NORTHERN TRUST GLOBAL ECONOMIC RESEARCH



2012 - As the Fundamentals Improve Stateside, They Deteriorate Abroad

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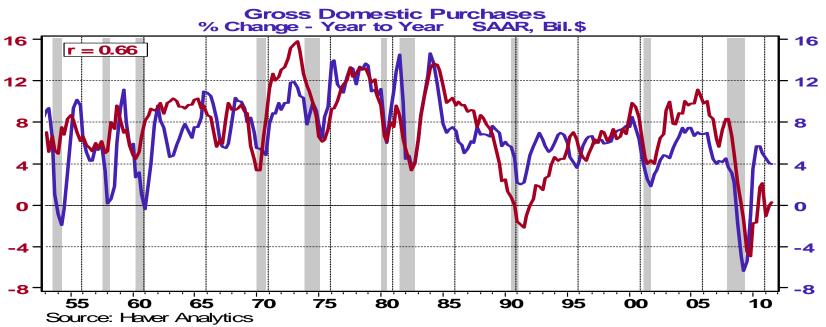




There is a strong positive correlation between growth in MFI credit and growth in gross domestic purchases.

- Monetary financial institution (MFI) credit is credit created figuratively "out of thin air."
- Credit created "out of thin air" enables the recipients of this credit to spend while no other entity needs to cut back on its spending.
- Thus, an increase in MFI credit implies a net increase in spending in the economy.
- There was a post-war record contraction in MFI credit after the financial crisis of 2008, which resulted in the most severe recession and the weakest recovery in the post-war era.

Monetary Financial Institution Credit* -- % Change - Year to Year * Sum of Commercial Bank, Savings & Loan and Credit Union Credit

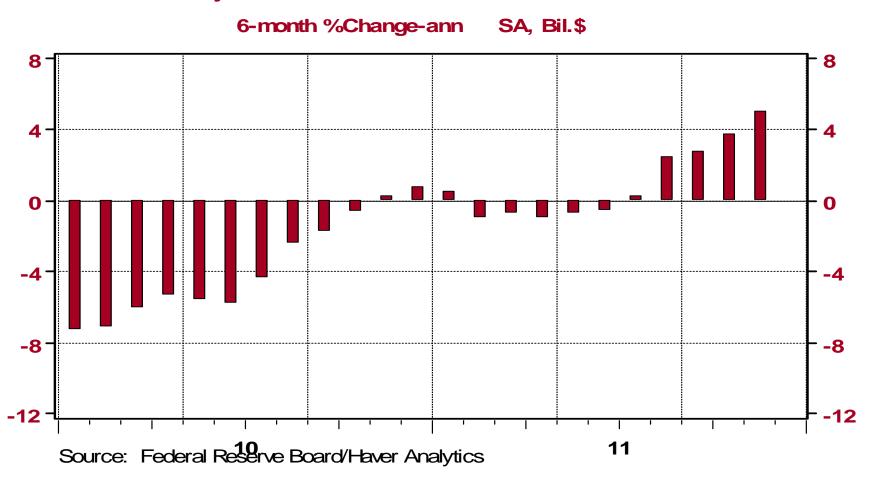






The previous headwind of contracting U.S. bank credit has now shifted into a tailwind.

Break-Adjusted Bank Credit: All Commercial Banks



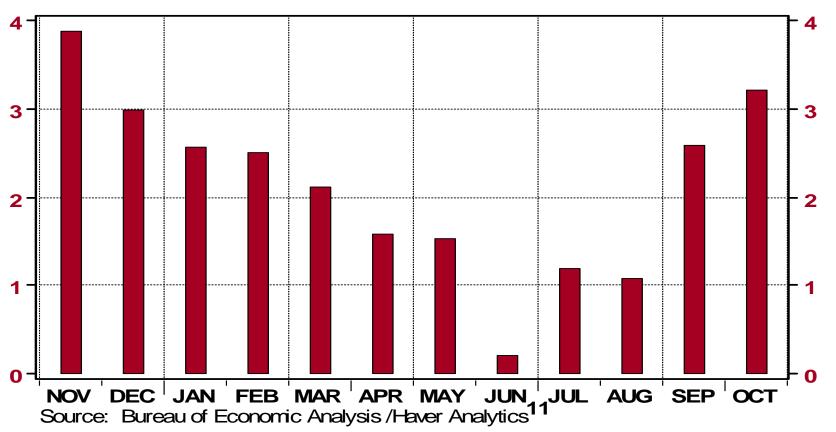




Consumption spending is rebounding from its 2011 spring doldrums.

Real Personal Consumption Expenditures

4-month %Change-ann SAAR, Bil.Chn.2005\$



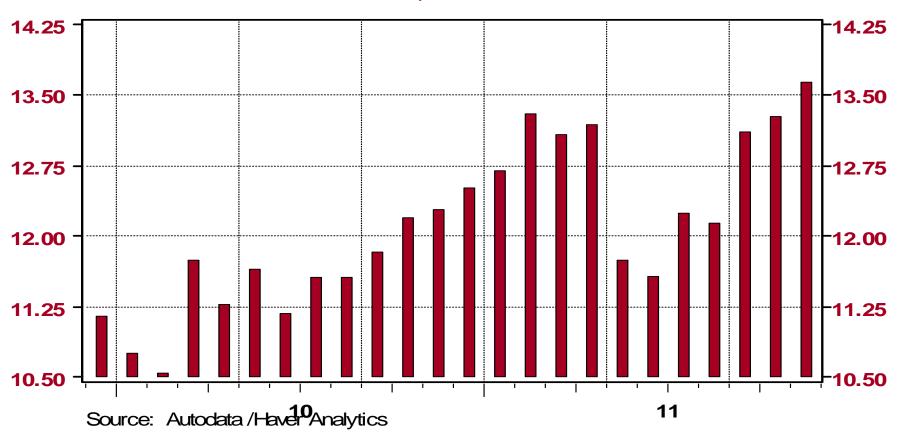




With their recent rebound, 2011 car and truck sales will be the strongest since 2008.

Total Light Vehicle Retail Sales (Imported+Domestic)

SAAR, Mil. Units







Although still weak in absolute terms, home sales are beginning to pick up ...

Sum of New and Existing Home Sales thous, units

Sum of New and Existing Home Sales thous. of units, 3-month MovingAverage



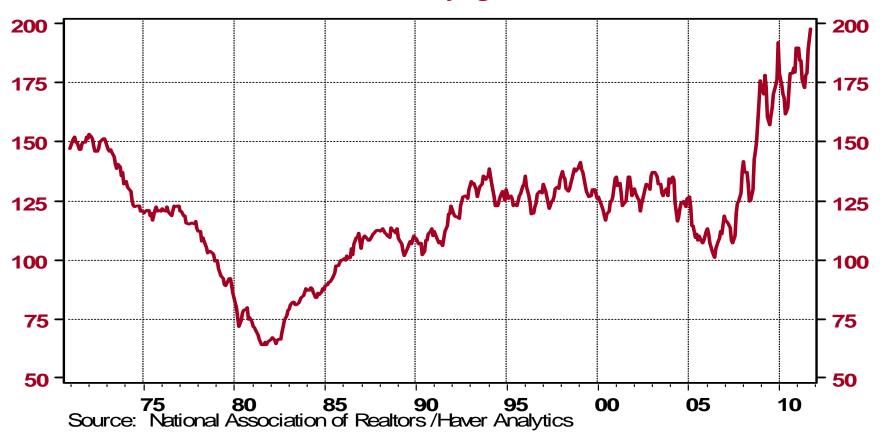




... as well they should with homes more affordable now than in over 40 years ...

Composite Housing Affordability Index

Median Inc=Qualifying Inc=100

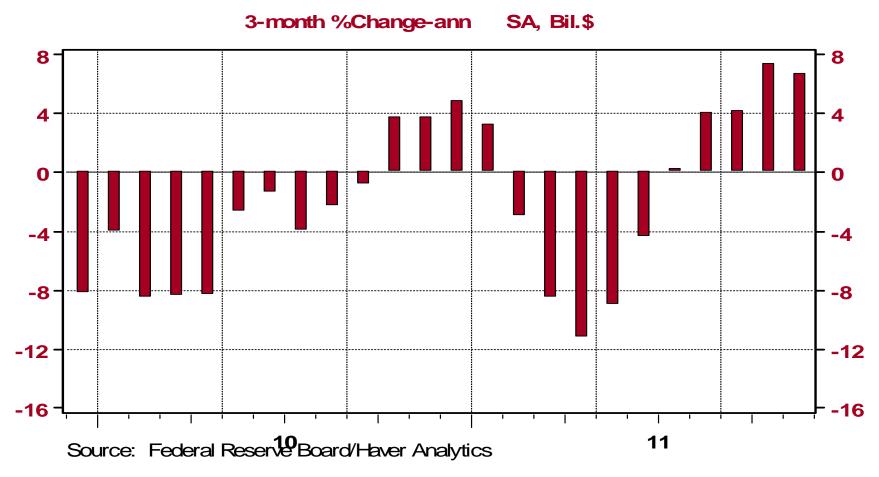






... and with banks starting to make mortgages again.

Break-Adj Real Estate Loans: Other Residential Loans: All Comml Banks

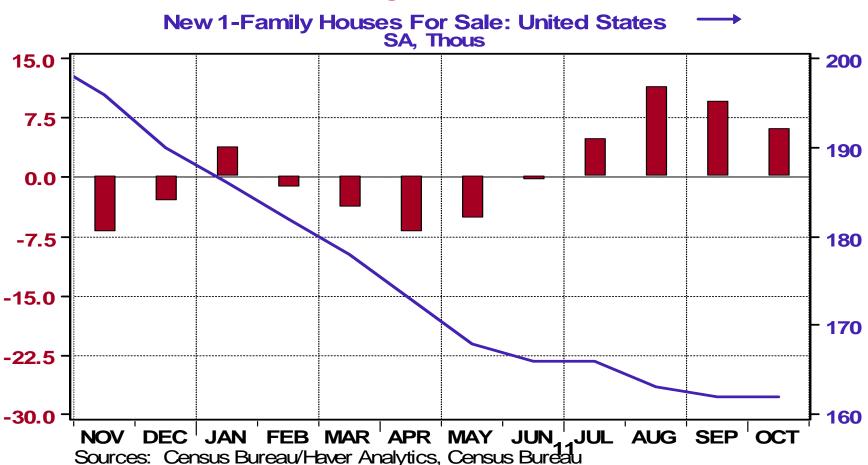






With the inventory of new homes for sale the lowest in almost 50 years and with housing demand starting to pick up, so, too, is housing construction.

Trivate Construction: Residential: New Housing Units 3-month %Change-ann SAAR, Mil.\$

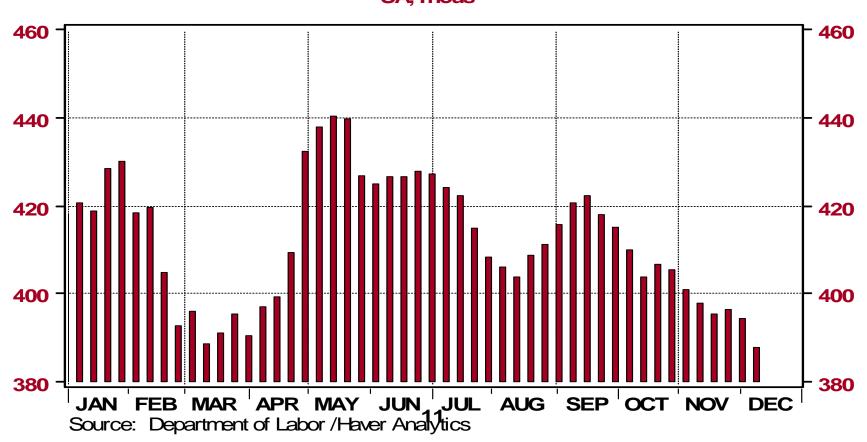






Before businesses start hiring, they have to stop firing. And they are doing less firing in recent months.

Unemployment Insurance: Initial Claims, 4-Week Moving Average SA,Thous



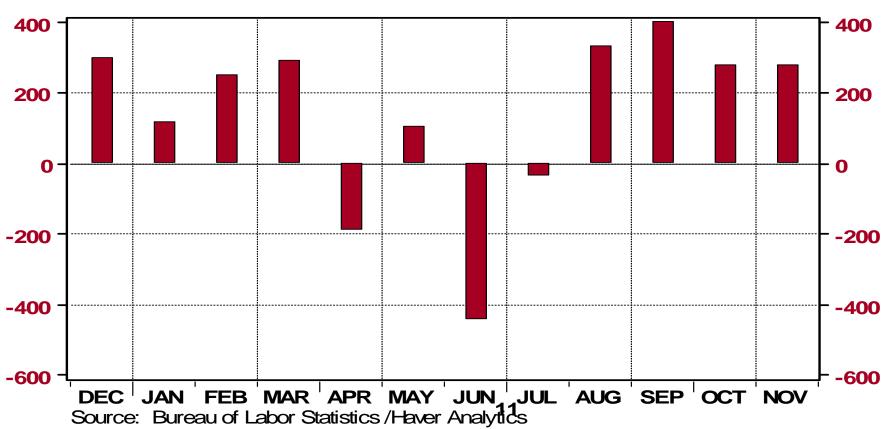




And hiring actually is picking up.

Civilian Employment: Sixteen Years & Over

Change - Period to Period SA, Thous



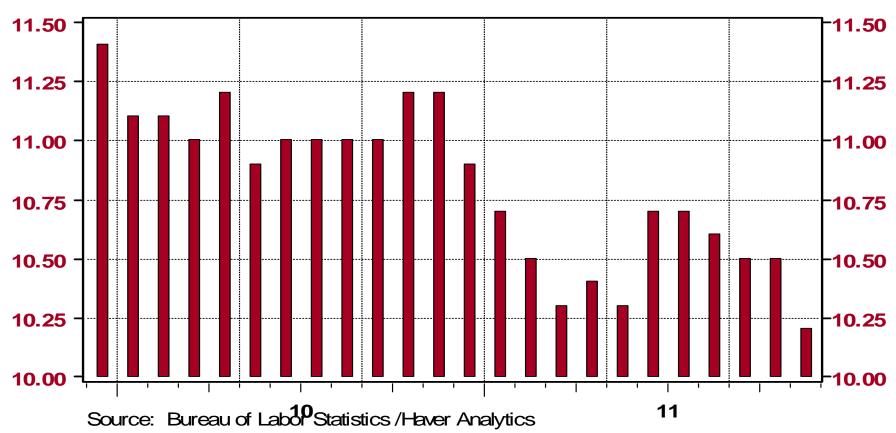




Although the unemployment rate remains high in absolute terms, it is moving lower, even taking into consideration labor-force drop-outs.

Unemployed + Marginally Attached/CLF + Marginally Attached





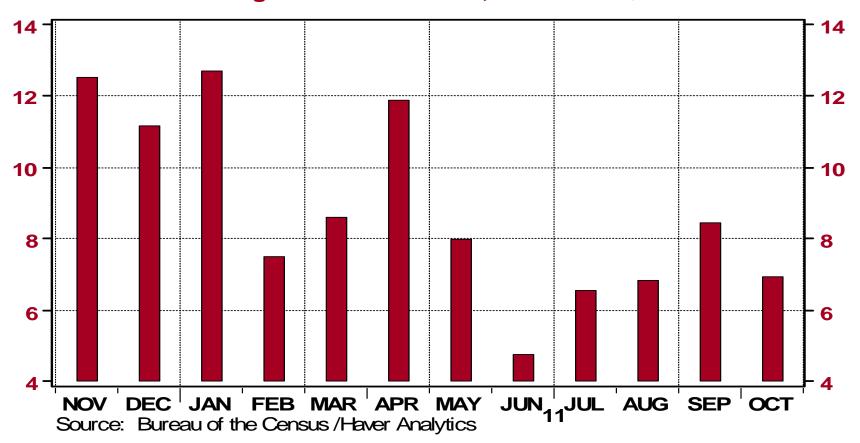




Growth in U.S. exports is moderating and will likely continue to do so as economic growth in the rest of the world slows.

Exports, f.a.s.





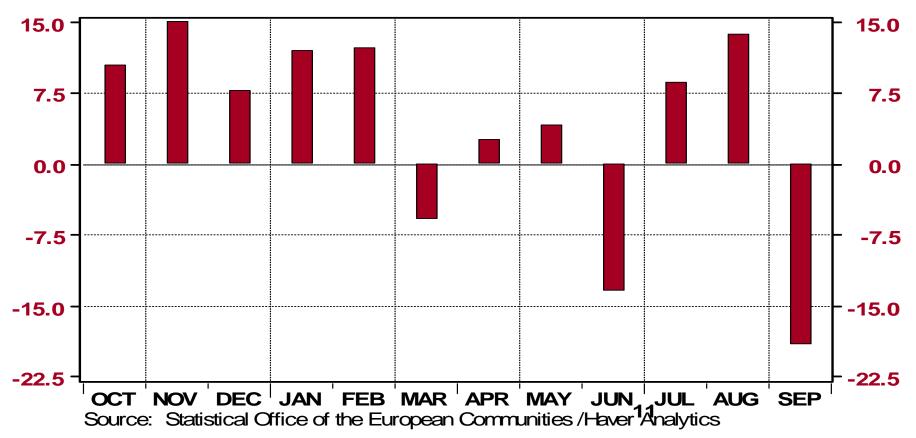




The 27-nation European Union, collectively the largest economy in the world, likely entered a recession in Q4:2011.

European Union [EU27]: IP: Manufacturing

% Change - Annual Rate SA/WDA, 2005=100

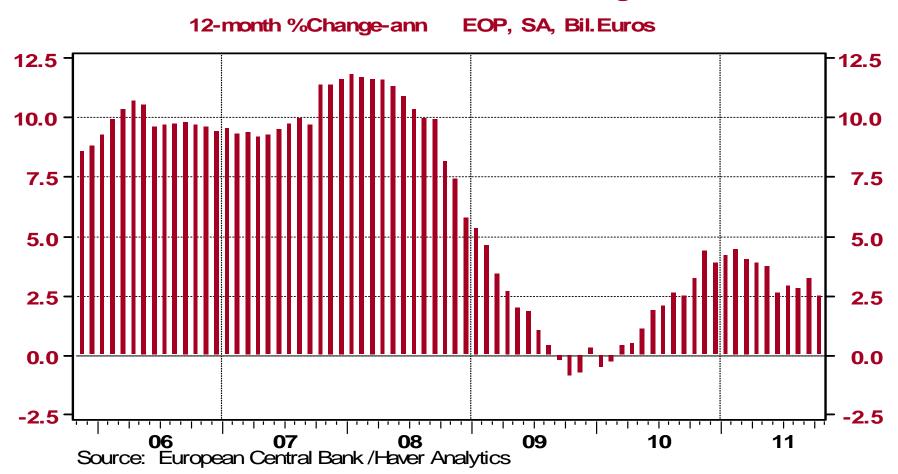






Eurozone monetary financial institution credit, which currently is growing only moderately, will likely begin to contract, prolonging the European recession.

Euro Area11-17: Total MFI Lending



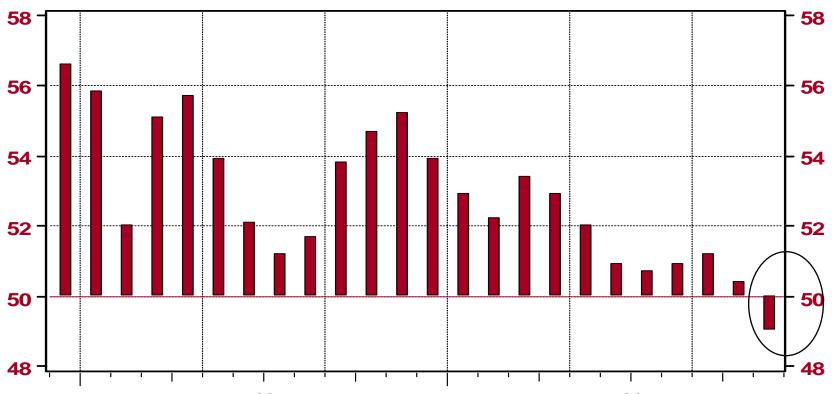




Growth in the Chinese economy, the third largest economy in the world, is moderating, but by no means collapsing.

China: PMI: Manufacturing

SA, 50+=Expansion



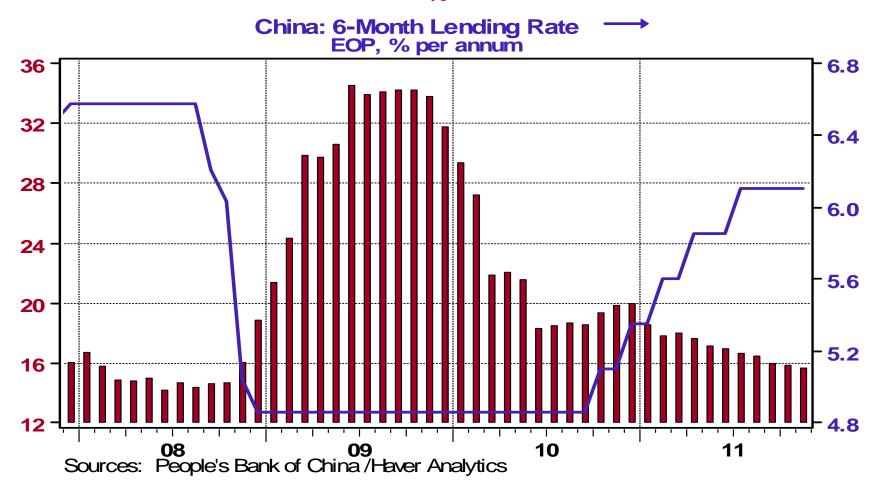
Source: China Federation of Logistics & Purchasing/NBS/Haver Analytics





The primary factor accounting for the moderation in Chinese economic growth is central bank policy tightening in order to rein in growth in money and credit.

Thina: Total RMB Loan: 12-Month Percent Change



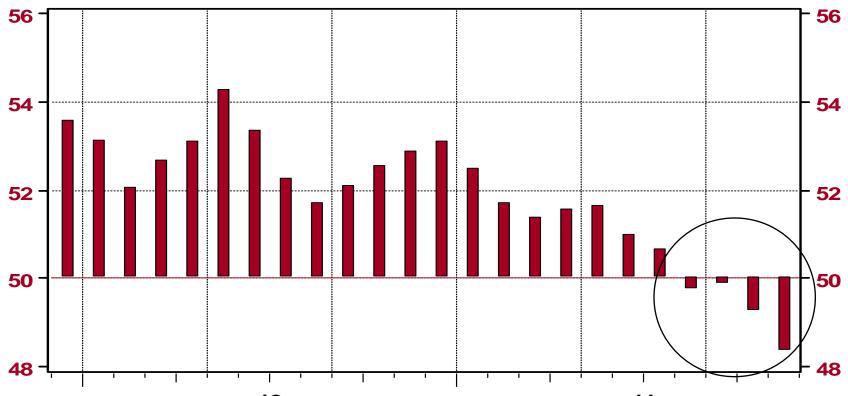




In addition, demand for Chinese exports is weakening, which will be exacerbated by the EU recession.

China: PMI: Manufacturing Export Orders

3-month MovingAverage SA, 50+=Expansion



Source: China Federation of Logistics & Purchasing/NBS/Haver Analytics

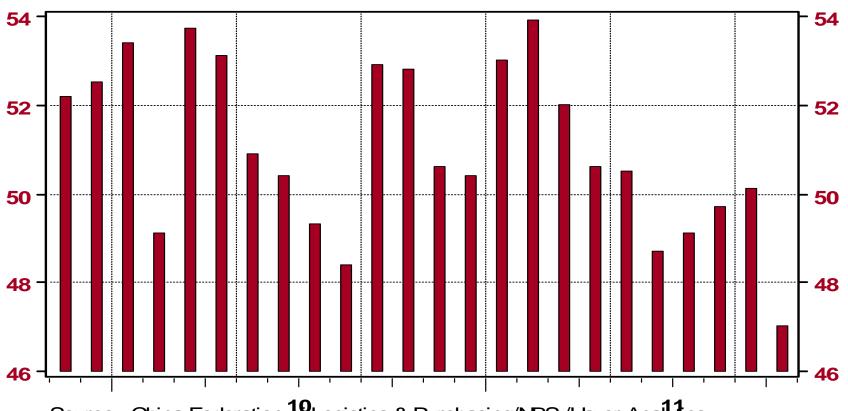




The slowing in Chinese economic growth has led to a slowing in Chinese import demand.

China: PMI: Manufacturing Imports

SA, 50+=Expansion



Source: China Federation of Logistics & Purchasing/NBS/Haver Analytics

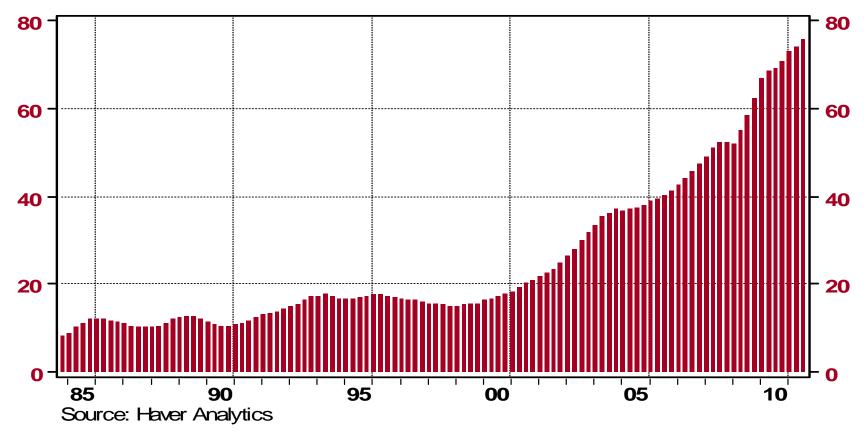




Because China has become a large importer in the past 10 years, the slowdown in its import demand has and will have a significant negative effect on the rest of the world's exports, including U.S. exports.

Dollar Value of Chinese Imports as a % of Dollar Value of U.S. Imports



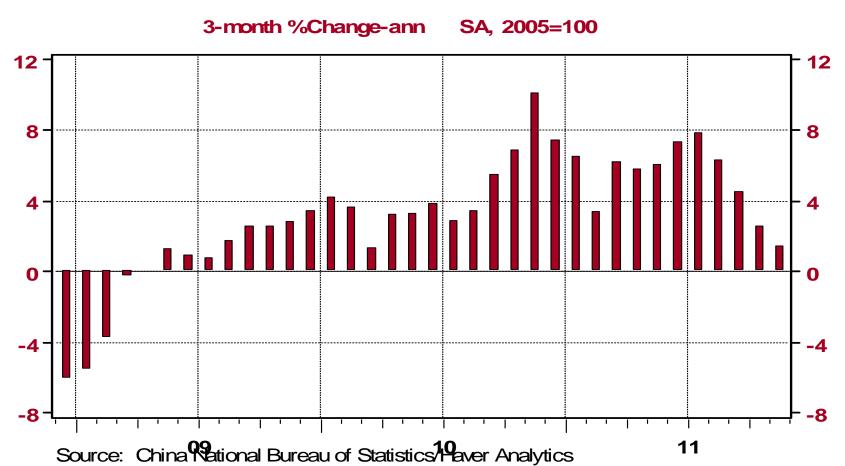






Chinese consumer inflation has begun moderating significantly ...

China: Consumer Price Index



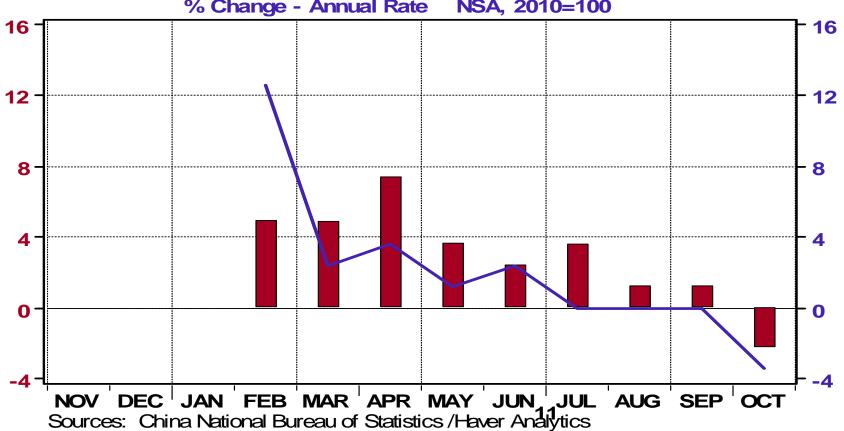




... and the Chinese real estate market has begun to deflate, both of which give the Chinese central bank latitude to begin easing monetary policy aggressively.

China: Shanghai: Price of Existing Residential Buildings % Change - Annual Rate NSA, 2010=100

China: Shanghai: Price of New Residential Buildings % Change - Annual Rate NSA, 2010=100

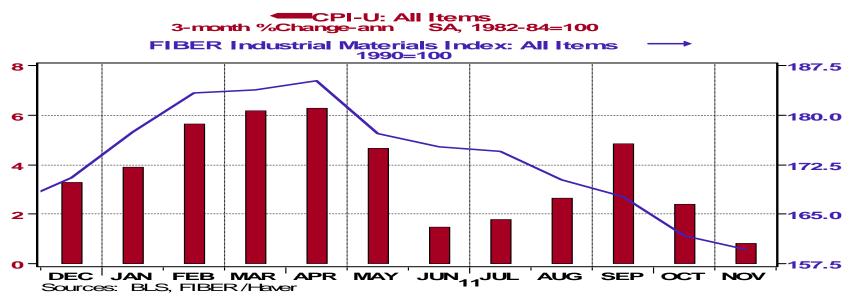






After spiking in the first half of 2011, U.S. inflation now is moderating.

- The first-half spike in U.S. inflation resulted from a surge in commodity prices, which was due to the overheating of developing economies and concerns about interruptions in the supply of North African oil.
- With growth slowing in developing economies, commodity prices are falling.
- Despite a moderate pick up in U.S. bank credit growth, *global* bank credit growth is moderating, which implies that global inflation also will moderate.
- With global inflation moderating, central banks will have the latitude to pursue more accommodative monetary policies if need be.





Con

Conclusions

- Europe, collectively the largest economy in the world, likely has entered a mild but prolonged recession, which will have an adverse effect on the rest of the world's exports, including those of the U.S.
- Prior to the onset of the European recession, growth in developing economies was moderating in reaction to deliberate tightening policies of central banks. The European recession will further moderate growth in the developing economies.
- Assuming continued growth in bank credit, the U.S. economy is likely to avoid slipping back into a recession in the next 12 months as moderate strength in domestic demand offsets weaker foreign demand.
- Although a recession is likely to be avoided, U.S. growth will not be sufficient to bring down the unemployment rate significantly, which, in the context of moderating inflation, could prompt another round of Federal Reserve asset purchases, i.e., quantitative easing (QE).
- The Federal Reserve will keep the federal funds rate near zero and the ECB will continue to lower its policy interest rate. Central banks in developing economies will ease their policies aggressively.
- Sluggish global economic growth and the sovereign-debt problems in the eurozone are likely to keep global investors' risk aversion at a relatively high level.

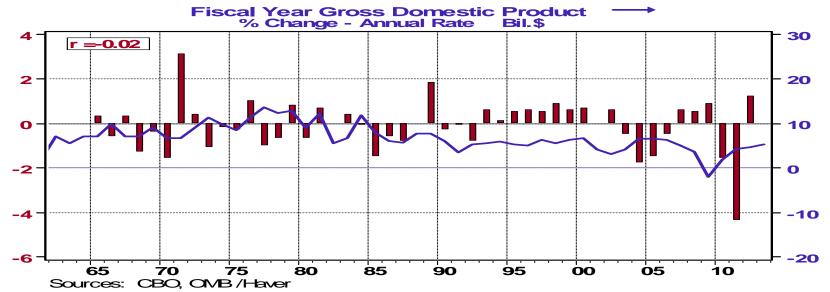




Appendix: Effect of Fiscal Policy Changes on Economic Activity?

- According to mainstream commentary, a tax cut and/or government spending increase is supposed to result in faster economic growth.
- Thus, according to mainstream commentary, changes in the cyclically-adjusted federal deficit should be *negatively* correlated with changes in GDP.
- That is, a tax cut and/or an increase in government spending resulting in a larger cyclically-adjusted federal deficit should be associated with faster GDP growth.
- Almost 50 years of U.S. data show no significant relationship, i.e., a very low correlation coefficient, between changes in government deficits and changes in GDP.









Why might there no significant relationship between fiscal policy and economic activity?

- If the government borrows more, it has to get the extra funds from somewhere from either the nonfinancial sector or the financial sector.
- If the government obtains the funds from the nonfinancial sector, this sector cuts back on its current spending, i.e., increases its saving, and *transfers* spending power to the government.
- Thus, an increase in government borrowing financed by the nonfinancial sector results in *no net* change in aggregate spending, just a change in the *composition* of spending.
- In contrast, if the government obtains the funds from the financial sector, which is able to create credit "out of thin air," then an increase in government borrowing *can* result in a net increase in aggregate spending.

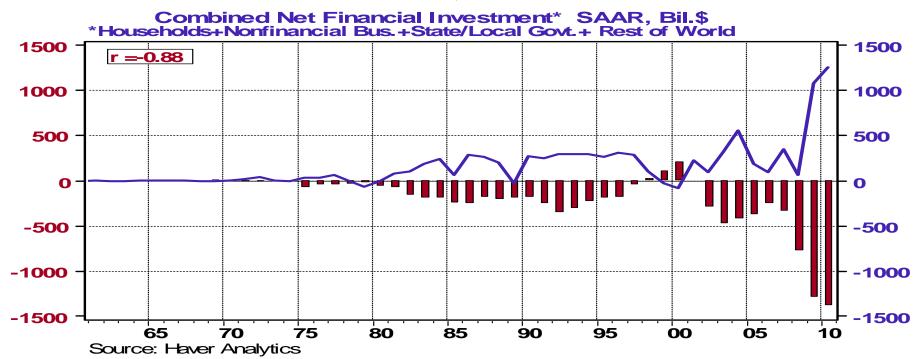




The historical data show that increases in federal government borrowing are closely associated with increases in nonfinancial sector saving by nearly the same magnitude.

- Income + Borrowing = Spending on Nonfinancial Goods/Services/Assets + Acquisition of Financial Assets
- Income Spending = Acquisition of Financial Assets Borrowing
- Income Spending = Saving; Acquisition of Financial Assets Borrowing = Net Financial Investment
- Saving = Net Financial Investment

U.S. Government: Net Financial Investment SAAR, Bil.\$







US Economic and Interest Rate Outlook, December 2011

Table 1: US GDP, Inflation, and Unemployment Rate

| | <u>2011</u> | | | | <u>2012</u> | | | | Q4 to Q4 change | | | Annual change | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------|--------------|--------------|---------------|--------------|--------------|
| | <u>11:1a</u> | <u>11:2a</u> | <u>11:3a</u> | <u>11:4f</u> | <u>12:1f</u> | <u>12:2f</u> | <u>12:3f</u> | <u>12:4f</u> | <u>2010a</u> | <u>2011f</u> | <u>2012f</u> | <u>2010a</u> | <u>2011f</u> | <u>2012f</u> |
| REAL GROSS DOMESTIC PRODUCT (% change, SAAR) | | | | | | | | | | | | | | |
| Dec-2011 | 0.4 | 1.3 | 2.0 | 3.5 | 2.1 | 2.3 | 2.8 | 3.3 | 3.1 | 1.8 | 2.6 | 3.0 | 1.8 | 2.5 |
| Nov-2011 | 0.4 | 1.3 | 2.5 | 2.2 | 1.5 | 2.0 | 2.2 | 2.8 | 3.1 | 1.6 | 2.1 | 3.0 | 1.8 | 2.0 |
| | | | | | | | | | | | | | | |
| CONSUMER PRICE INDEX (% change, ann. rate) | | | | | | | | | | | | | | |
| Dec-2011 | 5.2 | 4.1 | 3.1 | 1.1 | 1.6 | 1.7 | 1.9 | 2.3 | 1.2 | 3.4 | 1.9 | 1.6 | 3.2 | 2.0 |
| Nov-2011 | 5.2 | 4.1 | 3.1 | 2.4 | 1.9 | 1.7 | 1.9 | 2.3 | 1.2 | 3.7 | 2.0 | 1.6 | 3.2 | 2.3 |
| | | | | | | | | | | | | | | |
| CIVILIAN UNEMPLOYMENT RATE (avg.) | | | | | | | | | | | | | | |
| Dec-2011 | 8.9 | 9.1 | 9.1 | 8.8 | 8.7 | 8.7 | 8.5 | 8.3 | | | | 9.6* | 9.0* | 8.6* |
| Nov-2011 | 8.9 | 9.1 | 9.1 | 9.1 | 9.3 | 9.4 | 9.3 | 9.1 | | | | 9.6* | 9.0* | 9.3* |

a=actual

f= forecast



^{* -} annual average



US Economic and Interest Rate Outlook, December 2011

Table 2: Outlook for Interest Rates

| | | | Annual Average | | | | | | | | |
|----------------------|--------------|--------------|----------------|--------------|--------------|--------------|-------|-------|--------------|--------------|--------------|
| | <u>11:1a</u> | <u>11:2a</u> | <u>11:3a</u> | <u>11:4f</u> | <u>12:1f</u> | <u>12:2f</u> | 12:3f | 12:4f | <u>2010a</u> | <u>2011f</u> | <u>2012f</u> |
| Federal Funds | | | | | | | | | | | |
| Dec-2011 | 0.16 | 0.09 | 0.08 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.18 | 0.11 | 0.10 |
| Nov-2011 | 0.16 | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.18 | 0.11 | 0.10 |
| | | | | | | | | | | | |
| 2-yr. Treasury Note | | | | | | | | | | | |
| Dec-2011 | 0.69 | 0.57 | 0.28 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.70 | 0.45 | 0.25 |
| Nov-2011 | 0.69 | 0.57 | 0.28 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.70 | 0.45 | 0.25 |
| | | | | | | | | | | | |
| 10-yr. Treasury Note | | | | | | | | | | | |
| Dec-2011 | 3.46 | 3.21 | 2.43 | 2.10 | 2.05 | 2.05 | 2.20 | 2.50 | 3.21 | 3.14 | 2.20 |
| Nov-2011 | 3.46 | 3.21 | 2.43 | 2.10 | 2.05 | 2.05 | 2.20 | 2.50 | 3.21 | 3.14 | 2.36 |

a = actual

f = forecast

