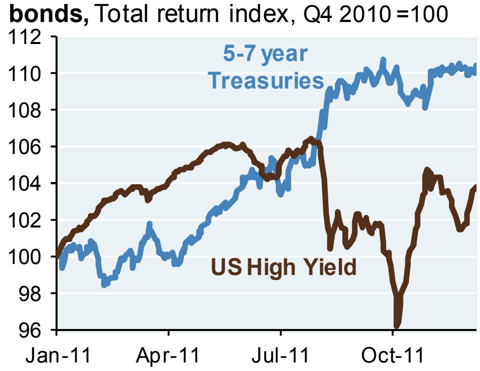
Private mezzanine debt, US high yield and leveraged loans
Investment grade and high yield spreads rallied sharply from 2009 to 2011. However, these spreads masked the reality that many companies did not have the same kind of access they did before the credit bubble burst. As a result, some issuers have had to look to private credit markets for financing, particularly newer issuers finding it more difficult to issue in public markets. As shown below (c62), private credit lending through "mezzanine" (subordinated) debt may offer substantial yields, cash coupons, substantial debt service coverage, call protection and equity beneath the mezzanine positions. However, these returns come at a price: private lending portfolios are illiquid, can be concentrated by sector, and are usually less diversified (20-30 positions) than high yield mutual funds.

US high yield bond prices fell sharply in the wake of the US downgrade by S&P in August (c63). Current prices imply default rates of around 40% over a 5-year period. These implied default rates are *above* the losses experienced during the prior two recessions (c64), but *lower* than what was priced in during March 2009. We see value in the high yield market for unleveraged investors who can ride out the volatility. Leveraged loans, currently priced at a spread of around 6.5% over 3-month Libor, are another area of focus, given the implicit (and admittedly remote) inflation hedge.

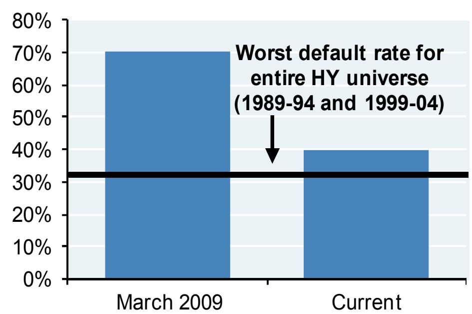
(c62) Private credit fund characteristics
Equal-weighted averages

	Corporate	Comm. R/E
Yield to call	15.2% - 18.8%	12.7%
Yield to maturity	13.1% - 14.2%	12.6%
Cash coupon	8.6% - 10.4%	10.1%
Years to maturity	4.7 - 6.5 yrs	4.9 yrs
Debt / EBITDA	5.0x - 6.1x	n/a
Estimated equity cushion	23% - 42%	33%
Debt service coverage	2.3x - 2.5x	1.2x

(c63) High yield vs. US government bonds, Total return index, Q4 2010 = 100

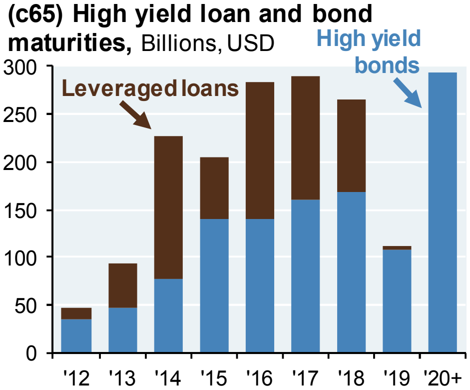


(c64) Market implied 5-year cumulative default rates, Percent, assuming 30% recovery and 0% break-even return

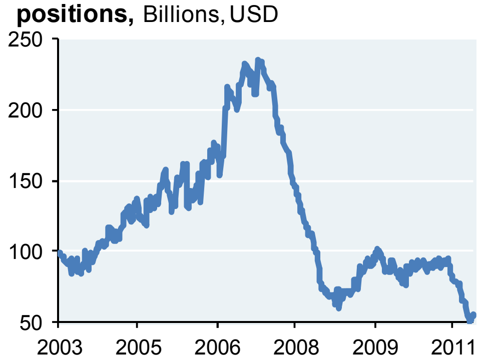


Two caveats on credit. First, while the supply/demand dynamic in credit looks good for 2012 and 2013 (when credit demand from portfolio buyers is expected to substantially exceed credit supply), maturities pick up substantially in 2014 and beyond (c65). Second, credit volatility and bid/offer ratios are higher now, as dealer inventories have declined (c66), a function of regulatory and other industry changes.

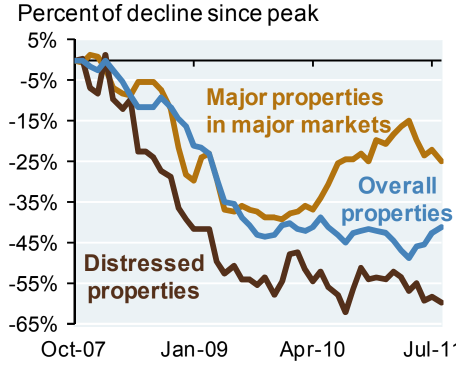
(c65) High yield loan and bond maturities, Billions, USD



(c66) Primary dealer corporate bond positions, Billions, USD



(c67) US commercial real estate
Percent of decline since peak



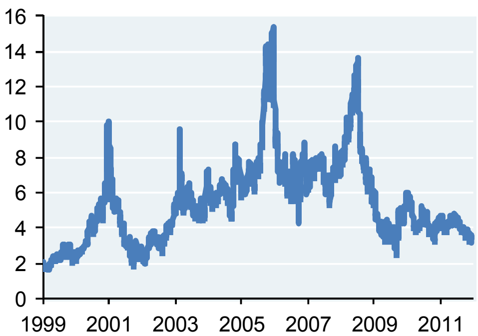
Commercial real estate
The search for yield resulted in a recovery in "core" real estate prices, shown above as "major properties in major markets" (c67). As a result, we have seen better value in the distressed sector, assuming of course that it can be priced right, and diversified. Usually, distressed transactions require motivated sellers, such as undercapitalized regional US banks; healthy banks looking to sell foreclosed real estate; sub-investment grade companies looking to raise cash by selling wholly owned real estate; and REITs looking to scale back their geographical or sector footprint. One example: a portfolio of 60 suburban office properties sold at roughly $108 psf (a 40% discount to replacement cost), for a 9.3% cap rate based on 84% occupancy. Another example of distress (not for the faint of heart): a neglected Boston-area office building that's only 48% occupied, sold at $176 psf; that's around 50% of replacement cost. The benefit of acquiring buildings at steep discounts to replacement cost: there's limited risk of new supply, and property owners can bid aggressively to attract tenants from other buildings.

Oil and Gas investments

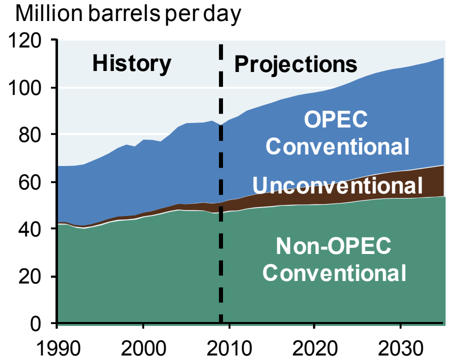
In November, we wrote our annual Thanksgiving piece on the outlook for conventional and renewable energy sources, and related investments. It's worth a read if you are interested in the subject matter; it was based on a day we spent with Vaclav Smil and his 2010 book, "*Energy Myths and Realities*". One trend we noted towards the end of the piece is that projections for global liquids production and US dry gas production both assume substantial contributions from non-conventional sources (c69, c70). This creates opportunities across the entire value chain, including exploration and production, distribution and services.

On natural gas, new finds have been rewarding, even with natural gas prices at current low levels (c68), since large major oil and gas companies aggregate proven reserves, and are willing to pay a premium for them given their long-term horizons. On crude oil, many of our investments focus on so-called "renaissance" plays, which entail older, mostly depleted fields which majors sell as they reshuffle their reserve mix to higher-growth assets. Service companies include firms providing enhanced oil recovery, fracking and waste-water management. Other servicing investments are related to deep-sea fields recently discovered off the coast of Brazil. We have discussed these projects before (EoTM September 2009). The sub-salt fields in Brazil lie 7 kilometers below the surface of the ocean, beneath a thick salt canopy in the Lower Tertiary region. Oil extraction can be quite complicated due to the low permeability and porosity of the salt canopy, and tar pockets. Our investments in this region are linked to providing services, rather than owning exploration and production assets themselves.

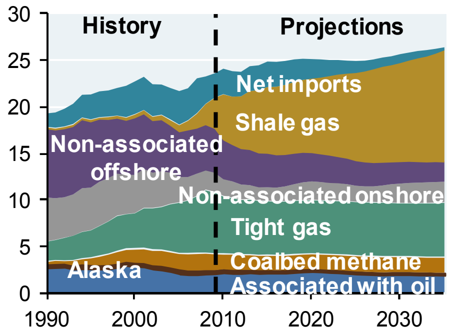
(c68) Natural gas spot price
USD/mmBtu



(c69) Global liquids production
Million barrels per day



(c70) US dry gas production
Trillion cubic feet per year

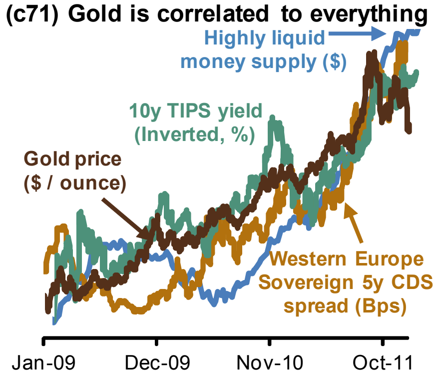


Gold, macro hedge funds and oil

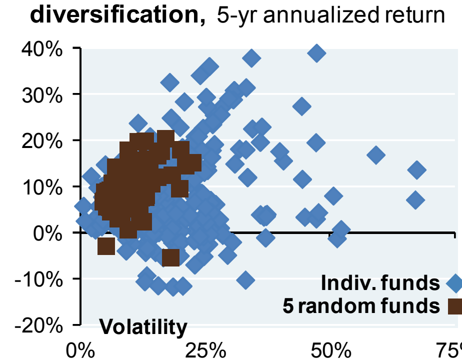
Gold has been correlated to lots of things (c71): credit spreads on European sovereigns (directly); the yield on inflation protected bonds (inversely) and the highly liquid money supply (directly). Gold markets are volatile, have attracted a lot of hot money that needs to book profits from time to time, and are always at risk of Central Banks unloading supply. However, until the variables mentioned (sovereign spreads, the monetary base and inflation fears) move back to where they started, we would not sell gold here. Last year we wrote that we expected gold to be volatile in 2011, but end the year higher than it began. We have the same view for 2012.

We generally use hedge funds as a complement to underweight positions in equities. One of the more successful strategies involves **macro hedge funds**. As shown (c72), individual macro hedge funds generate a lot of volatility. When grouped (even randomly) into pods of 5 funds, low correlation tends to reduce return, but reduce volatility even more. That's a tradeoff we see as sensible. **As for oil markets**, we are expecting below-trend oil demand growth in 2012 given the recession in Europe and slower GDP growth in Asia in the first half of the year, but still an increase in oil demand overall. As inflation comes off the boil in Asia, we expect oil demand to pick up later in the year. Any supply increases from Libya and Iraq might be offset by Gulf countries returning to pre-Libyan war production levels; since July 2010, Kuwait, Saudi Arabia and the UAE increased production by 2 million barrels per day. The wild card for oil markets in 2012 is **Iran** and its continuing quest to enrich uranium (see Appendix B). Bottom line: any 10%+ declines in oil prices would represent good value.

(c71) Gold is correlated to everything



(c72) Macro hedge funds require diversification, 5-yr annualized return

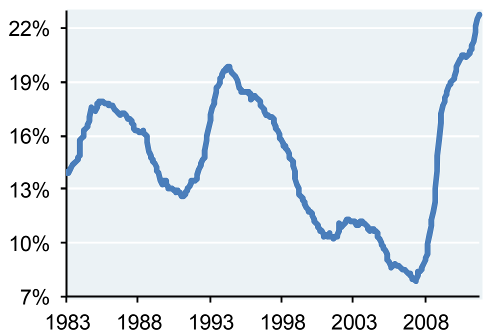


[Appendix A] The pain in Spain, and a history of European austerity and social unrest

Other than exports (c78), the news in Spain is very downbeat. If there are socioeconomic limits to how much austerity a country can take in order to remain in a currency union, we are likely to find out in Spain, where unemployment is 23%, youth unemployment is over 40%, and there are large budget deficit and current account deficit adjustments still to come.

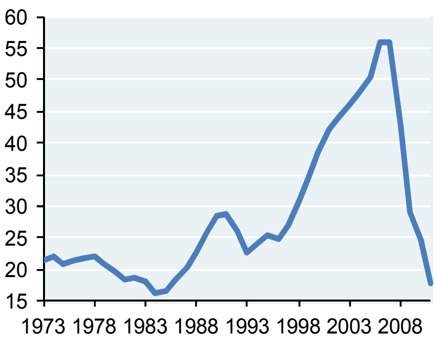
(c73) Spanish services activity survey
Purchasing Managers Index, sa

(c74) Spanish unemployment rate
Percent



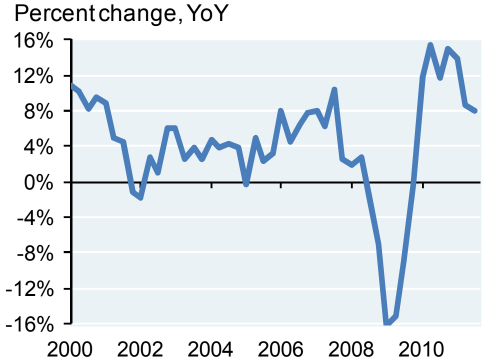
(c75) Spanish industrial production
Index, January 2007=100

(c76) Spanish cement consumption
Millions, tons



(c77) Spanish retail sales
Index, January 2003 =100

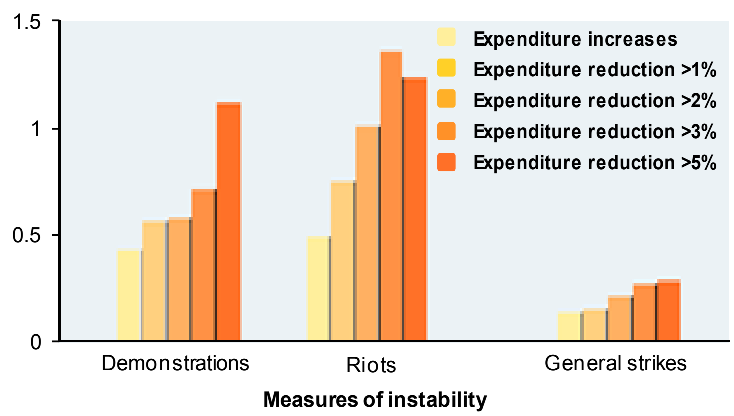
(c78) Spanish exports
Percent change, YoY



Austerity and Unrest. Austerity sounds straightforward as a policy, until the consequences bite. It remains unclear that the road Europe is taking is less costly in the long run, in economic, political and social terms. The history of Europe over the last 100 years shows that austerity can have severe consequences and outcomes. A paper from the Centre for Economic Policy Research looks at the unrest that resulted from austerity in 32 European countries since 1919[4]. **They found a very clear pattern of rising demonstrations, riots and strikes (and worse) after expenditure cuts took place (c79).** The authors tested to see if results varied with ethnic fragmentation, inflation, penetration of mass media and the quality of government institutions; they did not. Results are also consistent across time, covering interwar and postwar periods. The independent variable that did result in more unrest: higher levels of government debt in the first place.

Compounding the problem is the way some decisions are being taken, which may reinforce perceptions of a "democratic deficit" at the EU level, an issue highlighted by Germany's Constitutional Court. It remains to be seen if Europe can sustain cohesion around its path of most resistance. One sign of rising tensions: the following (staggering) comment by the head of the Bank of France: "A downgrade does not appear to me to be justified when considering economic fundamentals," Noyer said. "**Otherwise, they should start by downgrading Britain** which has more deficits, as much debt, more inflation, less growth than us and where credit is slumping." At a time of increasing budgetary pressures and declining growth, I suppose there are limits to European solidarity.

(c79) Austerity and unrest in Europe, 1919 - 2008
Number of incidents per country per year



[4] "*Austerity and Anarchy: Budget Cuts and Social Unrest in Europe, 1919-2008*", Ponticelli and Voth, International Macroeconomics and Economic History Initiative, CEPR, December 2011.

[Appendix B] Learning to live with a nuclear Iran

Investors have to factor in more than just finance and economics. As we head into 2012, oil markets are at risk from ongoing issues surrounding Iran's quest to enrich uranium. Here are a few things to keep in mind regarding this issue:

- **The International Atomic Energy Agency now believes that Iran has undertaken most steps necessary to design, manufacture, test and deliver a nuclear weapon**, including the modification of a ballistic missile to accommodate a nuclear payload, and computer modeling of the process to compress and detonate enriched uranium. Joschka Fischer, Germany's foreign minister and vice chancellor from 1998 to 2005, noted in a November article that Iran only has one civilian nuclear reactor (fuel rods supplied by Russia), and that the Iranian technology being developed cannot be used in it.
- **Iran may be motivated by what happened elsewhere in the Gulf.** After the NATO intervention in Libya, Ayatollah Khamenei gave a speech saying that Ghaddafi's mistake was giving up his nuclear program, as it made him vulnerable to outside intervention. This reduces the chances of a deal whereby Iran agrees to meaningful compromises.
- **Nevertheless, the likelihood of a US military strike appears low**. Last month, Secretary of Defense Panetta reiterated the position of prior Defense Secretary Gates that an attack on Iran would be difficult, citing "unintended consequences". Capitol Hill has been more hawkish, but there appears to be considerable resistance in the intelligence and military establishments against an Iranian attack. For more context around the Iran hawks and doves within the US political and military establishment, and the history of National Intelligence Estimates which claim that Iran has not yet moved towards weaponization, see "*The domestic politics of America's response to Iran's nuclear programme*", *Cambridge Review of International Affairs*, Ido Oren, December 2011. According to sources we spoke with, the world might only have a few weeks to respond if Iran moves towards weaponization, a process that could be signaled by banning IAEA inspectors, or changes in inventory levels of uranium enriched to 3.5% or 20% (90% is needed for weapons). The time required to enrich uranium from 20% to 90% is much shorter than the time required to enrich uranium from 0% to 20%[5]; it is not linear.
- **There have been some successes through unattributed covert operations to slow down Iran's progress.** David Albright at the Institute for Science and International Security walked me through the nuances of the Stuxnet computer virus that apparently wreaked havoc with vibration sensors, pressure gauges and frequency converters at one of Iran's centrifuge facilities. A more recent virus (Duqu) appears designed to gather intelligence, perhaps in preparation for a future operation. However, there may be limits to what can be accomplished, as supply chains and security procedures are tightened.
- **If there were circumstances that resulted in Iran deciding to cease oil exports to the OECD, some combination of Libyan, Iraqi and other Gulf production might be able to take up the slack. However, given tight conditions in oil markets, prices would probably spike.** Here are some of the numbers. Rising Libyan and Iraqi production could provide a supply cushion in case Iranian exports to the OECD were cut off (c80). There is also reason to believe that other Gulf countries could increase production as well; over the last few months, Saudi, Kuwaiti and UAE production rose around 2 million barrels per day above prior estimates, as they responded to the situation in Libya (c81). However, oil markets overall are pretty tight. OPEC countries are running at very high levels of production, and the IEA decision to release strategic reserves during the Libya crisis is an indication that they see limits to OPEC production increases. As a result, we believe that oil prices will remain well bid in 2012, despite declining expectations for global GDP growth. If a crisis occurred in Iran, oil prices would likely head sharply higher.

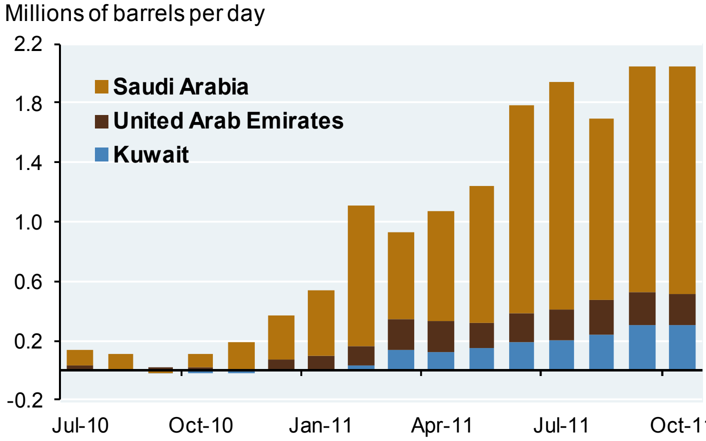
(c80) Possible offsets to an Iranian supply shock

Millions of barrels per day, as of October 2011

	Production	Domestic Consumption	Exports	YE2012 Exports (Est.)	Change in Exports
Iraq	2.7	0.8	1.9	2.6	0.7
Libya	0.3	0.1	0.2	1.1	0.9
				Total:	1.6
				Iranian Exports to OECD:	1.2

(c81) Increased production vs. mid-2010 output

Millions of barrels per day



[5] See "*The New IAEA Report: Beyond Weaponization*", U.S. Bipartisan Policy Center, November 10, 2011.

Hopes that Iranians will effect regime change appear overstated. There is conflicting evidence on conditions in Iran:

- IMF data on real per capita income growth show that Iran has the 2nd best results in the region since 1990, behind only Qatar (which spreads its natural gas riches over 1.7 million people). Other factors that might contribute to cohesion: "freedom shares", handed out as part of a $100 bn privatization program; and the recognition of progress in human development. Since 1990, of the 94 countries in the United Nations Human Development Report ranked as "high" or "very high", Iran recorded the single largest improvement, reflecting progress in life expectancy and education.
- On the other hand, a recent Gallup poll shows that 26% of Iranians are economically "suffering", compared to 14% in 2008, in part a reflection of the removal of domestic energy subsidies. IMF data rely on official Iranian statistics, which may understate actual inflation; there are reports that capital flight is rampant. Economists inside and outside of Iran, and European governments, have questioned the accuracy of the IMF's data. According to Karim Sadjadpour at the Carnegie Endowment for International Peace, Iran ranks higher than Egypt and Tunisia in terms of economic malaise (inflation and unemployment) and corruption. Household incomes have fallen versus prior generations, and people under the age of 30 now account for 70% of all unemployed persons; youth unemployment itself is around 23%. As for sanctions, recent ones are aimed at Iran's gas, oil and petrochemical industries (the US Government Accountability Office reports that only 16 firms are currently active in Iran, down from 43 in 2010). Other sanctions are aimed at its banks, and potentially at its Central Bank. The sanctions have impeded the modernization of its natural gas industry, led to shortages in construction materials affecting small and medium sized businesses, and reduced available trade finance.

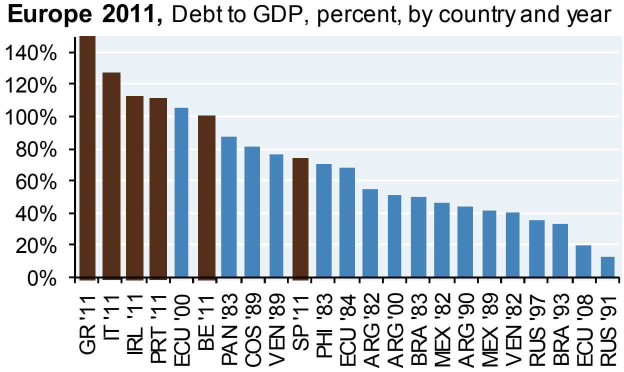
The bottom line is that it does not appear that regime change from within is something to be expected in Iran. Investors don't necessarily need another reason to hold gold, but this appears to be another issue with no resolution in 2012.

[Appendix C] Sovereign defaults, preferred creditors, and what "pari-passu" means (not that much) [6]

Every sovereign default is like a snowflake, with a story all its own. But there are often common factors: high levels of hard currency sovereign debt, a monetary anchor of some kind, and a balance of payments problem. Some Southern European countries have aspects of all three. While EU 2011 debt levels are above those associated with most prior debt crises (c82), the help these countries might get from outside lenders (and the ECB) is also larger; it's premature to know how deep those latter pockets are. When thinking about where we go from here, I remind our investors of the following:

1. In prior debt crises, IMF and other bilateral facilities did not prevent a subsequent decline in securities prices (c83-c86)
2. The lack of a legal framework around sovereign debt restructurings can increase the risks for bondholders when things go wrong

(c82) Sovereign debt levels in prior crises vs. Europe 2011, Debt to GDP, percent, by country and year



On the latter point, there have been thousands of pages of legalese written on the topic. Here are some observations on sovereign defaults, preferred creditors and risks to bondholders:

- Most sovereign bonds contain a clause referring to their pari-passu (equal) treatment vs. other indebtedness of the same issuer. Such clauses tend to work well in a corporate setting, where bankruptcy courts in a given country enforce clauses across creditor classes.
- However, **sovereign issuers are not subject to a bankruptcy code, their own, or anyone else's.** They have the freedom to discriminate amongst creditors, and often do. Sovereign entities in distress rarely pay all creditors on a "ratable" basis, where "ratable" signifies equal treatment in terms of priority, magnitude and timing of payment.
- The pari-passu clause does not prevent issuers, as a matter of practice, from discriminating in favor of institutions such as the IMF and World Bank. **As a result, should an eventual writedown of debt be needed, it might have to be absorbed by a smaller universe of private sector creditors. In this regard, increased commitments by official sector lenders may not change the risk equation for bondholders in the long run[7].**

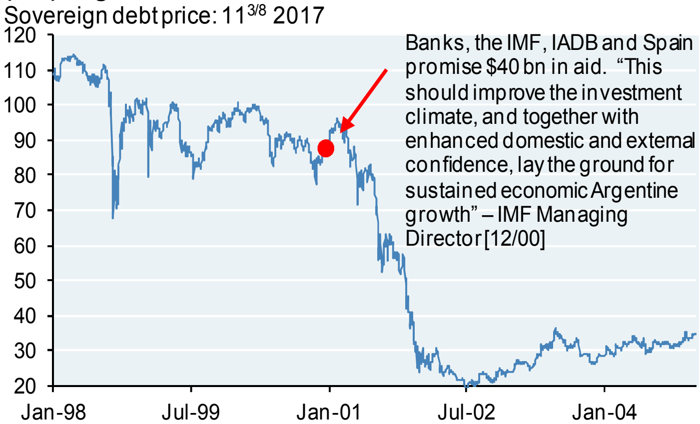
[6] This section draws on "***The Pari-Passu Debt Clause in Sovereign Debt Instruments***", Buchheit and Pam, Emory Law Journal, 2004. Lee Buchheit is with Cleary Gottlieb Steen & Hamilton, which represents many sovereign issuers in distress/default. I have a lot of respect for Lee's judgment and decades of experience, but also believe that such commentary should be considered in light of what sovereign counsel normally does: seek maximum flexibility for sovereign issuers, sometimes at the expense of private creditors.

[7] On a related matter, I wouldn't put too much importance on the decision by EU governments to remove "private sector involvement" language as a pre-condition for lending via the ESM (European Stability Mechanism). **Just because they removed it from the ESM doesn't mean investors won't be required to share the pain in the future.**

- **The IMF and World Bank are not the only ones given preferred treatment**. In the proposed Greek debt exchange, Greek Social Security Funds holding its sovereign debt were reportedly not scheduled to participate. And in prior sovereign debt restructurings, t-bills were excluded, further concentrating losses on the remaining bondholders.
- In the world of *corporate* credit, lenders have a wide variety of remedies they can use when seeking to ensure equal treatment: sharing clauses, the use of a trustee to distribute payments ratably, inter-creditor agreements among lenders to share payments and losses equally, and subordination agreements. These remedies are generally not used by lenders to *governments*, most likely because it would be difficult (if not impossible) to enforce them.
- A notable exception: in the year 2000, a hedge fund sought to block Peruvian payments on its Brady bonds, since Peru didn't pay interest on the fund's Peruvian loans (the fund opted not to participate in the Brady bond exchange). The hedge fund's injunction was granted by a New York Federal Court and a Belgian Court of Appeals, and the hedge fund was fully paid. As an investor, I have a lot of sympathy for creditors that are actually able to get their contracts enforced. In recent years, other creditors have not been as successful in the wake of the Peru case in getting the phrase "pari-passu" to mean what markets often assume it to mean[8]. The reality: it may mean very little, if anything.

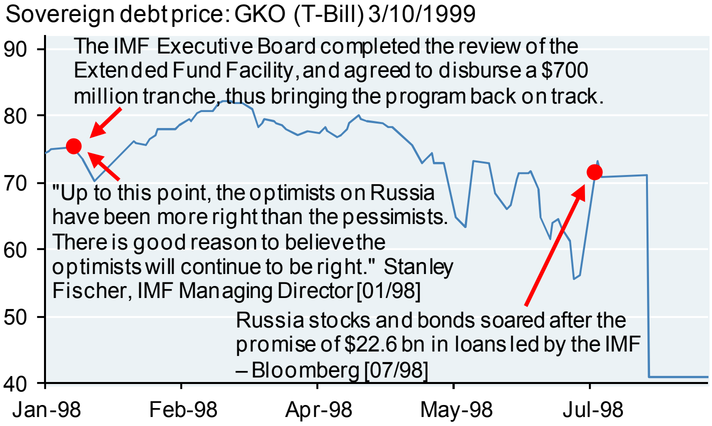
All things considered, the history suggests that investors seek a very large potential reward before taking risk on sovereign debt, once a crisis hits. Here are the charts referenced above on how official sector credit facilities did not prevent further deterioration in securities markets of the countries involved. In Argentina and Russia these declines were permanent. In Mexico and Indonesia, the declines were temporary; after 50%-70% currency devaluations eventually re-established a more stable equilibrium, their sovereign bond prices recovered.

(c83) Argentina
Sovereign debt price: 11 3/8 2017



(c84) Mexico
Sovereign Brady Bond debt price: 6 1/4 2019

(c85) Russia
Sovereign debt price: GKO (T-Bill) 3/10/1999



(c86) Indonesia
Sovereign debt price: 7 3/4 2006

[8] See "*Debt Defaults and Lessons from a Decade of Crises*", Sturzenegger and Zettelmeyer, MIT Press, 2006, p. 71 and table 3.1.

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Acronyms

BEA	Bureau of Economic Analysis
CBO	Congressional Budget Office
CDS	Credit Default Swaps
EBITDA	Earnings before interest, taxes, depreciation, and amortization
ECB	European Central Bank
EU	European Union
EMU	European Economic and Monetary Union
EBA	European Banking Authority
EFSF	European Financial Stability Facility
FRB	Federal Reserve Board
GDP	Gross Domestic Product
GNP	Gross National Product
IAEA	International Atomic Energy Agency
IEA	International Energy Agency
IMF	International Monetary Fund
ISM	Institute for Supply Management
NATO	North Atlantic Treaty Organization
NFIB	National Federation of Independent Business
OECD	Organization for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
PMI	Purchasing Managers Index
REIT	Real Estate Investment Trust
RMB	Renminbi
PSF	Per square foot
SMP	Securities Markets Program
TIPS	Treasury Inflation Protected Securities
UAE	United Arab Emirates

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