

Research

16 April 2012 | 113 pages

Q2 2012 Commodity Update

Unfolding Tail Risks...

- **Commodity markets** are reflecting increased differentiation as a group, with most of the asset class range bound and driven by macroeconomic factors and relatively balanced fundamentals. Uneven performance is expected to continue through 2012. The tail risk story outlined in Citi's 2012 Commodity Outlook earlier this year continues to pervade the sector; unfolding supply disruptions, uncertainty surrounding China's growth and policy and the Euro Area sovereign credit crisis thus remain dominant macro themes.
- **Energy:** Oil prices look range bound for now. The market is struggling to replace Iranian barrels lost with US and EU sanctions but 1Q still saw the first global inventory build in two years; so some slack is finding its way into the market although stocks remain low and geopolitical tensions remain high. Brent spreads continue to have spike potential and remain our preferred way of playing a surprise supply disruption. Gasoline should continue to perform into the summer. **US natural gas** would be neutral at these levels, with forced coal burn and storage congestion as a result of high inventory in the Producing region in the South as potential concerns. Citi initiates calls and coverage on NBP and Global LNG this quarter.
- **Industrials:** prices, as a basket, are forecast to be range bound over the short and medium term. Within the complex there are likely to be vastly different outcomes for each bucket. In the near term, individual industrial commodities are likely to be driven by supply shocks and cost push rather than a significant demand shock. In the medium term, we expect to see the transition to later cycle commodities, which should benefit the base and precious metals over bulk commodities. The conviction calls, relative to the forward curve, are in palladium, nickel, and gold on the bullish side and copper and silver on the bearish side. **Gold** prices should remain supported given low real interest rates and continued financial interest from central banks and private investors. However, price action could be volatile as markets are caught between changing inflation and monetary policy expectations, political turnover and sudden demand for liquidity.
- **Agriculture:** bullish-to-neutral bias on a fundamental basis, expecting corn and oilseeds to set the tone for the market. 2012 forecast for grains and soybeans are upgraded although a less constructive view is held for the thinly traded soft commodity complex. LatAm supply disruptions are an ongoing concern likely to tighten US export markets this summer and potentially into 2013. Chinese stockpiling and import demand should further strain balances and support prices. Vis-à-vis the forward curve, soybeans and coarse grains appear more favorable against a robustly supplied wheat market.

Figure 1. Short-Term Commodity Outlook*

	Energy	Base Metals	Precious Metals	Bulks	Agriculture
Current View	Neutral	Neutral	Slightly Bullish	Slightly Bearish	Slightly Bullish
End of 2012	Bullish	Slightly Bullish	Slightly Bullish	Neutral	Neutral

Source: Citi Investment Research and Analysis, *subject to change

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

- Quarterly
- Global Macro
- Commodities

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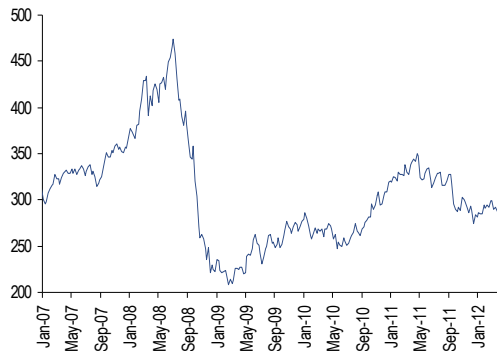
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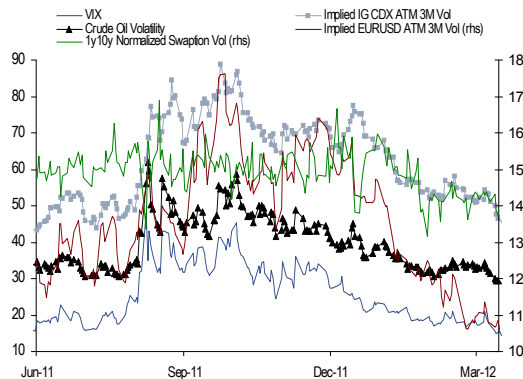
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Figure 2. Dow-Jones UBS Total Return Index



Source: Bloomberg, Citi Investment Research and Analysis

1Q Market Volatility: Equities, Crude Oil, Credit, Rates and FX



Source: CBOE, IG Credit Trading, Citi Investment Research and Analysis

Commodities 2012: False Starts, Head Starts, Headwinds, Tailwinds...and ever present Tail Risks...

Commodity land has thus far in 2012 evoked mixed metaphors and mixed signals. There have been false starts reflected in far higher prices than expected in copper, iron ore and some other commodities partly as a result of inventory management in China. Gasoline and crude oil provided head starts with expectations of tighter markets to come, especially this summer. The global macro economic and risk environment continues to improve, but both lower global growth and continuing systemic threats provide strong headwinds to demand and looser balances in industrial metals as the year progresses. China's softer landing than some had anticipated, along with the country's predominant position in global commodity demand, is nonetheless providing strong but not robust countervailing tailwinds.

Still the tail risk story outlined in Citi's 2012 Commodity Outlook early this year continues to pervade the sector. Tail risks abound, whether arising from politically-induced supply disruptions in oil, from weather-related factors in bulk commodity producers like Australia, or from moisture and heat conditions impacting the agriculture sector, where improved inventories may be just short of enough. Both crude oil and grains, along with some other soft commodities provide attractive risk/reward returns in the eventuality that tail risks materialize.

China's appetite for commodities remains a dominant issue for individual commodity demand, but Chinese growth is no longer the monolithic force it was last decade. To be sure, when it comes to oil, continued infrastructure demand and heightened strategic stock needs are propelling apparent demand. But China's soft landing and lower expected growth path, even in the event of greater monetary easing as the year progresses, means a reduced pace of fixed asset investment and reduced demand for industrial metals. Reforms are also picking up the pace of rationalization in such areas as refining and metal fabrication, also reducing the pace of commodity demand growth. And internal investment in China in numerous commodities and added value processes are further commodity fundamentals.

China's increasingly differentiated impact across commodities is providing abundant evidence that the coordinated commodity super cycle of the last decade may be coming to an end, creating challenges for investors and the financial services sector when it comes to differentiating investment opportunities both in terms of time spreads and relative value relationship; further eroding the long-term attraction of earlier generation long-only strategies. The investment cycle has been completed for North American natural gas where high prices in the last decade spurred on an explosion of supply and lower prices, which are now seeing an emergent demand response. Similar, if less dramatic cyclical investment trends are appearing across base metals, albeit a bit slower and less dramatically than in US and Canadian natural gas.

While macroeconomic growth continues to drive commodity demand, macroeconomic and political risks drive the currency side of the business along with precious metals. The divergent movement of economic and monetary conditions in the US and Euro Area should continue to see US dollar strengthening over time, albeit in fits and starts, but nonetheless being a persistent head wind for commodities prices. And dollar strength of higher growth should dent but not reverse returns from gold and other precious metals investments.

- Edward L. Morse
Global Head of Commodity Research



Forecast Table

Figure 3. 2Q'12 Commodity Price Forecasts*

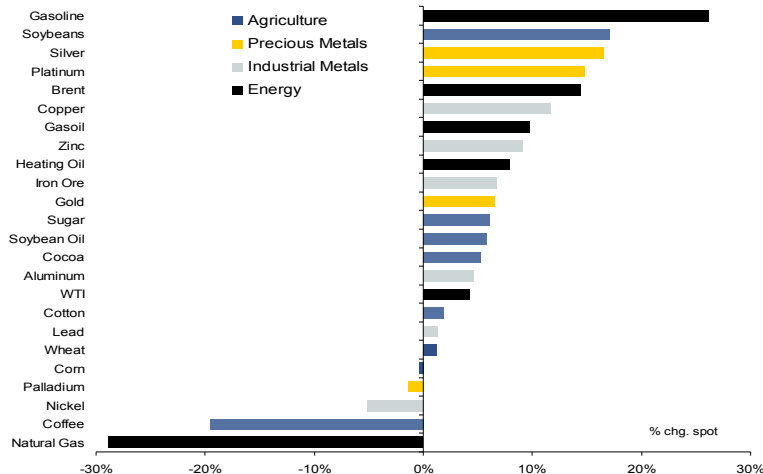
		Recent Spot	5Y Cyclical	Q1_2012	Q2_2012E	Q3_2012E	Q4_2012E	2012E	Q1_2013E	Q2_2013E	Q3_2013E	Q4_2013E	2013E
Energy													
NYMEX WTI	USD/bbl	102.9	81.0	103.0	105.0	115.0	105.0	106.0	N/A	N/A	N/A	N/A	113.0
ICE Brent	USD/bbl	121.4	85.0	118.4	125.0	130.0	125.0	125.0	N/A	N/A	N/A	N/A	120.0
Henry Hub Natural Gas	USD/MMBtu	2.0	N/A	2.5	2.4	2.6	2.3	2.5	3.1	3.5	3.8	3.7	3.6
Base Metals													
LME Aluminum	USD/MT	2,059	2,500	2,216	2,250	2,300	2,350	2,279	2,350	2,380	2,420	2,400	2,388
LME Copper	USD/MT	7,997	7,500	8,314	8,500	8,550	8,600	8,491	8,500	8,360	8,340	8,300	8,375
LME Lead	USD/MT	2,065	2,300	2,118	2,100	2,175	2,250	2,161	2,300	2,250	2,250	2,300	2,275
LME Nickel	USD/MT	18,292	22,000	19,721	18,500	19,000	20,500	19,430	22,550	22,475	23,000	23,250	22,819
LME Tin	USD/MT	22,187	24,500	22,986	22,500	23,000	23,500	22,997	25,000	26,000	26,500	25,000	25,625
LME Zinc	USD/MT	1,981	2,300	2,042	2,050	2,150	2,240	2,121	2,275	2,300	2,280	2,350	2,301
Precious Metals													
Gold	USD/T. oz	1,652	1,050	1,691	1,680	1,740	1,760	1720.0	1820	1890	1840	1790	1835
Silver	USD/T. oz	31.5	15	32.7	31.0	29.5	29.0	30.6	28.3	27.5	26.8	26.0	27.1
Platinum	USD/T. oz	1,583	1,500	1,604	1,675	1,725	1,725	1682.0	1725.0	1725.0	1725.0	1725.0	1725.0
Palladium	USD/T. oz	644	600	683	750	870	900	801.0	925.0	925.0	925.0	925.0	925.0
Bulk Commodities													
Hard Coking Coal (benchmark Asia)	USD/MT	285	220	235	215	235	245	233	235	235	230	225	231
Thermal Coal Asia (NEWC)	USD/MT	105	105	116	114	120	125	119	130	135	140	140	136
Iron Ore Spot (TSI)	USD/MT	149	100	142	160	150	145	149	140	140	135	135	138
Agriculture													
Corn	USD/bu	628	N/A	641	660	640	620	640	600	610	590	600	600
Wheat	USD/bu	623	N/A	643	650	630	630	638	640	660	700	700	675
Soybeans	USD/bu	1,437	N/A	1,272	1,425	1,400	1,380	1,369	1325	1305	1305	1275	1,303
Rice	USD/cwt	15	N/A	14.31	15.15	15.05	15.10	14.90	15.15	15.20	15.25	15.00	15.15
Cotton	USD/lb	92	N/A	93	90	90	90	91	N/A	N/A	N/A	N/A	90
Sugar	USD/lb	23	N/A	24.5	24.0	24.0	25.0	24.4	N/A	N/A	N/A	N/A	24.0
Coffee	USD/lb	179	N/A	205	185	185	180	189	N/A	N/A	N/A	N/A	200
Cocoa	USD/MT	2,248	N/A	2,308	2,275	2,315	2,300	2,300	N/A	N/A	N/A	N/A	2,400

Source: Citi Investment Research and Analysis, *subject to revision, **not rounded



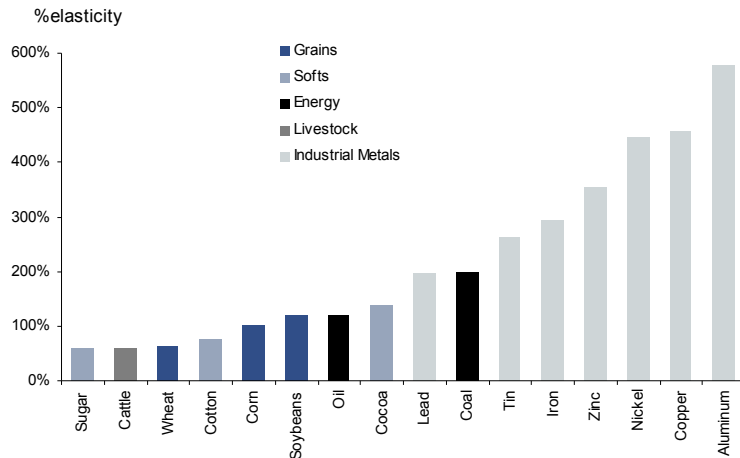
Macro Themes

Figure 4. Individual Commodity Performance in 1Q 2012



Source: Bloomberg, Citi Investment Research and Analysis

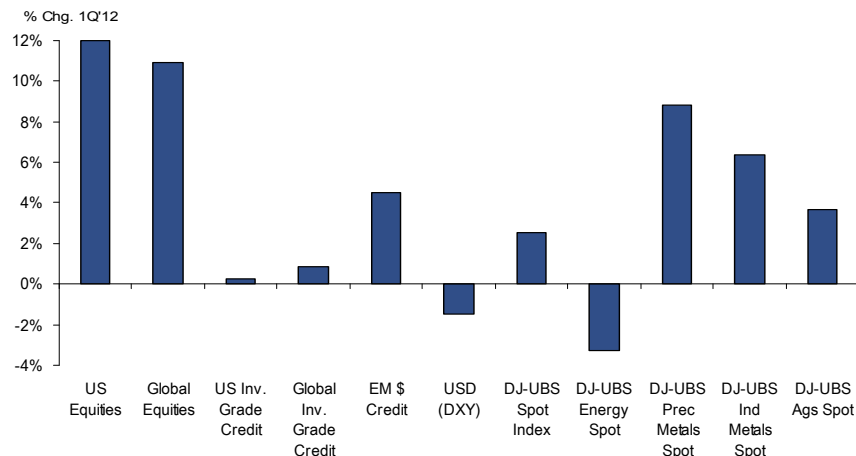
Figure 5. Sensitivity of Commodity Demand to Global Real GDP



Source: Haver Analytics, Citi Investment Research and Analysis

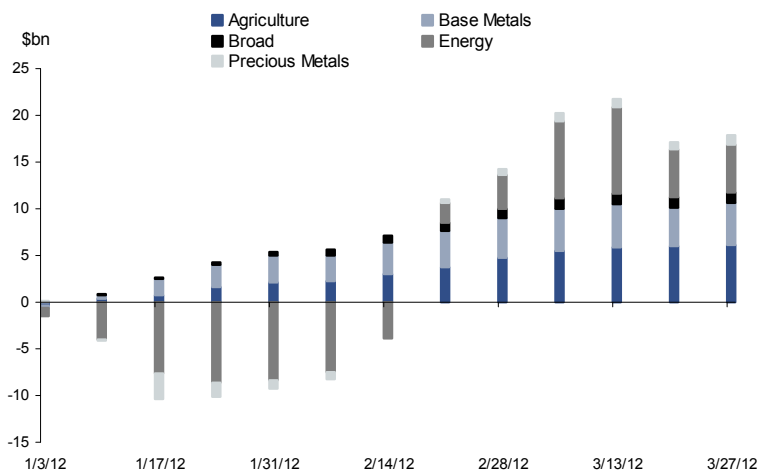
- On the whole, commodity markets are reflecting increased differentiation as a group, with most of the asset class range bound and driven by macroeconomic factors and relatively balanced fundamentals. This uneven performance is expected to continue through the year.
- Tail risk supply issues as Citi had forecast dominated the oil market in Q1 and are likely to again in Q2 and through the year. But energy actually held both positions on either extreme of performance. US gasoline has rocketed up thanks to refining shutdowns in the Atlantic squeezed by higher crude input costs. Meanwhile, US natural gas continued to be a notable underperformer, reflecting the overpowering supply glut and weak demand amid unusually mild weather. US natural gas has clearly entered a radically different cycle and phase.
- Within the metals complex, a similar bracket is unfolding as seen between copper and nickel, with industrial metals as a whole entering what may be a more supply abundant phase.
- Going forward, commodities should continue to reflect overall global economic conditions, with energy and agricultural commodities remaining highly sensitive to geopolitical and weather risks. Indeed, supply-driven oil price spikes remain one of the three key tail risks to watch.
- Industrial metals and bulk commodities are closely tied to the global economic business cycle. In particular, they are impacted by the Chinese economy, which is showing signs of cooling and may signal structural pauses ahead. Strong disagreement continues about the ability of Chinese policymakers to control their imbalanced and leveraged economy. Structural reform looks likely to move away from investment-intensive forms of growth and from support to energy intensive industries such as metal fabrication. But further monetary easing should be generally supportive of commodity demand.
- Meanwhile, precious metals are slowing down from their rapid appreciation of 2009 and 2010. Stronger US economic performance has diminished expectations of more Fed QE3, while continued ECB monetary expansion should weaken the euro relative to the US dollar in the short-term.

Figure 6. Commodity Sector and Other Asset Class Performance in 1Q 2012



Source: Bloomberg, Citi Investment Research and Analysis

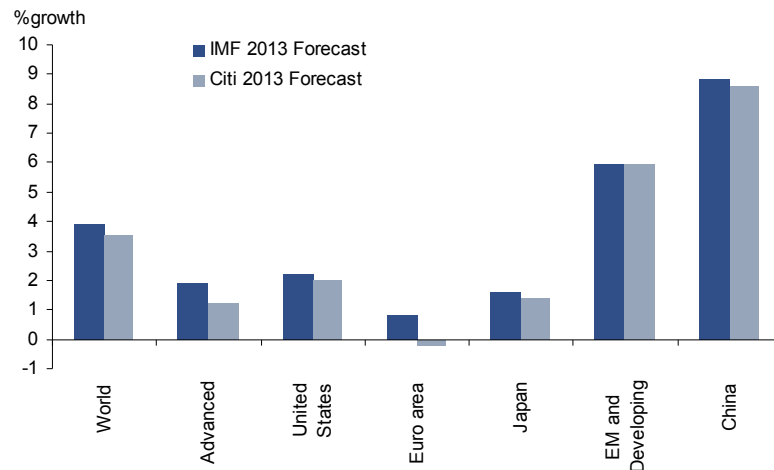
Figure 7. Cumulative Financial Net Flows by Commodity Sector



Source: CFTC, Citi Investment Research and Analysis

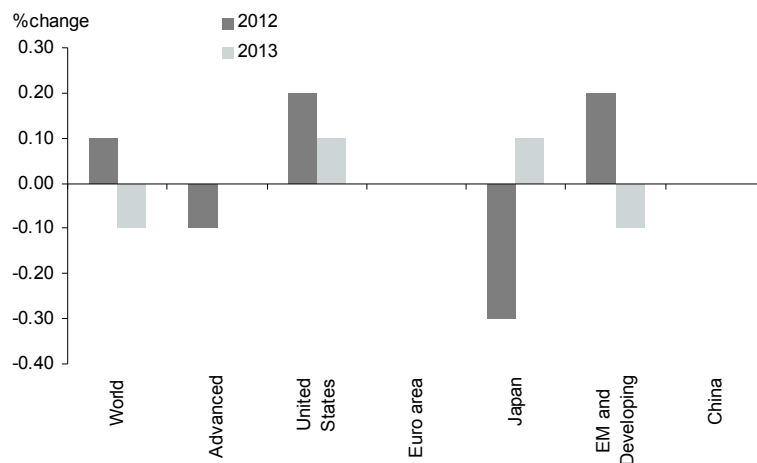
- The overall theme of the previous quarterly outlook was “tail risk,” stemming from large economic uncertainties in the developed and developing world, a cluster of major political elections and regime changes, economic and political pressures from high food and energy prices, and ever-present weather and natural disaster risks.
- In particular, three major tail risks were highlighted: geopolitical risk in oil markets, a potential meltdown in the Eurozone and a “hard landing” in China. All three risks have seen substantial evolution since the beginning of the year, and this quarter’s theme is one of unfolding tail risks.
- Oil prices remain elevated and tensions high as the European embargo of Iranian exports tightens markets. On the other hand, the Eurozone has bought some breathing room with large liquidity injections. Finally, while there are some signs of slowing, China may be shifting again to a more accommodative policy stance.
- On the whole, commodity spot prices advanced nearly 3% during 1Q’12 as compared to a 12% appreciation of large-cap US equities.
- Financial investment into commodities from passive indices and exchange traded-products (ETPs) have followed the general “risk-on” rally that also saw US and global equities perform strongly at the expense of bonds thanks to heavy liquidity injections and stronger economic data.
- Overall, Q1 2012 was off to a fairly strong start, with estimates of cumulative inflows in commodities at \$15bn as of March 27, 2012 since the beginning of January. This compares to a peak of \$19bn earlier in the month.
- Investment in energy commodities were initially negative but then reversed course in February and have contributed a net \$4bn of financial investment since the beginning of the year, while agricultural commodities have seen a cumulative investment over \$6bn, and investment in base and precious metals together have contributed another \$4bn.
- Similar to the lack of direction for commodity fundamentals, financial investment in commodities have moderated since 2009 but continues to add some volatility to the picture.

Figure 8. Citi and IMF Economic Forecasts for 2013



Source: IMF, Citi Investment Research and Analysis

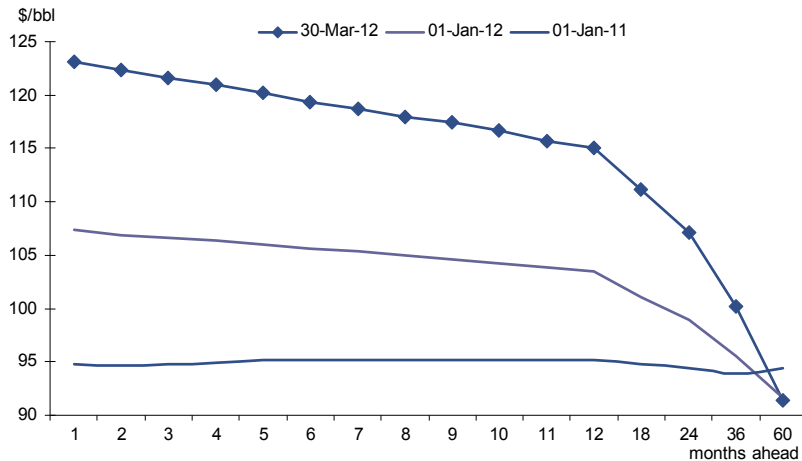
Figure 9. Change in Citi Economic Forecast since Previous Quarter



Source: Citi Investment Research and Analysis

- Citi's economic forecast sees global real GDP growth (in PPP terms) falling from +3.7% growth in 2011 to +3.1% growth in 2012 before recovering to +3.5% growth in 2013, slightly more pessimistic than the latest IMF *World Economic Outlook Update* from January 2012. Since the previous quarter, Citi has upgraded global growth forecasts in 2012 by +0.1% but shaved growth in 2013 by -0.1%.
- Advanced economies are facing continued headwinds to stronger growth, with a brighter US balanced by a still weak Japan and a worsening Europe. Citi forecasts advanced economies to grow a mediocre +0.8% in 2012 and a stronger +1.2% in 2013.
- In the US, positive news has driven upside growth expectations and forecast revisions, leading to the largest US-EMU divergence in many years. Improving labor market conditions, mild weather, and a modest revival in certain sectors of the housing market, are all pointing to a possibly strengthening recovery. However, broad tax hikes and spending cuts currently in law cast a shadow over 2013. But this is balanced by weak growth in Japan and a recession in the Eurozone that is expected to continue into 2013.
- Despite some recent stabilization and mild upward forecast revisions, the Eurozone remains a source of tremendous concern. Most positive economic news is in the "core" economies such as Germany and France, and not in the troubled periphery nations.
- As in the previous two years, a strong initial rally in risk assets may stall as sentiment gets ahead of underlying economic conditions and central banks pull back from further stimulus. Central banks are expected to remain accommodative but the Fed may restrict itself to reserve-neutral MBS purchases instead of outright QE3 while the ECB may cut rates and deploy more long-term refinancing operations (LTRO) if conditions merit it.
- As usual, the emerging and developing economies remain the engine of world economic growth, forecast to grow +5.3% in 2012 and +5.9% in 2013.
- Despite a recent slowdown in Chinese manufacturing and other indicators, Citi believes the hype over a potential "hard landing" is somewhat overdone, and expects Chinese growth to remain intact substantially above the +7.5% official target level.

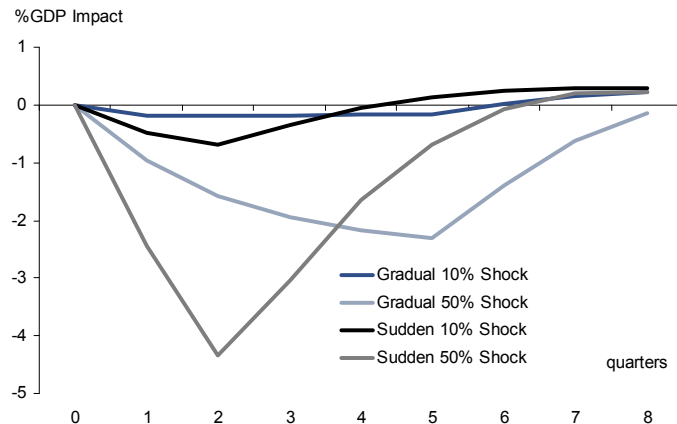
Figure 10. Brent Crude Oil Price Futures Curve



Source: Bloomberg, Citi Investment Research and Analysis

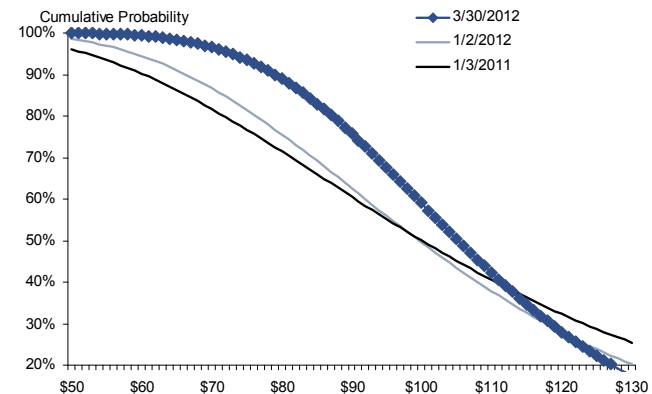
- Geopolitical tensions around the Iranian oil export embargo have flared as markets struggled to absorb and price the risk of military conflict in the Strait of Hormuz. Falling Iranian loadings and low inventories east-of-Suez heading into the summer refining season should be supportive of crude prices through Q2, with Brent prices remaining at around \$125/bbl.
- Policymakers worried over the economic and political impact of high oil prices have strived to respond, including promises of ample supply by Saudi oil minister Al-Naimi and international efforts potentially to coordinate a strategic stockpile release. Nevertheless, upside risks remain and a sudden 50% increase in real oil prices (to \$175-180/bbl for Brent in case of a shutting of the Strait of Hormuz) may be sufficient to drive a technical recession in the US.
- On the other hand, options markets have stabilized with less positioning and pricing into far out-of-the-money strikes. Also, Brent oil futures curves have moved into structural backwardation since last year, with long-dated futures stabilizing in a \$90-95/bbl range having recently moved upward.

Figure 11. Estimated Impact on US Real GDP Growth of an Increase in the Real Price of Oil



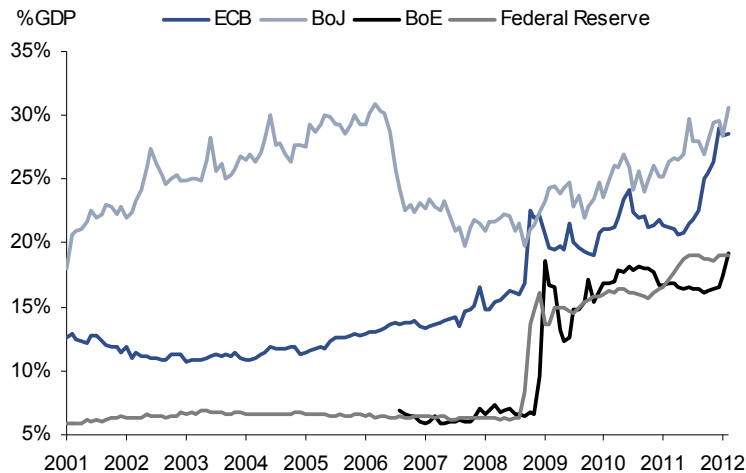
Source: Bloomberg, Federal Reserve, Citi Investment Research and Analysis

Figure 12. Option-Implied Probability of Dec-12 WTI Prices exceeding Strike Price



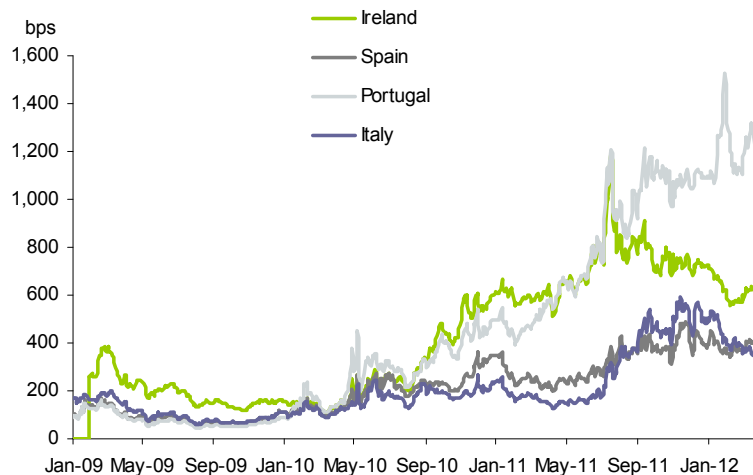
Source: Bloomberg, Federal Reserve, Citi Investment Research and Analysis

Figure 13. Central Bank Total Assets on Balance Sheet as % of GDP



Source: Bloomberg, Citi Investment Research and Analysis

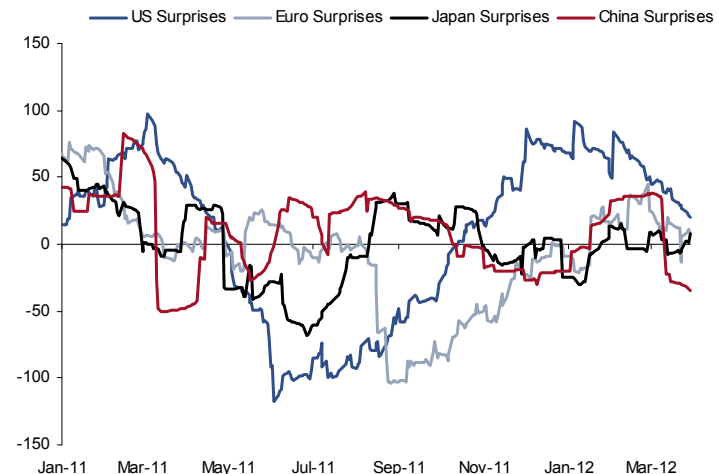
Figure 14. Sovereign CDS for selected Eurozone Periphery Nations



Source: Bloomberg, Citi Investment Research and Analysis

- Last year, attention focused on the tail risk of a default or messy restructuring of sovereign debt in the Eurozone periphery, with fears of damaging financial contagion or even a breakup of the monetary union.
- But markets subsequently stabilized as the ECB unleashed massive LTRO liquidity measures worth €489bn in Dec 2011 and a further €530bn in Feb 2012. This propelled the ECB's balance sheet to expand by some 5-6% of GDP since mid-2011.
- Nevertheless, LTROs can only buy time and do nothing to address the structural problems at the heart of the crisis. Five year CDS levels for key EMU peripheries appear to have stabilized but remain elevated. To be sure, part of the credit spread tightening might be in advance of the upcoming short-selling ban on sovereign CDS as the sell-off in Spanish and Italian cash markets has been more pronounced in recent weeks. Despite its recent debt restructuring, Greece's fiscal path remains unsustainable, in our view, and further bailouts are likely necessary for Portugal and Ireland. Fiscal retrenchment is hitting the Spanish economy hard, weakening its public finances by reducing revenue despite austerity. Citi's view is that the EMU sovereign crisis is far from over.

Figure 15. Citi Economic Surprise Indices for Selected Major Economies

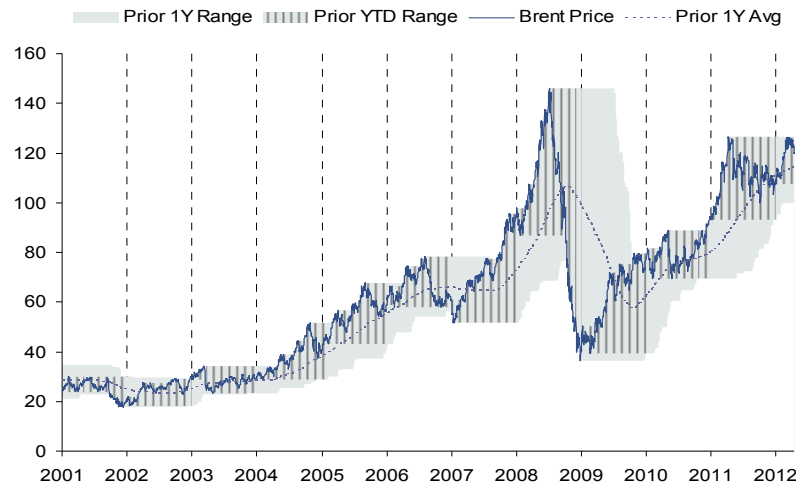


Source: Citi Investment Research and Analysis



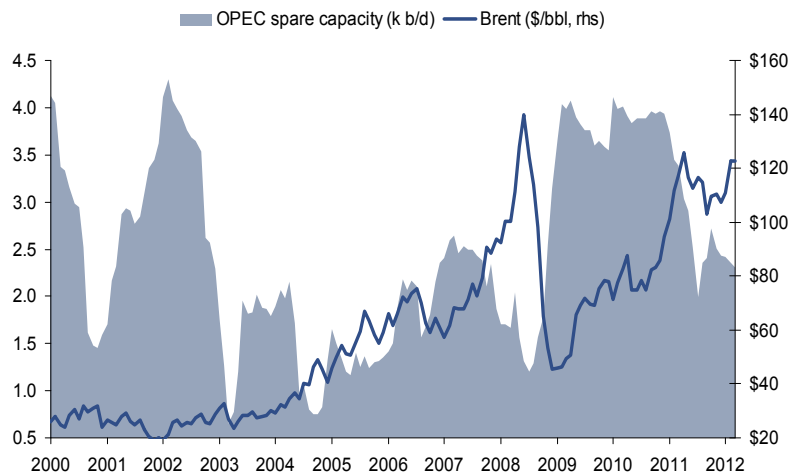
Energy

Figure 16. Brent - \$/bbl – range-bound for now



Source: Bloomberg, Citi Investment Research and Analysis

Figure 17. Global spare capacity could approach zero over the summer – m b/d

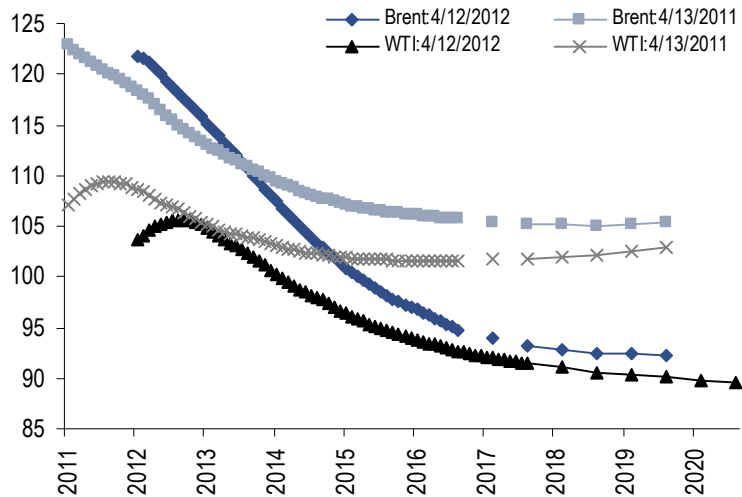


Source: Bloomberg, Citi Investment Research and Analysis

Crude Oil

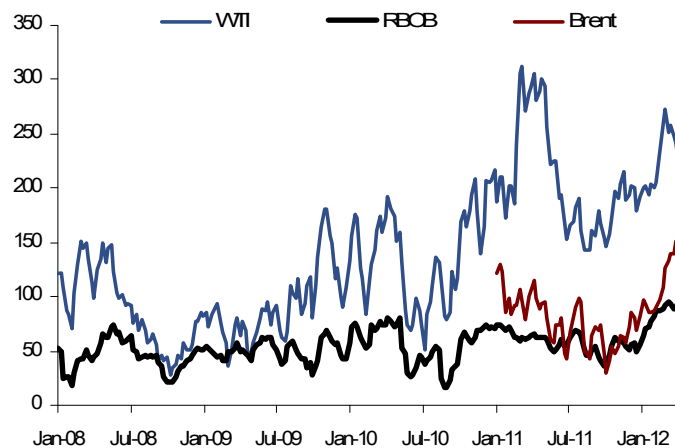
- The Brent market remains supported at current price levels and it looks like a record high annual price is being set in 2012 and another new high could be set in 2013 at \$130/bbl – buy Brent structure on any weakness, while summer gasoline looks like it has further to run.
- Inventories are building, but remain low where visible (except for the US). China and Saudi Arabia have both been building crude stocks, but these are largely invisible to the market. As Saudi inventories move out of their storage and into OECD inventories their weight on the market should increase, but the seasonal rise in crude demand should ensure that they get absorbed fairly easily.
- It is looking very likely that there will be an SPR release which would add more weight to the market, but any sell-off would likely be short-lived. Iran's nuclear program is the issue, and we believe there is little probability of this getting resolved soon.
- The market is facing the prospect of a prolonged stand off and tightening sanctions that will see increased volumes of Iranian crude getting removed from the market starting in May. Saudi Arabia says it should be able to replace the lost barrels, but this could stress test their own capacity and the market will take time to be assured that this is in fact adequate. Saudi Arabia has substantial oil in tank to draw on to meet the summer demand surge, over and above its production capacity.
- The market is going into the summer with limited spare capacity while Iranian loadings continue to trend lower, and the list of other supply disruptions and risks remains long and ominous. Iraq remains a key risk, though Nigeria and Venezuela also need watching.
- The US continues its slow march towards energy independence with the ongoing surge in shale oil production now bolstered by the return of GOM production lost post-Macondo.

Figure 18. Crude Oil Futures Curves - \$/bbl



Source: Bloomberg, Citi Investment Research and Analysis

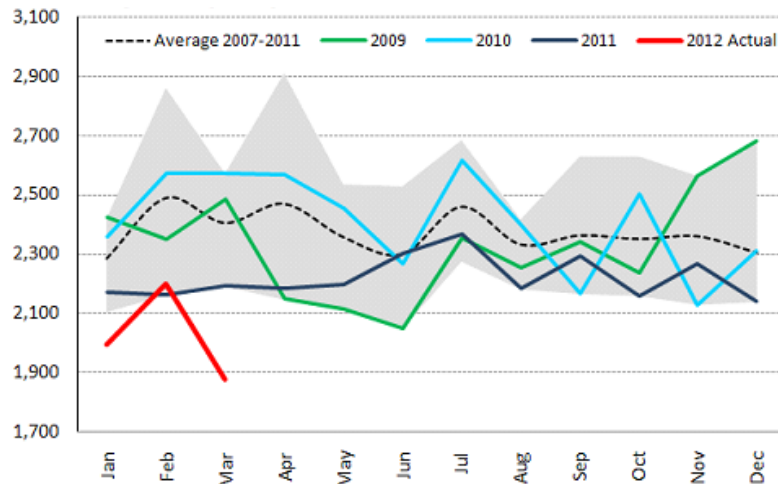
Figure 19. Managed Money Net Length in 1,000 contracts – the market is long everything, especially gasoline



Source: CFTC, Citi Investment Research and Analysis

- Brent prices are not that different to one year ago in the prompt, but deferred prices are significantly lower as the degree of backwardation in the Brent curve has hit new highs. The difference between prompt and 5-year futures made record highs and stayed above \$30/bbl for all of March. This reflects several factors – the extreme tightness in the front of the market and the fears of a major supply disruption; the significant volumes of producer hedging being done further down the curve and the lower appetite for long-term hedges on the part of cash- and credit-strapped consumers (e.g. airlines) and to some extent the changing dynamics of supply that the market is seeing in the United States with the shale oil revolution still gaining pace.
- Tensions with Iran and further drops in Iranian loadings look set to support the crude market, and the US gasoline season remains bullish going into the summer, giving the market another leg of support.
- The market looks well supported and price risk remains slanted to the upside, but there are several important bearish risks to highlight:
- Iran could give up its nuclear program. This remains unlikely but there have been repeated discussions of talks; further news flow could prompt some selling before the genuine impasse reasserts itself again.
- The macro economy remains supportive but there are always risks and Citi's economics team is increasingly concerned about Spain's fiscal stability. A resumption of panic about the future of the euro and the likely resulting rally in the USD would dent oil price strength. In the event of a significant macro sell-off, oil prices would likely go down, but still outperform.
- Saudi production could surprise to the upside and hold at levels high enough to both replace lost Iranian barrels and replenish global inventories. This is the biggest bearish risk and the physical crude oil market would be the first indicator that the Saudis are doing enough. The Saudis have over 250-m bbls of crude in storage (according to JODI data) and they can draw down on these stocks to meet the summer crude demand surge.

Figure 20. Iranian Crude Exports – k b/d

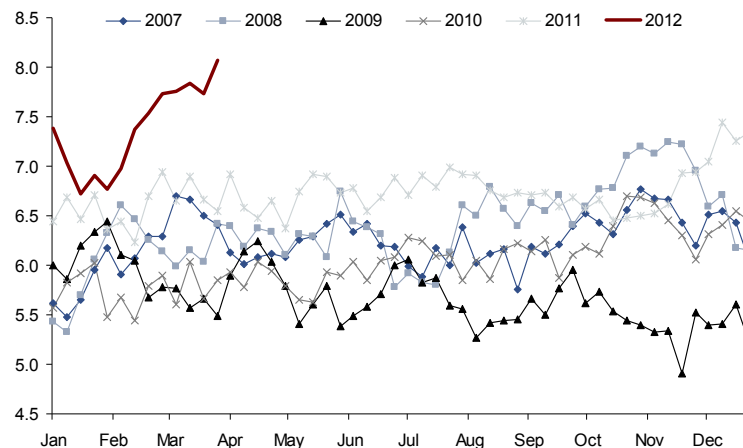


Source: Citi Investment Research and Analysis

Iran continues to underpin the crude market

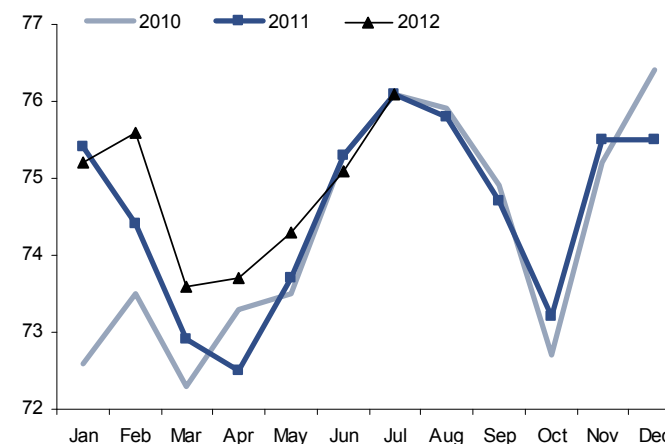
- US financial sanctions on anyone dealing with the Iranian central bank, coupled with the looming EU embargo on Iranian crude that takes effect July 1, should accelerate the removal of Iranian barrels from the market come late May and early June, but the reduction is already clearly visible in the steep drop in Iranian loadings.
- Saudi Arabia is stepping in to fill the gap, but between April and July global crude demand should rise by 1.5- to 2-m b/d. Saudi Arabia is already producing close to 10-m b/d, and say they might go to 10.5-m b/d. So meeting the seasonal rise in global crude demand (on top of their own seasonal domestic rise in crude burn for power generation) would require them to draw down inventory from at home and abroad, and is likely in any event to reduce global capacity further.
- Crude markets globally (excluding onshore US) are strong, with robust backwardation and decent physical premiums. Given that the market is trading the trough of global crude demand now and is still fairly firm, it is hard to get bearish on crude.

Figure 21. Saudi Loadings – m b/d



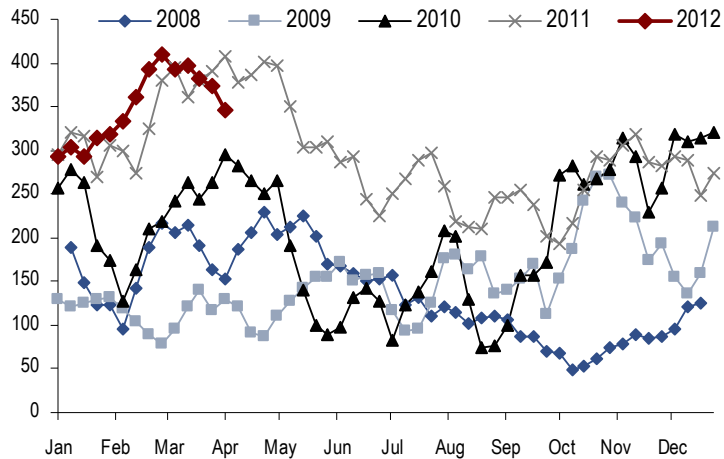
Source: Citi Investment Research and Analysis

Figure 22. Global Refinery Crude Runs – m b/d



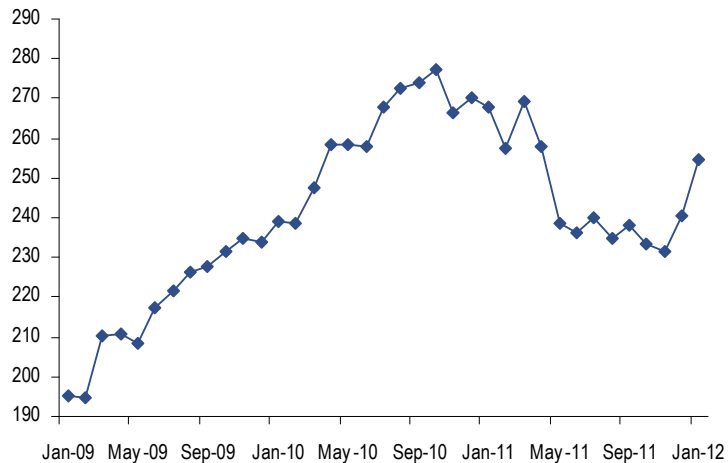
Source: IEA, Citi Investment Research and Analysis

Figure 23. Managed Money Net Length in WTI, RBOB and Heating oil – 1,000 contracts



Source: CFTC, Citi Investment Research and Analysis

Figure 24. Saudi Arabia Crude Inventories – m bbls

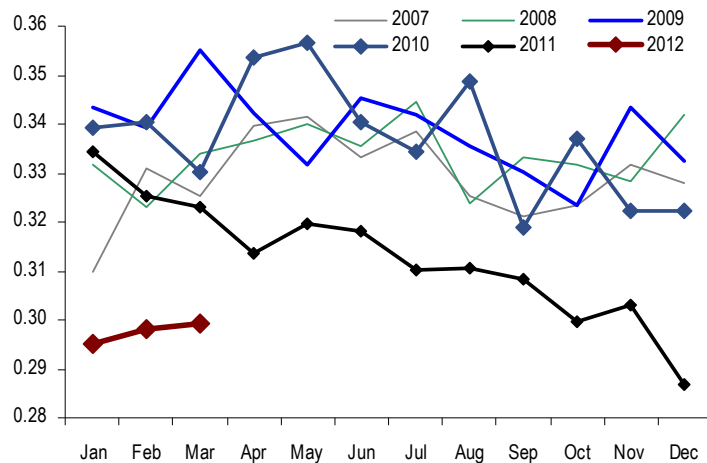


Source: JODI, Citi Investment Research and Analysis

But near-term bearish risks are mounting

- In each of the last two years, May has seen a major risk-off trade, and with concern over Spain's fiscal position growing, the macro environment is getting murkier. Managed money remains very long the energy complex and if things are seen to have peaked, the possibility of a sell-off similar to that seen in each of the last two years cannot be ruled out. The last few weeks have seen a slight liquidation which may be gaining momentum.
- The probability of an SPR release is high, in our view. It is an election year in the US and \$4/gal gasoline is not a vote winner. The possibility of an SPR release has now been so widely discussed that it should already be priced-in to a large extent. A coordinated release under the auspices of the IEA is less likely as Germany and some IEA officials have been emphasizing their objection to a release in the absence of a material supply disruption, but the US could go it alone or have a joint release of strategic stocks with the UK and other amenable partners.
- There has been some optimism on the nuclear negotiations with Iran. Iran has said that it will make some new proposals at the P5+1 talks this past weekend in Istanbul, but Iran's rhetoric remains defiant on the nuclear issue, and we continue to assume that an abandonment of the nuclear program remains a very low probability outcome. Iran's Fordo facility looks set to be a key focus for these and any future negotiations. Israel views Fordo as the red line, and only a freeze on enrichment at Fordo and intrusive inspections would satisfy Israel, and hence significantly dent the market's perception regarding the likelihood of a significant supply disruption arising from any conflict, in our view. Iran has shown itself to be flexible enough that the talks are unlikely to collapse, but we think the likelihood of Israel being fully appeased by the talks' outcome is similarly low.
- Official balances remain bearish. The IEA's April OMR has (holding OPEC production constant at March levels) supplies exceeding demand by an average of 1.2-m b/d for the rest of the year. Even assuming another 600-k b/d of lost Iranian production, the official balances remain bearish.

Figure 25. OECD Europe Crude Inventories – bn bbls

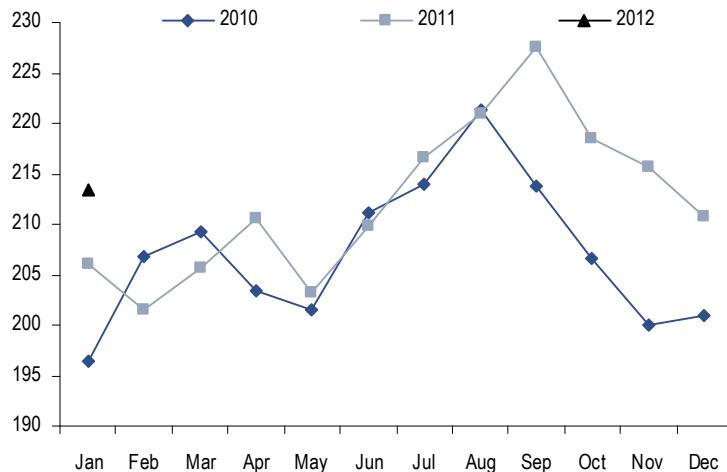


Source: Euroilstocks, Citi Investment Research and Analysis

Inventories are rising but remain low

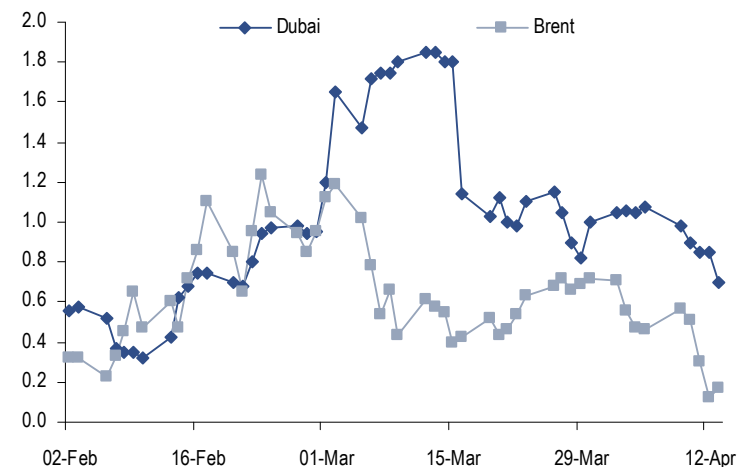
- Brent and Dubai crude time spreads have remained in solid backwardation giving no incentive to build inventories, yet there has been three months of stock builds in Europe. This reflects the fact that the rush to rebuild inventories before a possible supply disruption is partly driving crude strength, rather than 'natural' demand. At some stage, inventories should be rebuilt enough and this prop for the market should fade.
- China has been restocking crude at an impressive rate. Apparent demand eclipsed refinery throughput by 700-k b/d in February. Refineries in China ran down crude inventories in 4Q'11 as they ran hard to avoid a diesel shortage.
- China has done some restocking, but refining capacity should increase by 800-k b/d in 2012, and new capacity typically needs an additional 30 days of crude cover. 500-k b/d of new capacity is starting in 4Q'12, so China should continue to pull large volumes in imports despite weak margins.

Figure 26. China Commercial Crude Inventories – m bbls



Source: China Customs, Citi Investment Research and Analysis

Figure 27. Brent and Dubai Prompt Spreads - \$/bbl



Source: Bloomberg, Citi Investment Research and Analysis

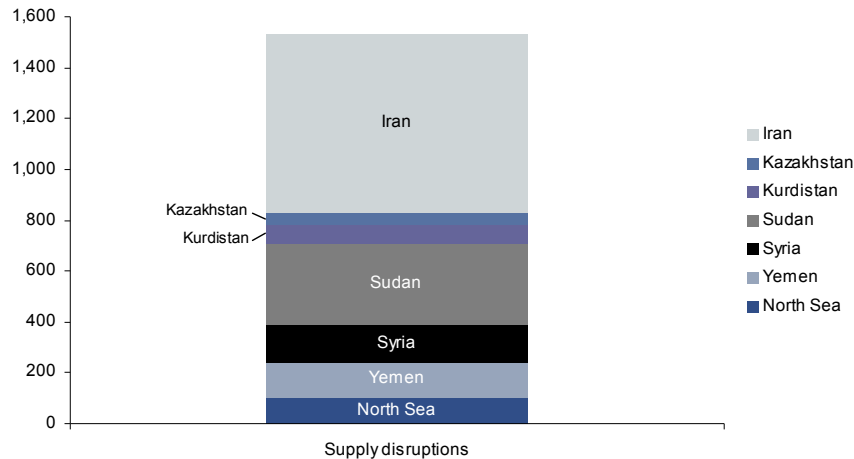
Figure 28. Citi oil supply and demand balance, 2010-13

m b/d	2010	Q1 2011	Q2 2011	Q3 2011	Q4 2011	2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	2012	2013	12v11	13v12
Demand														
OECD Demand	46.2	46.3	44.6	45.6	46.9	45.8	45.6	44.4	45.4	46.5	45.5	45.5	-0.4	0.0
Non-OECD Demand	42.1	42.8	43.6	43.7	44.1	43.6	43.8	44.8	45.0	45.4	44.7	45.8	1.2	1.1
Total Demand	88.3	89.1	88.2	89.3	91.0	89.4	89.4	89.1	90.3	91.9	90.2	91.3	0.8	1.1
Supply														
Non-OPEC														
Crude	48.7	48.9	48.3	48.6	49.3	48.8	48.7	48.4	48.9	50.0	49.0	49.5	0.2	0.5
Other	3.9	3.8	4.0	4.0	4.1	4.0	4.1	4.2	4.2	4.3	4.2	4.4	0.2	0.2
Total Non-OPEC	52.6	52.7	52.3	52.6	53.4	52.7	52.8	52.5	53.1	54.3	53.2	53.9	0.4	0.7
OPEC														
Crude	29.5	30.0	29.4	30.0	30.3	29.9	31.0	31.0	31.0	31.0	31.0	30.5	1.1	-0.5
Other	5.3	5.8	5.8	5.9	6.0	5.9	6.2	6.2	6.3	6.3	6.2	6.4	0.4	0.1
Total OPEC	34.8	35.8	35.2	35.9	36.3	35.8	37.2	37.2	37.3	37.3	37.2	36.9	1.4	-0.4
Total Supply	87.4	88.5	87.5	88.5	89.7	88.5	89.9	89.7	90.4	91.6	90.4	90.8	1.9	0.3
Stock Change	-0.8	-0.6	-0.7	-0.8	-1.3	-0.9	0.6	0.6	0.1	-0.3	0.2	-0.5		
Crude Oil Prices														
Brent (\$/bbl)	80.3	105.0	117.4	113.3	109.7	111.4	117.5	125.0	130.0	125.0	124.4	120.0	13.0	-4.4
WTI (\$/bbl)	79.4	93.5	102.2	89.7	93.8	94.8	103.6	105.0	115.0	105.0	107.2	113.0	12.3	5.8

Source: Citi Investment Research and Analysis

- **Non-OPEC growth in 2012 is, once again, a disappointment outside of the US.** Coming into the year Citi expected OPEC to have to do some work in the form of cutting production in order to keep the market firm, now it looks as if OPEC will have to produce to its maximum capacity to cope with the ongoing loss of Iranian barrels. Non-OPEC disappointments have come from South Sudan, Yemen, Syria and the North Sea and the result is the surge in OPEC production, helped by the return of Libya.
- **For 2012, Citi is remaining optimistic on non-OPEC supplies, but the risks to growth are once again heavily slanted to the downside if experience is any guide.**
- **The inventory builds in 2Q'12 are showing up, but are not doing much to dent prices.** It is the bid to rebuild inventories that is keeping crude curves (ex. WTI) in backwardation, despite the builds.
- **If OPEC production drops from its elevated 31-m b/d level, stocks could draw down, maintaining support for prices and a bullish tint on markets.**
- **Citi is expecting the spread between Brent and WTI to tighten going into 3Q'12, but once maintenance in US midcontinent refineries kicks-in in the Fall, the spread looks set to blow out again** as relentless growth in US onshore oil production outpaces pipeline and infrastructure build-out.

Figure 29. Crude Supply Outages – k b/d

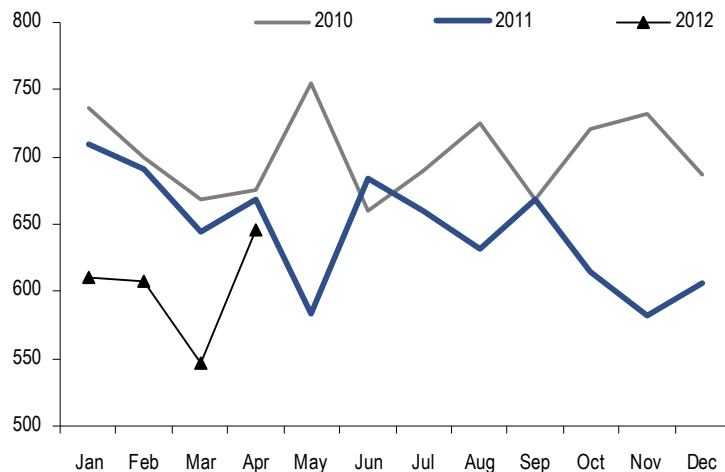


Source: Citi Investment Research and Analysis

Another year of supply problems

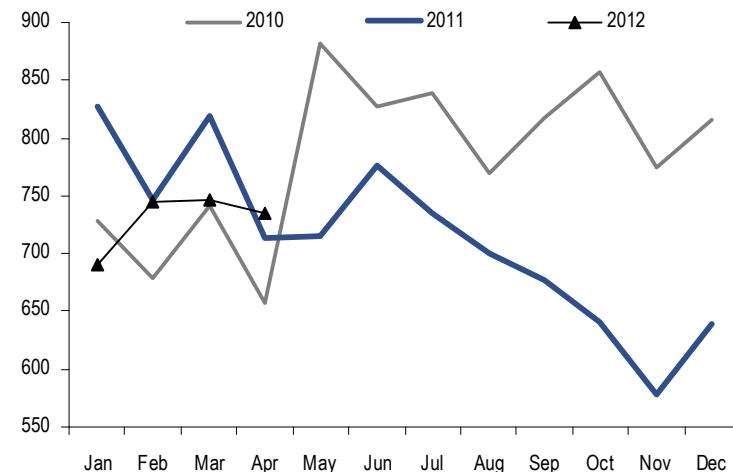
- **South Sudan** has stopped production, and the rapid deterioration of the situation, possibly into all-out war, makes the resumption of any of its 350-k b/d production look very unlikely through year-end.
- **Syrian** production has fallen by about 200-k b/d from 380-k b/d since mid-2011 as the EU has tightened sanctions against the country's oil industry, effectively banning European firms from operating there.
- **Yemen's** production remains down by almost 50% (from its 2010 300-k b/d level) as oil and gas pipelines continue to face attacks by militants in the country.
- **Kazakh** flows through the CPC pipeline remain low after an oil workers strike disrupted production in 4Q 2011, though **Azeri** flows through the BTC pipeline have partially rebounded after their 2H 2011 slump.

Figure 30. CPC Pipeline Flows – k b/d



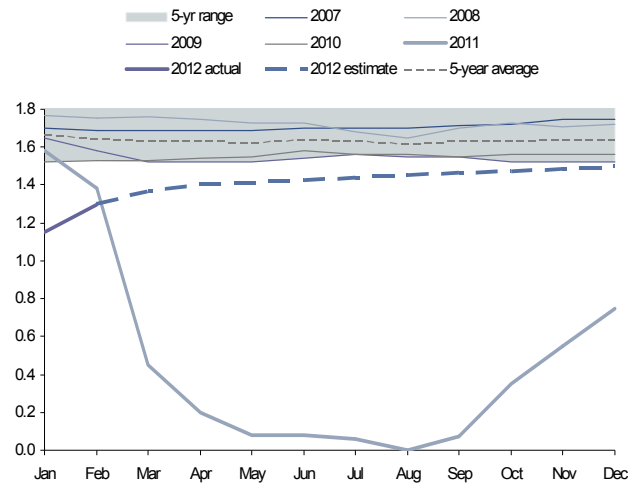
Source: Bloomberg, Citi Investment Research and Analysis

Figure 31. BTC Pipeline Flows – k b/d



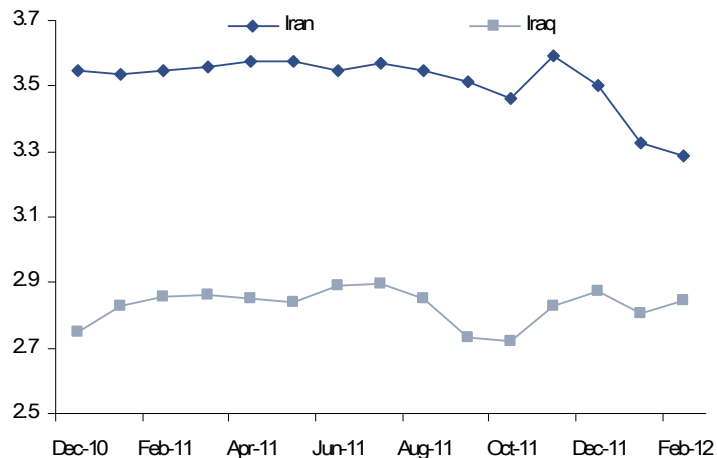
Source: Bloomberg, Citi Investment Research and Analysis

Figure 32. Libyan historical production and forecast – m b/d



Source: Citi Investment Research and Analysis

Figure 33. Iran and Iraq crude production moving in opposite directions – m b/d

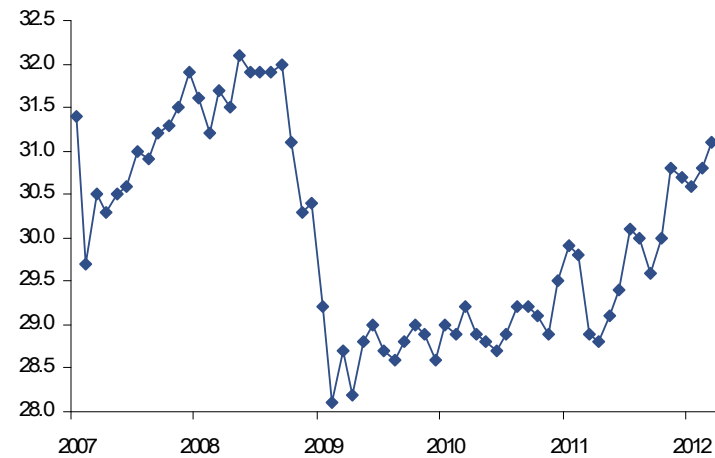


Source: Bloomberg, Citi Investment Research and Analysis

Libya and Iraq

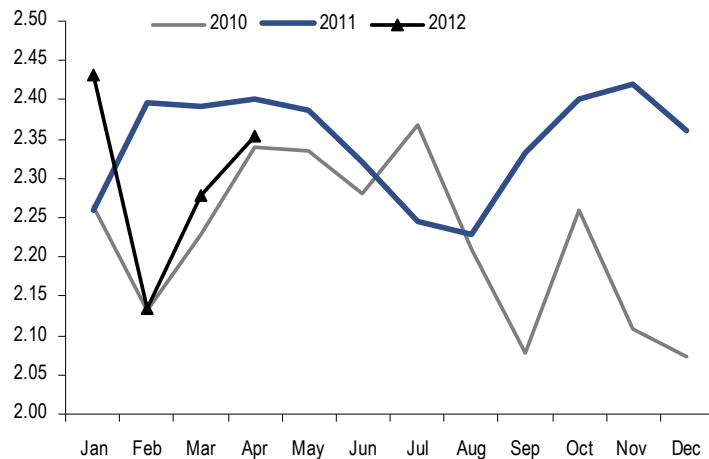
- **Libyan production has recovered to ~1.45-m b/d.** This is only 100-k b/d below the average production in 2010, while the highest observed production was 1.75-m b/d in January 2008. Exports in April are expected to be 1.3-m b/d according to Libya's National Oil Company. Ras Lanuf (the 220-k b/d refinery) is due to restart in May, which will constrain crude exports. Flows should waver from here.
- **Iraqi exports are rising, compensating for now for the ongoing fall in Iranian exports.** Iraq's newly expanded export facilities in the South helped exports jump by 250-k b/d in March, but it remains to be seen whether this can be sustained with ongoing upstream production issues, and Iraqi production may again fail to cross the 3-m b/d level in April with the Kurdistan Regional Government shutting in over 100-k b/d over a payment dispute with Baghdad. The strife in the North could impede production in the South, with Exxon removed as lead developer in the massive water-injection scheme required to boost West Qurna to 2.3-m b/d from just 300-k b/d now.

Figure 34. Total OPEC-12 Production – m b/d



Source: Bloomberg, Citi Investment Research and Analysis

Figure 35. Russian Loadings – m b/d

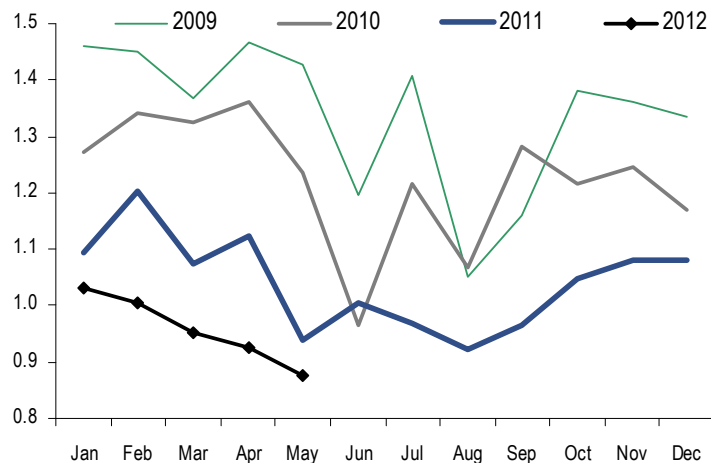


Source: Bloomberg, Citi Investment Research and Analysis

Russia and the North Sea

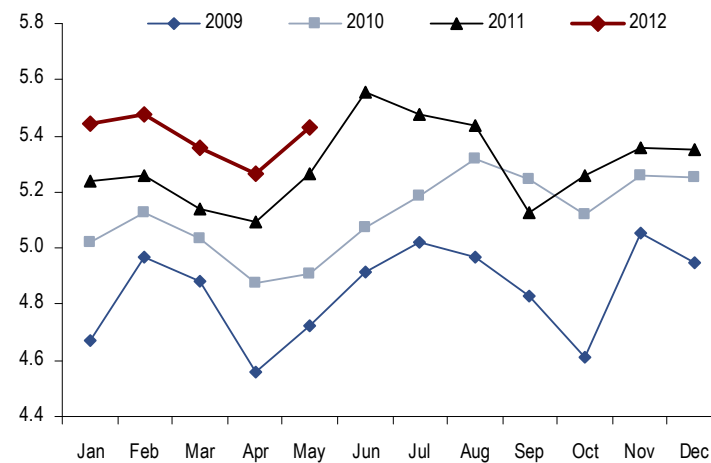
- Russian production continues to make new record highs, but robust product demand and higher refinery capacity and utilization is keeping crude exports down y-o-y. The big bounce back in crude exports in March and April has helped to pummel Urals differentials, but as refiners ramp up into the summer Russian crude exports are set to fall to fall.
- Coupled with seasonal North Sea maintenance and the ongoing issues with the Elgin field, the supply profile bolsters bullishness on Brent structure going into the summer. There are ongoing problems in the North Sea with total BFOE loadings running down 12% y-o-y year-to-date. BP has confirmed that there will be seven deferrals of Ekofisk cargoes due to issues at the Valhall field, while loadings of Forties has been reduced by about 120-k b/d in the first half of April as Total wrestles with a gas leak on the Elgin platform which typically puts about 60-k b/d into the Forties stream.

Figure 36. North Sea BFOE loadings – m b/d



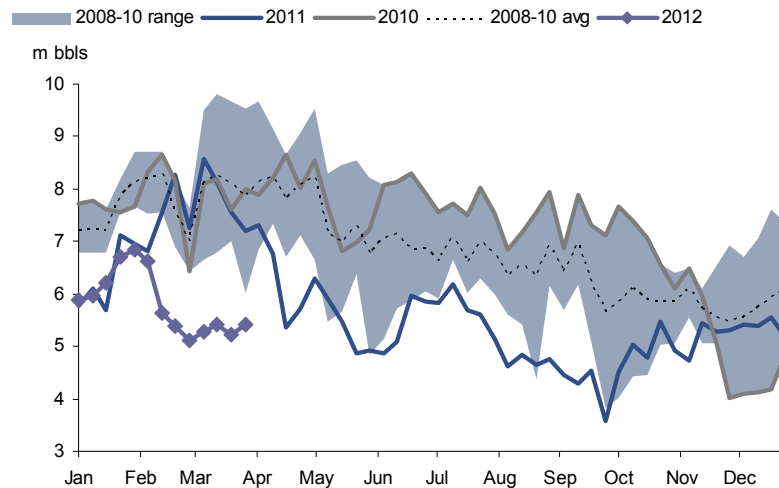
Source: Bloomberg, Citi Investment Research and Analysis

Figure 37. Russia crude runs – m b/d



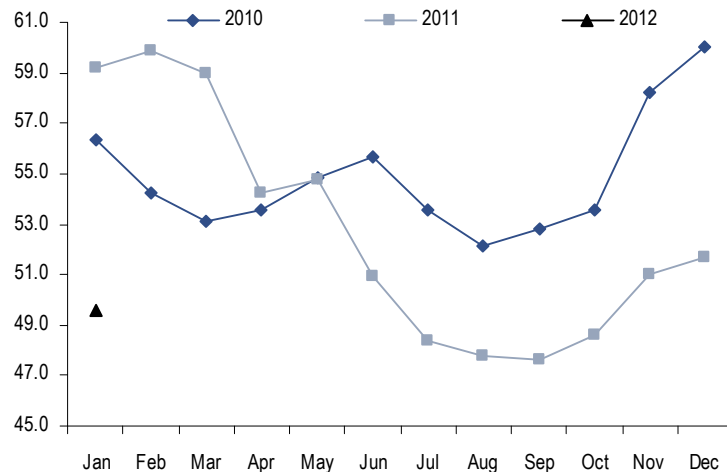
Source: Citi Investment Research and Analysis

Figure 38. Europe (ARA) Gasoline Stocks – m bbls



Source: PJK, Citi Investment Research and Analysis

Figure 39. China Gasoline Stocks – m bbls

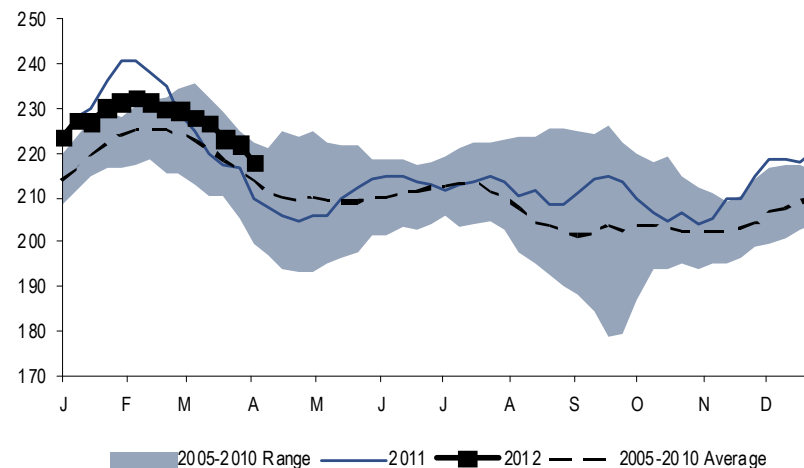


Source: China Customs, Citi Investment Research and Analysis

Gasoline inventories are low in Europe and China

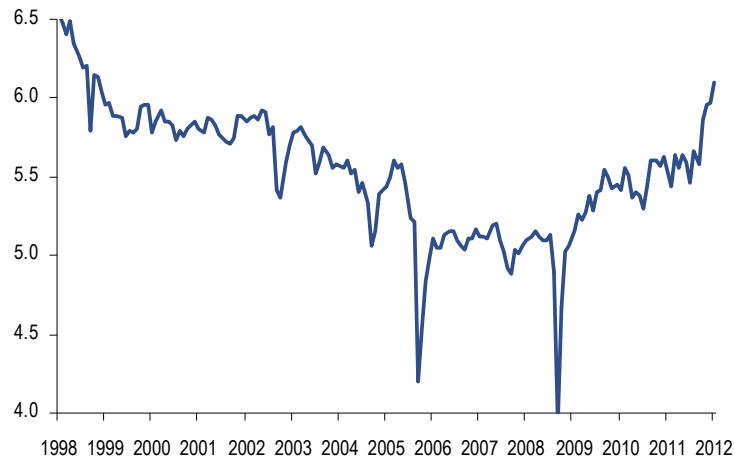
- European gasoline inventories are low following multiple refinery closures on difficult credit conditions. Although buyers may be emerging for the Petroplus refineries, their economics should remain poor.
- China gasoline stocks have been low since last summer, not helped by low or negative margins for refineries as crude prices have risen but fuel prices have remained depressed on government price controls; however, refinery runs have been high since November 2011 on government orders to preempt potential fuel shortages; thus, gasoline stocks could be building in February and March.
- US nationwide gasoline stocks have been drawing down, though in line with seasonal trends, remaining comfortably in the upper end of the recent historical range; however, the US East Coast (PADD I) region has seen three refinery closures which keep gasoline markets tight this summer; Sunoco Philadelphia is still running and seeking a seller; but its closure would leave PADD I refining capacity with a meager 700-k b/d.

Figure 40. US Gasoline Stocks – m bbls



Source: EIA, Citi Investment Research and Analysis

Figure 41. US Crude Production - m b/d

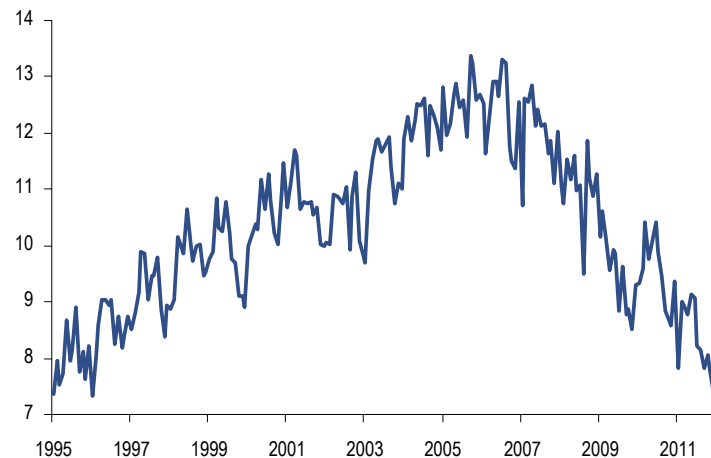


Source: EIA, Citi Investment Research and Analysis

The US goes from strength to strength

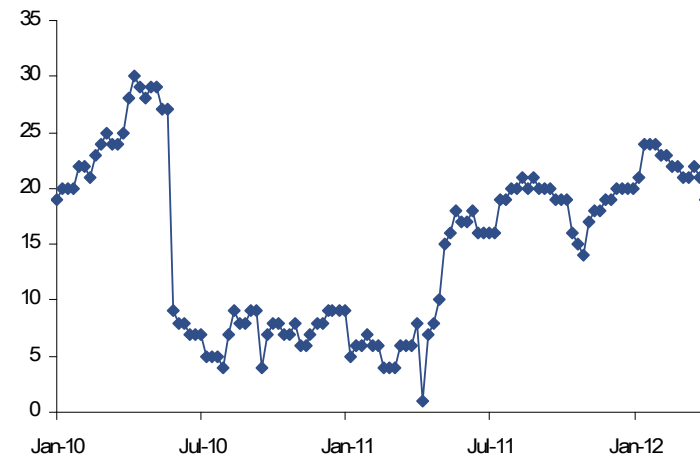
- US production continues to accelerate driven by shale oil and now this is being joined by a rebounding Gulf of Mexico; rig counts in the GOM are back to pre-Macondo levels and the oil is starting to flow. Monthly data for January showed the US's crude production getting back over 6 m b/d for the first time since 1998.
- US net petroleum imports have fallen to levels unseen since the mid-1990s, and are set to make further lows by year-end.
- Physical crude differentials in the US continue to reflect production outpacing the infrastructure build out, and Citi continues to expect WTI's discount to Brent to persist and indeed to grow over the coming years as the US's import requirements shrink and the growth of production from the Eagle Ford wears away at the Gulf Coast's light sweet import needs, eventually resulting in a surplus that severs the ties between the US and global crude markets.

Figure 42. US Total Net Petroleum Imports – m b/d



Source: EIA, Citi Investment Research and Analysis

Figure 43. US GOM Baker Hughes Oil Rig Count (no. of rigs)

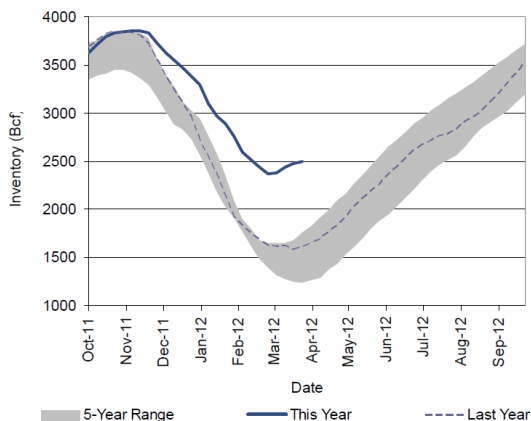


Source: Baker Hughes, Citi Investment Research and Analysis

US Natural Gas

- **2012 US natural gas should average \$2.5/MMBtu due to four major factors, driven in part by weather and regulatory tail-risk events:** (1) a large gas inventory overhang after one of the mildest winters in a century; (2) the delay of the Cross State Air Pollution Rule (CSAPR), which would have accelerated coal-plant retirements because of a stay issued by the D.C. Circuit Court of Appeals after the close of business on Dec 30, 2011; (3) the increased likelihood of forced coal burn as a result of high coal inventories reaching an all-time high due to warm winter weather; and (4) the probable pipeline and storage congestion in the Producing region on expected all-time high in gas inventory.
- **Citi maintains its call for 2013 gas to average \$3.6/MMBtu, unchanged from our [December outlook](#).** Assumptions and projections of demand-supply fundamentals remain the same, particularly the growth in major demand sectors.
- **A V-shape decline in price could happen due to forced coal burn and severe congestion in the Producing region.** Prices would have to fall further to “fish” for the equilibrium level that would induce (a) a sufficient amount of coal-to-gas substitution and (b) wide-enough regional price spreads for gas to be either consumed or moved elsewhere. The catalyst for this capitulation-like decline could happen if pipeline companies issue restrictions, as might happen in late summer or early fall.
- **Gas production could fall by 1-Bcf/d by the end of 2012.** While sharply lower rig counts and the shift towards liquids away from dry gas drilling could reverse production growth, there are several offsets. Liquids-rich wells should still see significant associated gas production, while ethane rejection due to low ethane prices also adds to the gas stream. Technological and efficiency improvements boost potential production further.
- The potential for severe weakness in the front of the curve, possibly dragged lowered by a V-shaped decline, and the strength at the back of the curve due to falling rig counts and the annual reset of the gas market at the start of winter, are conducive to a widening of the calendar strip spreads

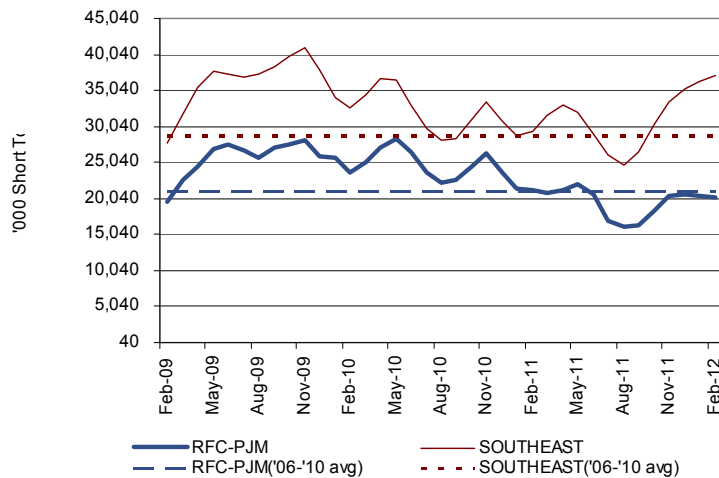
Figure 44. US Natural Gas Inventory



Source: EIA, Citi Investment Research and Analysis estimates

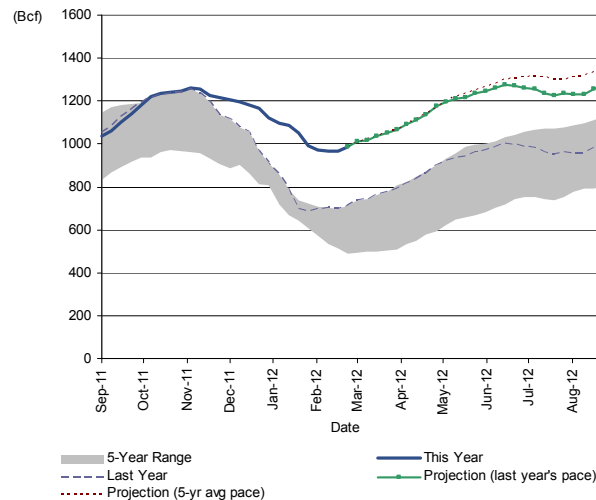
- **Mild winter:** Gas demand fell sharply this past winter on very mild weather in North America. Total gas-weighted heating degree days (HDDs) for the Lower 48 States from Nov'11 to Mar'12 were 2,848, 779 below that of last year and 630 below that of the 30-year average. This decline in HDDs year-on-year has led to a fall in heating demand by about 4.9-Bcf/d in the residential and commercial sector, driving the record amount of gas inventory at the end of March to 2.5-Tcf.
- **CSAPR delay:** After market close on 12/30/11, the US DC Circuit Court of Appeals issued a stay of the EPA's Cross State Air Pollution Rule (CSAPR), one of two major rules limiting pollution by electric utilities. The rule would have increased the cost of coal-fired generation, leading to a 0.7-Bcf/d increase in gas demand. Prices would have risen by \$0.2/MMBtu, based on our sensitivity analysis. If a significant reworking of the rule is needed, then it is likely that a new rule would not be ready until 2014. Reworking the rule would require going through the whole process of issuing a draft rule, conducting a public comment period, revising the draft rule and issuing the final rule, which would take a year or more.
- Gas production is expected to be flat throughout much of the year, with a slight decline near the end due to sharply lower gas rig counts. Production declines at plays such as Haynesville would be partly offset by the rapid gain in Marcellus production.

Figure 45. Estimated coal stocks in the Mid-Atlantic (RFC) and Southeast



Source: PIRA, Citi Investment Research and Analysis

Figure 46. Gas Inventory in the Producing region (actual vs. projected)



Source: EIA, Citi Investment Research and Analysis

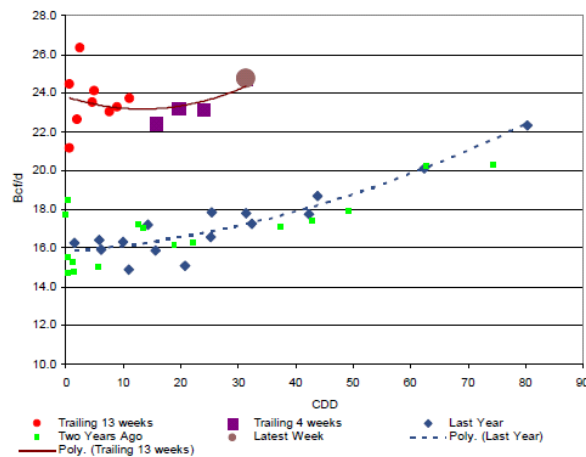
- **Force coal burn:** Coal inventory is reaching a high level, particularly in the Southeast, potentially leading to the forced burning of coal. Space for stockpiling coal would yet again become an issue, as the high coal inventory continues to build as coal shipments arrive but coal burn falls behind on poor economics.
- Forced coal burn distorts the normal relationship between the coal-gas price spread and the amount of coal-to-gas switching that can be generated.
- If more coal units are running (and burning coal) than would be indicated by prices, then gas demand would be lower than the amount predicted by the coal-gas price relationship.
- Hence, gas prices would have to fall further to induce the same amount of gas demand for generation. The main factor in driving forced coal burn is the amount of space available on the coal pile to accommodate more coal deliveries under fixed contract terms
- With more than 6-Bcf/d of additional coal-gas switching year-on-year, 100-MM tons of coal are expected to be displaced.
- **Unusually high gas inventory in the Producing region** could also weigh on gas prices, especially at Henry Hub, given its location in the heart of the region.
- As gas inventory builds and nears its peak, pipeline or storage congestion could cause sellers of physical gas to dump gas in the market, if they have no other outlets for the gas to go, such as the lack of firm transport on pipelines and firm injection rights at storage fields.
- Only 296-Bcf of gas was drawn this winter season in the Producing region, compared with 567-Bcf last year and a 5-year average of 497-Bcf. If the pace of gas injection were similar to last year or the 5-year average, then the inventory level by the start of summer in July could approach the demonstrated peak inventory level of 1261-Bcf set in Nov, five months ahead of schedule.
- Although inventory in the Producing region does not build as quickly in the summer, the moderate build in a potentially congested environment could cause gas prices in the Producing region to fall, widening the price spreads with other regions outside.

Figure 47. US Natural Gas Supply-Demand Balance

	1Q'12	2Q'12	3Q'12	4Q'12	1Q'13	2Q'13	3Q'13	4Q'13	2011	2012	2013	'12 vs '11	'13 vs '12
Supply (Bcf/d)													
Production	65.0	64.3	64.3	64.3	64.3	64.3	64.3	64.3	63.4	64.4	64.3	1.1	(0.2)
Imports from Canada	6.2	4.8	5.5	5.5	4.8	4.3	4.9	5.2	5.9	5.5	4.8	(0.4)	(0.7)
Exports to Mexico	(1.3)	(1.5)	(1.5)	(1.3)	(1.3)	(1.6)	(1.6)	(1.4)	(1.4)	(1.4)	(1.5)	(0.1)	(0.1)
LNG imports	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6	0.9	0.5	0.5	(0.3)	(0.0)
Demand (Bcf/d)													
Electric Power	22.0	23.3	28.6	19.7	19.9	21.9	27.7	19.4	20.8	23.4	22.2	2.6	(1.2)
Industrials	19.5	17.7	17.4	19.5	20.3	18.0	17.8	19.4	18.6	18.5	18.9	(0.0)	0.3
Residential, Commercial and Other	41.8	19.3	13.7	32.1	44.6	19.0	13.2	32.2	27.5	26.7	27.3	(0.8)	0.5
End of Injection Season Storage (Tcf)				4.0				3.8					
Price (\$/MMBtu)	\$2.5	\$2.4	\$2.6	\$2.3	\$3.1	\$3.5	\$3.8	\$3.7	\$4.0	\$2.5	\$3.6	(\$1.6)	\$1.1

Source: Platts, Citi Investment Research and Analysis

Figure 48. Gas demand intensity in power generation against Cooling Degree Days (as proxy for size of coal-gas switching)



Source: Citi Investment Research and Analysis estimates

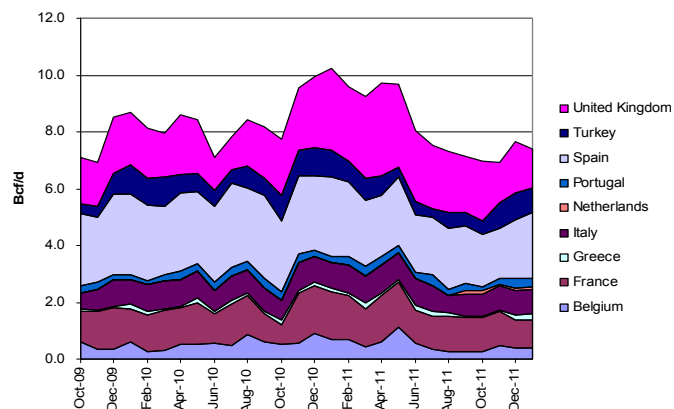
- **2013 US natural gas is expected to average \$3.6/MMBtu**, a pricing level that is able to induce sufficient coal-to-gas switching to keep the market in balance. The gas market hits a partial reset point every year at the start of the withdrawal season and as winter begins. A normal winter could draw down enough gas to bring the market closer to equilibrium. The end-of-injection season inventory in 2013 should be around 3.8-Tcf, based on normal weather. This compares with our projected 4.0-Tcf for this year.
- A key to this forecast is the return of normal winter demand in the residential and commercial (ResComm) sector. Demand in the heart of winter in January and February could average in the 40 to 50-Bcf/d range; with the Nov'12 to Mar'13 demand averaging about 3.7-Bcf/d higher than the winter just past.
- On the demand side, industrial consumption should rise to 18.9-Bcf/d, 0.35-Bcf/d over 2012. This increase would come as a result of rising capacity utilization and step-wise increases in demand coming from capacity expansion. The latter would produce structural increases in gas demand.
- Further, with production levels staying flat, a reduction in gas imports and a gain in industrial demand would tighten the supply-demand balance. Hence, a fall in the amount of excess gas, and a rise in non-power generation demand to absorb some of the remaining excess gas, would mean a reduction in the coal-to-gas switching requirement. Gas demand for power generation would fall from 23.4-Bcf/d expected in 2012 to 22.2-Bcf/d in 2013, compared with about 20.8-Bcf/d in 2011 based on our own estimates and pipeline data

Global Natural Gas

- NBP prices have remained firm, even though the shoulder season could bring down gas demand by 400 to 600 mmcm/d below the levels seen in March. Weak demand and high gas inventory should drive prices down, but supply concerns are helping to support prices. Macro tail-risks, such as a deepening of the recession affecting demand could push prices low, while crude supply disruptions could drive up prices of oil-linked contract gas.
- The many Qatari LNG cargoes that went to the UK in 2011 would be diverted to Asia as a result of growing demand there, highlighted by the need to replace the loss of nuclear generation in Japan. This could leave the UK vulnerable to supply risks. Additional gas supply would have to come from Norway or from the Netherlands via BBL
- The market might perceive that the relative lack of LNG imports could leave the UK and Europe gas short in winter. In fact, February power demand in Japan was up 1% y-o-y, unlike the demand losses observed since the 3-11 earthquake. The steep contango to winter appears to be encouraging further gas injection into storage that is already high compared with prior years (see a graph on NBP storage level next page).
- Currently, storage injection could be supporting prices, but weak overall demand across the industrial, power and other sectors could finally weigh on the curve. While our bullish stance on oil prices remains, continued unobserved inventory build in non-OECD countries, non-OPEC supply gains and soft global oil demand could affect oil prices in the rest of the year, thereby impacting oil-linked contract gas. NBP is forecast to average 57-p/th (or \$9.0/MMBtu) in 2Q'12, 56-p/th (\$8.9/MMBtu) in 3Q'12 and 68-p/th (\$10.8/MMBtu) in 4Q'12. Hence, Bal 12 could average 60.3-p/th (\$9.6/MMBtu) and 2013 at 64-p/th (\$10.1/MMBtu).
- Asian LNG prices, based on Platt's Japan-Korea Marker (JKM), could rise above the oil-linked level in 3Q on summer demand. The lack of gas storage facilities in a number of LNG-consuming Asian countries essentially requires higher supply of LNG cargoes to meet demand, driving the tightness in the spot market. JKM is expected to average \$17/MMBtu in 2Q'12, \$19 in 3Q'12, \$17 in 4Q'12. Hence, Bal 12 could average \$17.6 and 2013 at \$17.4 on the expectation that Brent prices would be lower.

- Going forward, European gas demand is being squeezed on four fronts:

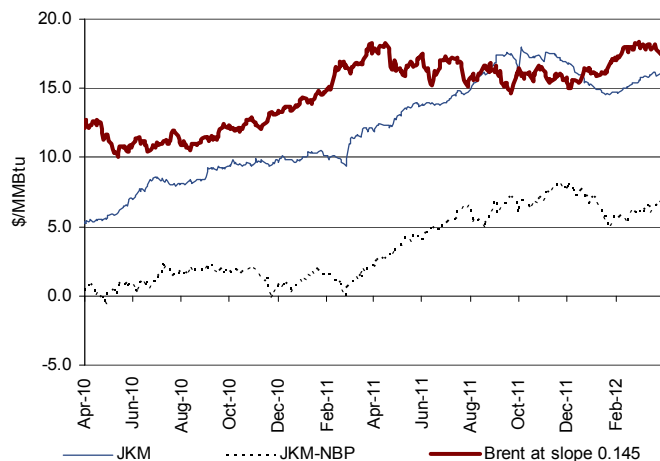
Figure 49. Estimated LNG Imports to Europe



Source: IEA, Citi Investment Research and Analysis estimates

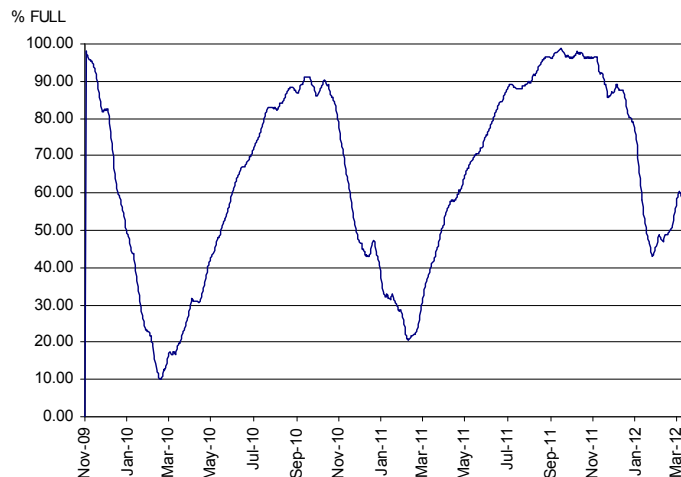
- First, generation from renewable sources, such as wind and solar, has been higher. German wind output rose 7% year-on-year in March, while solar rose 42% year-on-year.
- Second, the rise of coal-fired generation is expected to continue as a result of lower coal prices and low carbon prices. The rolling prompt API2 prices fell from last year's high-\$120/ton level to just under \$100/ton as the global demand for thermal coal softens and US coal exports strengthen. The rolling prompt US Central Appalachian coal fell from near \$80/short ton a year ago to below \$60/short ton. With US gas prices in the range of \$2/MMBtu, the resulting coal-gas switching could displace 100-MM ton or more of coal demand in 2012 vs. 2011, when the country as a whole consumed about 928-MM tons of coal in 2011.
- Third, power demand remains lackluster on both weak macroeconomic conditions and efficiency gains. With current policies, the European Commission expects the EU to improve energy efficiency by 10%. In fact, International Power is set to close its 215-MW gas unit at Shotton.
- Fourth, high gas prices, likely on supply concerns and demand for storage injection, are putting heavy gas-consuming industrials at a particular disadvantage compared with their counterparts in the US benefiting from very low gas prices.

Figure 50. Asian LNG price proxies: Japan Korea Marker (JKM), Brent at slope 0.145, and the difference between JKM and NBP



Source: Platts, Citi Investment Research and Analysis

Figure 51. NBP gas inventory at multi-year high



Source: GSE, Citi Investment Research and Analysis

- **Japan Regas:** After the last nuclear unit comes offline in early May, Japan could face the possibility that no nuclear units would be available through 2012, if various local governments remain oppose to restarts of idle nuclear units, even if they pass safety tests.
- Before the nuclear shutdowns, Japan's 49-GW of nuclear capacity typically running at about 66-70% capacity factor effectively translated into about 32-GW of generation. If the 7% year-on-year decline in power load in the April to Dec'11 period, as reported by FEPC, due to conservation and/or demand destruction is maintained in 2012, then the 32-GW of replacement generation would be reduced by about 7-GW. Of the 25-GW that remains to be replaced, recent data suggested that coal-fired generation barely gained ground, leaving gas and oil-fired units for replacements.
- It appears that coal-fired generation might have hit a ceiling. The 3-11 earthquake also took down the 2-GW Haramachi coal unit in the Tohoku service territory in northeastern Japan. It is not expected to come back online until 2013.
- Yet, with a scattered network of gas pipelines and the power grid only nominally integrated across the 10 power regions, the increase in gas-fired generation might have reached a limit. With coal-fired generation lower as well, more oil units would be called on to generate.
- **India Regas:** The 5-mtpa Kochi regasification terminal, initially set to come online in June 2012, would likely not be brought online until early 2013. The delay stems from a capacity increase from 2.5 to 5-mtpa. The commissioning of the Ratnagiri terminal is also delayed indefinitely.
- **China Regas:** CNOOC's 3-mtpa regas terminal at Ningbo, Zhejiang could begin service as early as October 2012. It supplies gas to the sister power plant project that has eight 350-MW gas-fired power plant, besides existing pipelines that connects Ningbo to Hangzhou with access to the wider grid. However, China has not been an active buyer of spot LNG.
- **Other liquefaction facilities** would be coming online in Angola and Australia, possibly Algeria
- The 5.2-mtpa Angola LNG should begin operation in 2Q'12. Initially destined for the US Gulf Coast, demand growth in South America provides the much needed outlet for Angolan LNG.
- Australia's Pluto LNG should come online sometime in 2Q'12, directly supplying the gas-short Asia-Pacific region.
- Algeria's 4.5-mtpa, or 0.58-Bcf/d, train in the Skikda LNG plant is expected to come online in July'12, according to the Algerian energy minister Youcef Yousfi, though a startup date of 1Q'13 was initially expected. The second train, with 4.7-mtpa of capacity, could come online in 2013.



Industrial Outlook

Industrial Commodities – Transition

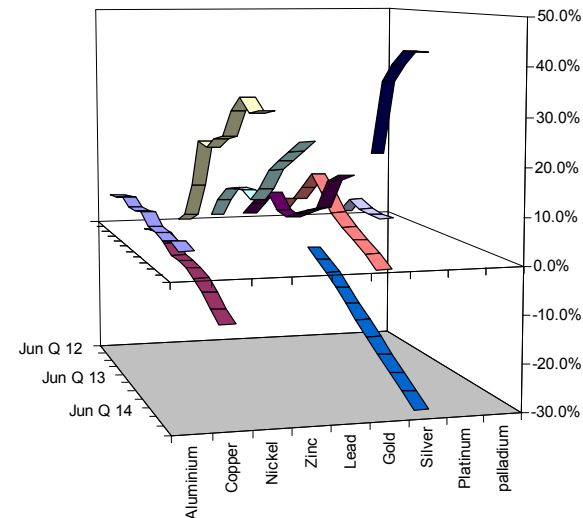
- Industrial commodity prices, as a basket, are forecast to be range bound over the short and medium term. Within the basket there are likely to be vastly different outcomes (or alpha) for each commodity. In the near term, individual commodities are likely to be driven by supply shocks and cost push rather than a significant demand shock. In the medium term, we expect to see the transition to later cycle commodities, which should benefit the base metals and precious over bulk commodities.
- The demand outlook for the industrial commodities has softened but has not imploded. Critically, Citi's house view is for China to engineer a soft landing. Against this backdrop, industrial commodity prices are unlikely to test their 2011 highs which were seen in 1Q 2011. The factors that drove the price gains to their highs—namely restocking, large stimulus packaging and incentive schemes—have largely abated.
- Consumers, particularly in China, appear to be more price sensitive than previously seen. Demand destruction is largely still at the margin but the c450% rise in industrial commodity prices over the six years consumers appears to be impacting the timing of physical purchases.
- The major changes to Citi commodity price forecasts occurred in the 2013 and 2014 timeframe, with generally mild downgrades of between -1 to -3% on average - refer Figure 64. The culmination of changes has resulted in a preference for base and precious metals over the bulk commodities.
- Within these various commodities the conviction calls are in palladium, nickel, and gold on the bullish side and copper and silver on the bearish side. Citi bullish and bearish calls against the forward curve for each commodity are presented in Figure 52.

Figure 52. Bullish versus bearish – 6-12 month view versus the forward curve

Bullish	In Line	Bearish
Aluminum	Tin	Silver
Nickel	Platinum	Copper
Zinc	Iron Ore	
Lead		
Gold		
Palladium		
Thermal Coal		

Source: CIRA

Figure 53. CIRA forecasts versus the forward curves of each commodity

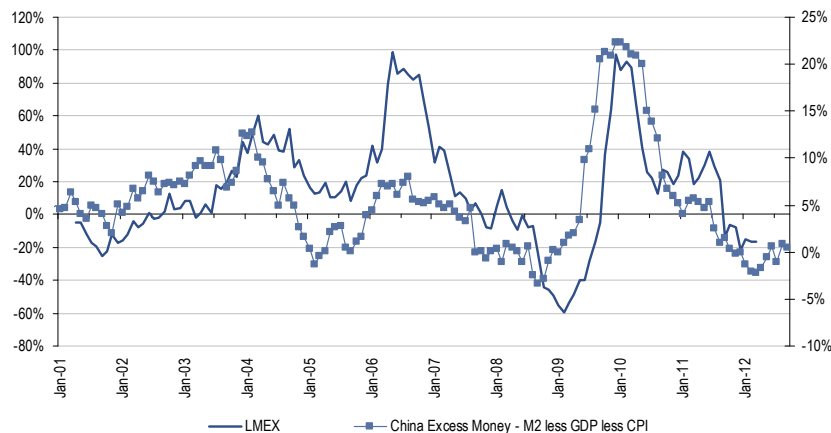


Source: Bloomberg, CIRA

Demand outlook

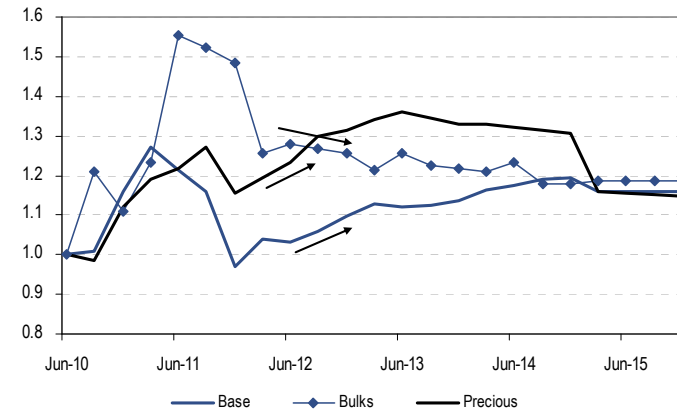
- The short term demand outlook for commodities has softened, but certainly hasn't imploded. A key lead indicator for industrial commodity consumption is China's excess monetary supply which is measured by M2 less GDP less CPI which has historically led the metals index by around 6 months. The reason this relationship holds is due to excess monetary supply finding its way into fixed asset investment and therefore commodity demand—particularly for industrials.
- China's monetary growth has recently been losing momentum as the trade surplus, which has narrowed from 7.5% of GDP in 2007 to 2.1% of GDP in 2011, became more balanced. This in turn has resulted in a structural decline in the ability of the PBOC to make FX purchases, the main source of base money creation over the past decade. To facilitate adequate money and credit growth a RRR cut would be required in the medium term. Citi's China economists expect a further three RRR cuts this year and highlight that without these cuts, M2 growth may fall to 10% (relative to the PBOC forecasts of 14%). Against this backdrop, base and bulk prices are likely to move sideways for the course of 2012, with slight base metal price rises and bulk declines into 2013.

Figure 55. Chinese Excess monetary supply – M2 less GDP less CPI



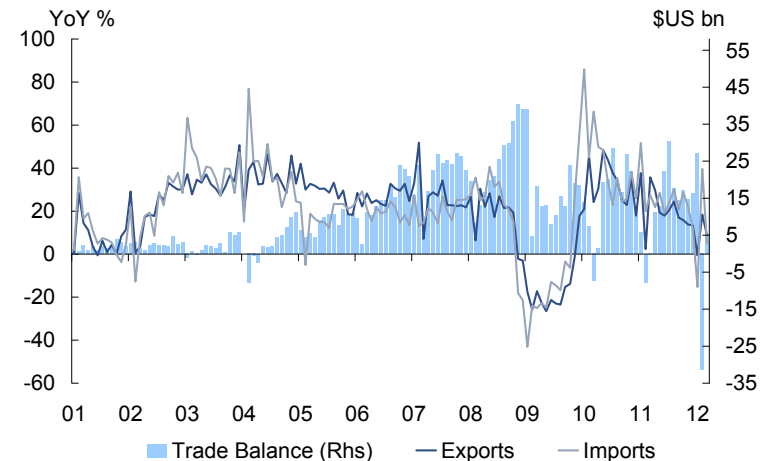
Source: Bloomberg, Citi Investment Research and Analysis

Figure 54. Citi – price indexes, base, bulks and precious



Source: Citi Investment Research and Analysis

Figure 56. China trade balance

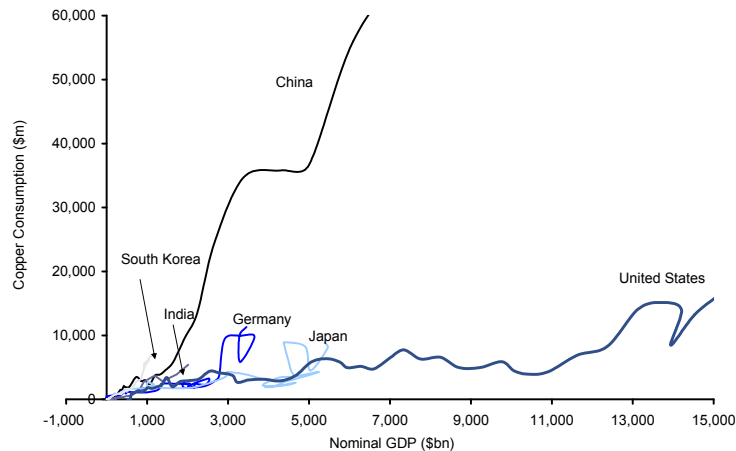


Source: CEIC, Citi Investment Research and Analysis

Value in use – price impacting demand?

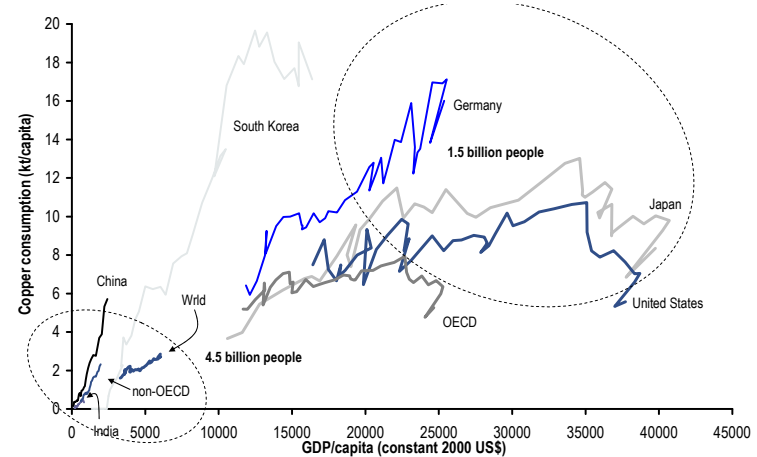
- The structural bull argument for commodity consumption is predicated by sector; constructing a point chart of commodities consumed per capita in developing economies and then extrapolating this into the future based on consumption in developed markets.
- Arguably this analysis avoids one critical component, which is the price of the commodity. It assumes that a developing economy will continue to increase commodity consumption regardless of the underlying price. Historically a booming property and autos market in China has allowed higher commodity prices to be offset and general inelastic demand.
- Taking into account price and suggesting that China has already overtaken most of the developed world on a value in use basis, the Sleeping Dragon is currently spending an equivalent of 7% of its GDP on steel consumption; the peak of this consumption occurred in 2008 and is likely result in a falling intensity of use. Although the base effect of higher production will still correspond to incremental consumption growth.

Figure 58. Copper consumption \$m against nominal GDP - 1960 to 2011



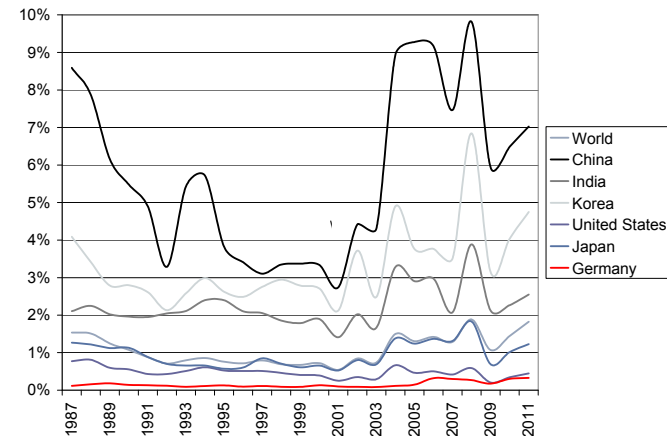
Source: Citi Investment Research and Analysis

Figure 57. Copper Consumption GDP/Capita kg per capita



Source: Citi Investment Research and Analysis

Figure 59. Steel consumed as a % of GDP by country

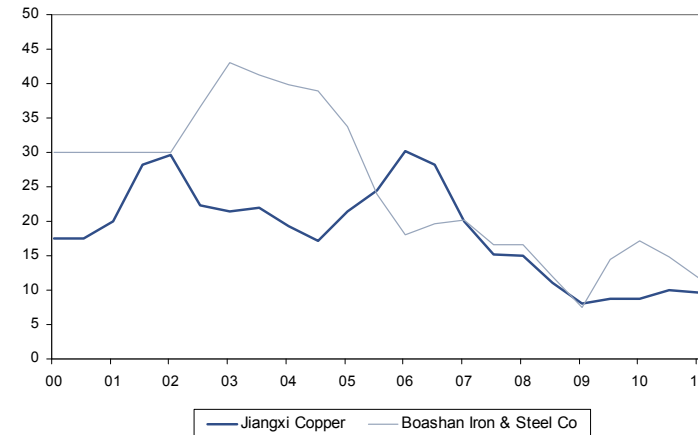


Source: Citi Investment Research and Analysis

Less bang for your buck

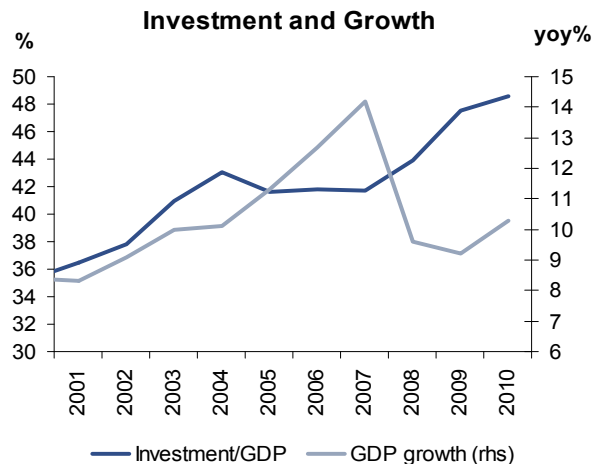
- Arguably the investment boom in China is already becoming less efficient due to higher input costs. In the past decade, China's GDP grew at an average rate of 10.5%. Investment expanded at an average rate of 13.5% during the period and was the main contributor of growth. As a result, share of investment in GDP increased from 36.5% in 2001 to 48.5% in 2010.
- The efficiency of investment appears to be falling – In the absence of a more reliable metric for assessing the productivity of investment, we employ the Incremental Capital Output Ratio (ICOR) as an indicator of marginal product of investment. During 2001-2010, China's average ICOR topped 4. More recently, the ratio rose to around 5, with a big jump in investment/GDP ratio—associated with stimulus measures introduced to tackle the global financial crisis—producing a relatively small output response.
- Moreover, the ability for consumers in China to offset higher commodity prices has also diminished. EBITDA margins for Jiangxi Copper and Boashan are close to the lows experienced through the financial crisis in 2009.

Figure 60. EBITDA - Margins of intermediaries



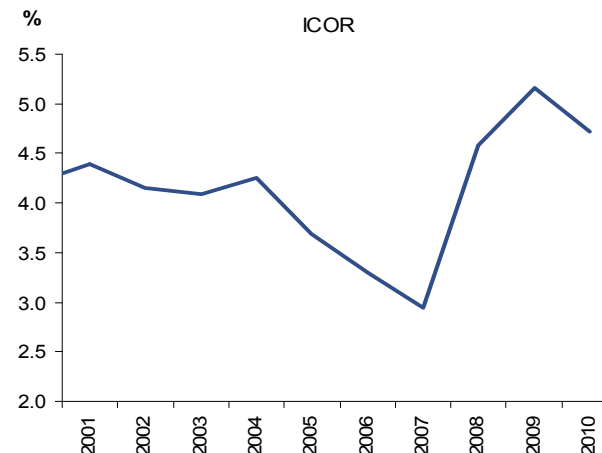
Source: Bloomberg, Citi Investment Research and Analysis

Figure 61. Investment produced weaker output response recently...



Source: Citi Investment Research and Analysis

Figure 62... indicating lower marginal product of investment.



Source: Citi Investment Research and Analysis ICOR is obtained by dividing the ratio of investment to GDP with real economic growth. The ratio shows the amount of capital investment incurred per extra unit of output. The higher the ratio, the lower the productivity of capital

Commodity price revisions

The major changes to Citi commodity price forecasts are for the 2013 and 2014 timeframe, with generally mild downgrades of between -1 to -5% on average for the base metals. The largest change is for tin. On precious metals there are no changes to the palladium or silver forecasts, modest upgrades to platinum and a pushing out of the gold profile until mid-decade.

Figure 63. Commodity Price Revisions – Industrial Commodities

		2012	2013	2014
Aluminum	Old	2,275	2,525	2,600
	New	2,279	2,388	2,453
		0.2%	-5.4%	-5.7%
Copper	Old	7,825	8,528	8,200
	New	8,491	8,375	7,950
		8.5%	-1.8%	-3.0%
Nickel	Old	19,500	22,819	24,650
	New	19,430	22,819	24,650
		-0.4%	0.0%	0.0%
Zinc	Old	2,050	2,295	2,525
	New	2,121	2,301	2,525
		3.4%	0.3%	0.0%
Lead	Old	2,150	2,400	2,600
	New	2,161	2,275	2,475
		0.5%	-5.2%	-4.8%
Tin	Old	22,125	25,700	28,250
	New	22,997	25,625	25,125
		3.9%	-0.3%	-11.1%
Gold	Old	1,709	1,912	1,610
	New	1,718	1,835	1,725
		0.5%	-4.0%	7.2%
Silver	Old	30		
	New	30		
		0.0%		

Source: Citi Investment Research and Analysis

Figure 64. Commodity Price Revisions – Precious Metals & Bulk Commodities

		2012	2013	2014
Platinum	Old	1,609	1,675	1,725
	New	1,682	1,725	1,775
		4.6%	3.0%	2.9%
Palladium	Old	775	925	900
	New	801	925	900
		3.3%	0.0%	0.0%
Rhodium	Old	1,650	1,850	2,500
	New	1,550	1,650	1,800
		-6.1%	-10.8%	-28.0%
Hard coking Coal	Old	256	248	240
	New	233	231	225
		-9.2%	-6.8%	-6.3%
Thermal Coal	Old	120	139	145
	New	119	136	148
		-0.8%	-2.2%	2.1%
Iron Ore	Old	149	135	125
	New	149	138	130
		0.3%	1.9%	4.0%

Source: Citi Investment Research and Analysis



Trade Recommendations

- **Outright long Nickel flat price**— Citi's nickel price forecast is currently c20% above the forward curve for 2012 and 33% for 2013.
- **Outright long Palladium flat price** – Citi's palladium price forecast is currently c40% above the forward curve for 2013.
- **Nickel long December Calls at \$18,000** – Given volatility is close to 5 year lows on all base metals, expressing a positive view on nickel through upside Calls. This trade could be also funded by selling downside puts.
- **Buy Gold and gold volatility** – Buy 9th month Gold volatility, given the macro uncertainty, and tail risk on the gold price both positively and negatively and the potential for huge swings in the gold price coupled with the low volatility this can be expressed through a long Vega position.
- **Short Copper flat price**— Copper has the least cost support amongst the base metals and arguably the most susceptible to a risk off trade. The upside to the price appears to be capped at around \$8,800 per ton in the short term.
- **Short Silver flat price** – Non consensual call based on significant supply of silver in 2012 and a lack of follow through from retail demand from silver coins and ETFs.



Base Metals

Copper – Range bound

- The sharp rally in copper prices between early January and mid-February caught many market participants by surprise. LME 3-month prices opened the year at \$7,645/t, and traded up to year-to-date highs of \$8,765/t on February 9th as the fund community unwound short positions built up during December 2011. However, since early February, prices have lost any sense of direction trading largely between \$8,150/t and \$8,600/t as macroeconomic uncertainty has dogged sentiment.
- Focusing on the LME would suggest that the copper market has tightened significantly in 2012. LME stocks have indeed fallen sharply since the beginning of January, declining from 375,175 mt to 2012 lows of 254,000 mt in late-March, a draw of 117,575 mt. However, this has largely been transference of metal to Asia, as over the same period Shanghai Exchange stocks rose by 130,413 mt. In addition, bonded warehouse stocks in China are estimated to have risen from around 300,000 mt to around 650,000 mt. Since mid March, LME inventory has again started to build, rising over 14,000 mt since late March.
- Chinese imports of copper have remained high through the first quarter of 2012 (unwrought copper imports rising by 50% yoy). However, the key driver has not been underlying physical demand, but rather demand for copper for collateralised financing, driven by tight credit availability. It is questionable whether such demand will continue as credit availability slowly eases in China.
- Consumer buying combined with lingering supply concerns are expected to continue to present a floor for copper prices at around \$8,000/t. Indeed, consumers remain significantly under hedged which has prompted the buying on dips pattern seen in recent months, thus any price dips will be quickly bought into. However, there is little prospect of upside breakout from the current trading range as slower demand growth, combined with uncertain macro sentiment, prompt producer and fund selling.

Figure 65. Global Copper Supply Demand Balance

kt	2009	2010	2011	2012e	2013e	2014e	2015e
Mine Production (Concentrates)	12,683	12,868	12,811	13,348	14,496	15,453	15,687
Secondary Supply etc. (incl losses)	1,282	951	806	1,488	1,283	1,205	1,307
Smelter Capacity	17,140	17,571	18,011	18,767	19,582	20,531	20,882
Smelter Production	13,925	13,870	13,638	15,014	15,764	16,513	17,123
Mine Production (Electrowon)	3,316	3,351	3,469	3,619	3,829	4,014	4,281
High Grade Scrap	1,093	1,774	2,572	1,658	1,550	1,550	1,550
Mine Production (Total)	16,000	16,218	16,280	17,290	18,154	19,467	19,968
Refined Production (Total)	18,334	18,994	19,680	20,291	21,142	22,076	22,955
% Change	0.9%	3.6%	3.6%	3.1%	4.2%	4.4%	4.0%
Consumption/Demand	17,367	19,258	19,821	20,336	21,037	21,864	22,638
% Change	-3.6%	10.9%	2.9%	2.6%	3.4%	3.9%	3.5%
Surplus/Deficit	967	-264	-142	-45	106	213	316
Stock Change	279	-107	-45	-45	106	213	316
Stocks	1,125	1,017	972	927	1,032	1,225	1,562
Stock:Consumption Ratio (wks)	3.4	2.7	2.6	2.4	2.6	3.0	3.6
Price (US\$/lb)	2.41	3.42	4.00	3.85	3.80	3.61	3.49
(US\$/t)	5,318	7,543	8,829	8,491	8,375	7,950	7,700

Source: Wood Mackenzie, WBMS, ICSG, Citi Investment Research and Analysis

Consumption – waiting on China

- Copper bulls have highlighted the strength of Chinese apparent copper demand (domestic production + imports – exports) in the year-to-date compared to the same period in 2011. However, slower white goods and auto production, plus construction activity rates point to the dominant driver of apparent consumption has been stock building, rather than real demand.
- The prospect of a return to the high levels of Chinese auto production growth seen in 2009 and 2010 looks remote to us. Q1 2012 auto sales remained almost flat compared to Q1 2011 according to the Chinese passenger car association. New stimulus packages are expected this year, but not until after October's change in government.
- Chinese construction activity has slowed largely as a result of continue efforts by the government to bring property prices into line with incomes. Citi's China property team expects a 19% yoy drop in gross floor area under construction in 2012 as a result. As with Autos, however, improvement is expect in H2.
- However, hopes for a boost to construction activity, provided by targets for economic housing unit volumes (7mn units in 2012), is being overplayed. It is now reported that new unsold property is being reclassified as economic housing in order to assist in the meeting central government volume targets.
- China's intensity of copper usage as a share of real per capita GDP actually peaked in 2009, the year the Government's stimulus policy had the greatest impact. In 2009, intensity of copper use in China stood at 2.41 kg per \$100,000 of real GDP. Levels have since declined to around 2.33 kg in 2011.

Figure 66. Chinese Fixed Asset Investment Growth

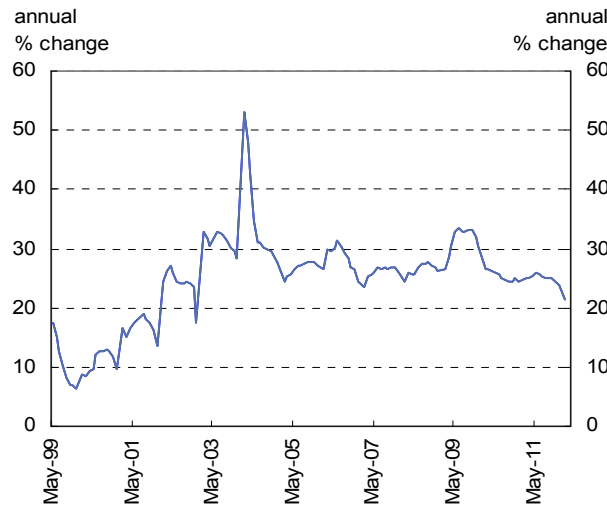


Figure 68. Chinese grade A Cu premiums falling sharply

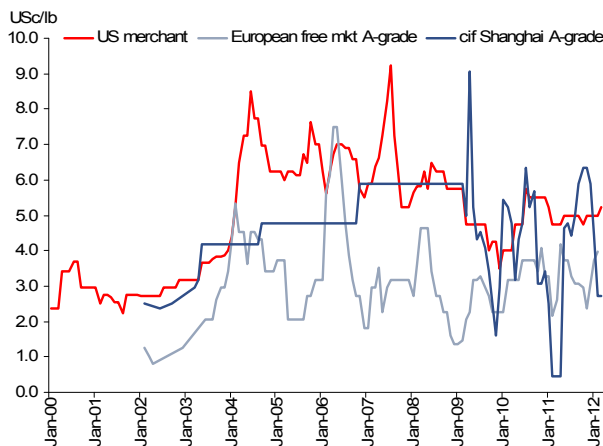


Figure 67. Chinese Auto Production, no growth in Q1

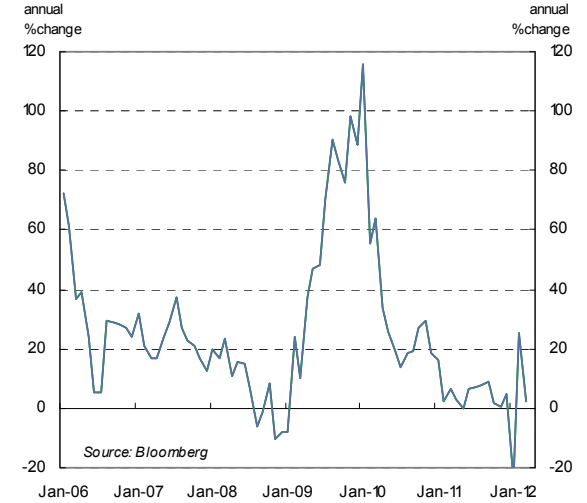
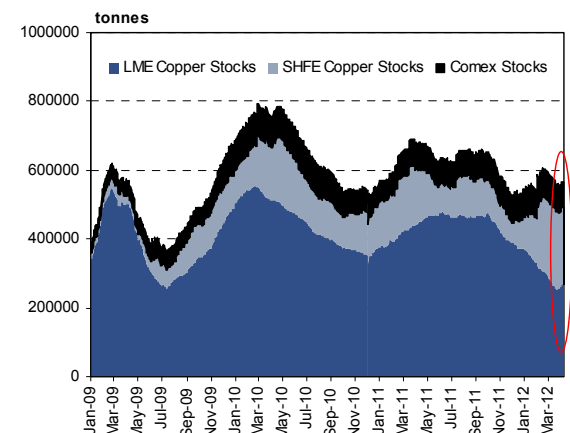


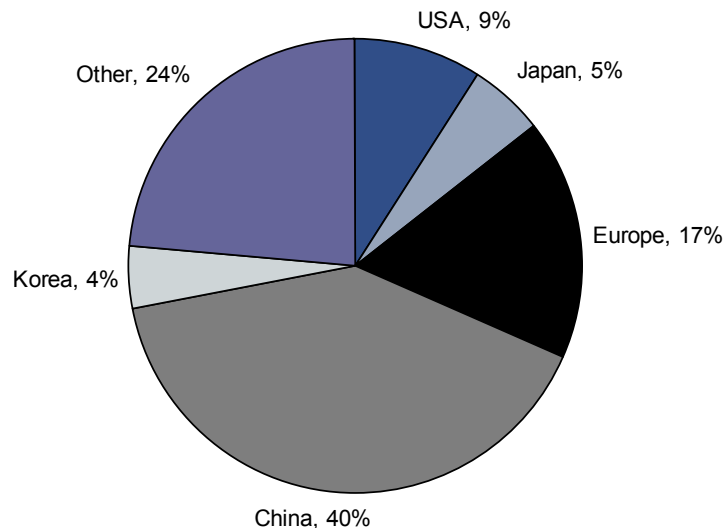
Figure 69. Exchange Inventories – beginning to build



Demand – By Use and Region

- Chinese demand expectations for 2012 have been downgraded to 5.5% from the previous expectation of 7.4%, reducing Chinese 2012 demand expectation by 150,000 mt to 8.2 million mt. The downgrade is largely driven by subdued auto production and construction activity.
- European copper consumption is expected to contract by 3.5% through 2012, on the expectation of continued contraction in European wide activity. However, low levels of LME copper inventory in Europe are like to maintain upward pressure on physical premiums, currently at \$90/t for grade A material.
- Better than expected manufacturing activity in the US, most notably in the auto and transport sectors has prompted an upgrade to 2012 demand expectations, with copper consumption now expected to rise to 1.9 million mt this year. However, the lack of any rebound in construction activity means copper demand will remain well below pre-crisis levels.
- Overall, global copper consumption growth is expected to slow to 2.6% in 2012, largely as a result of slower H1 Chinese consumption growth.

Figure 71. 2012 Forecast Copper Consumption by Region



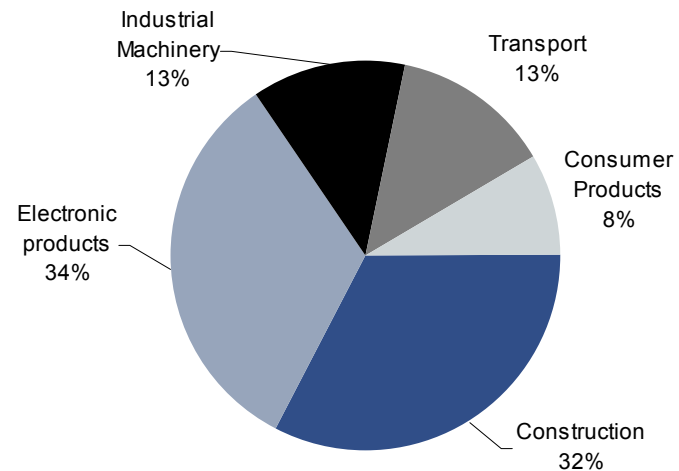
Source: WBMS, Wood Mackenzie, Citi Investment Research and Analysis

Figure 70. Copper Consumption Forecast by Region

(% ch yoy)	2009	2010	2011	2012e	2013e	2014e	2015e
World	-3.6%	10.9%	2.9%	2.6%	3.4%	3.9%	4.5%
USA	-18.4%	7.0%	4.0%	3.5%	3.1%	3.3%	3.3%
Japan	-26.9%	21.0%	-4.4%	4.6%	2.3%	3.1%	3.1%
Europe	-17.2%	8.6%	4.5%	-3.5%	-0.1%	1.5%	1.9%
China	25.0%	13.0%	8.0%	5.5%	7.3%	7.4%	7.3%
Korea	7.1%	3.4%	7.9%	7.9%	7.9%	7.9%	7.9%

Source: WBMS, Wood Mackenzie, Citi Investment Research and Analysis

Figure 72. Global Copper Consumption by End Use

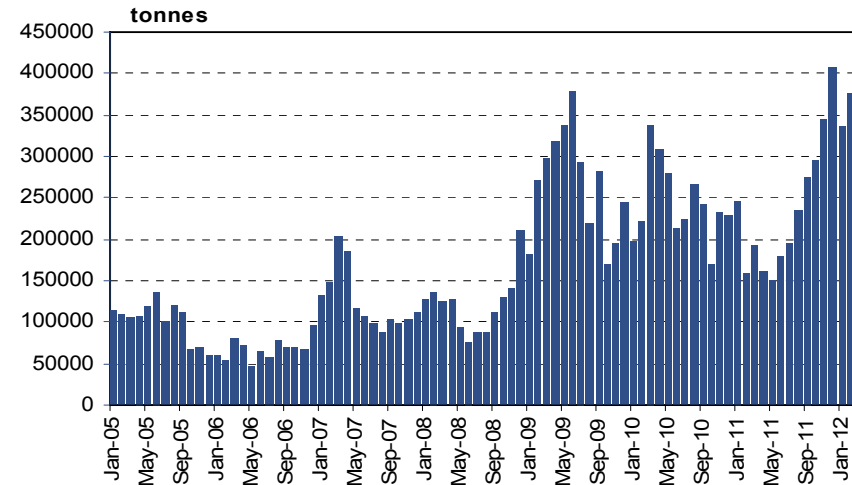


Source: Wood Mackenzie, Citi Investment Research and Analysis

China – misleading imports

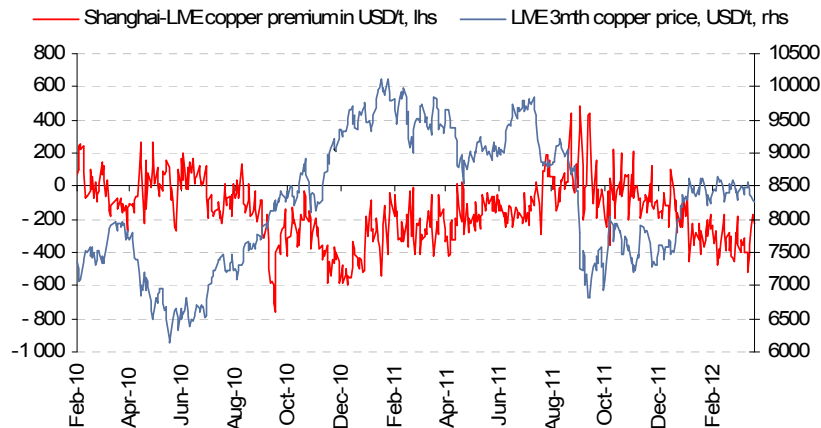
- Chinese copper imports have remained high during Q1, with preliminary March data for unwrought up 52% yoy, though down from February's highs. Much of the surge in imports in recent months is believed to have gone into bonded warehouse stocks, now estimated at around 650,000 tons, rather than being driven by end user demand.
- In 2010/early 2011, the surge in bonded warehouse stocks was driven by property speculators using copper as collateral for raising financing in a tight credit environment. This time around, the drive has come from traders using copper as a financing tool for trading currency and interest rate spreads.
- Reports on the percentage of bonded warehouse stocks tied up in this new round of financing range from 55% up to 90%. The question of how tightly held the metal is will be key to the H2 outlook. Given that the metal is used to typically gain 90 day letters of credit, the event of an upturn in demand would only be met by a modest lag before financing metal became available.

Figure 73. Chinese Primary Copper Imports



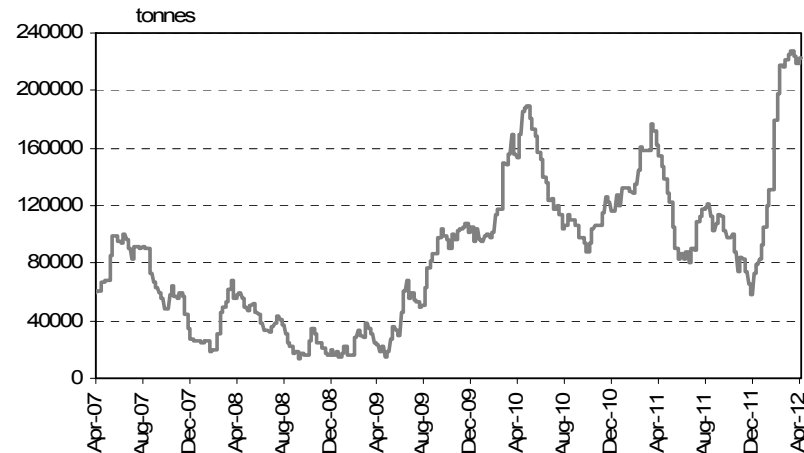
Source: China Customs, Citi Investment Research and Analysis

Figure 74. LME – SHFE arbitrage window remains firmly closed



Source: SHFE, LME, Bloomberg, Citi Investment Research and Analysis

Figure 75. Shanghai Exchange stocks – at record highs

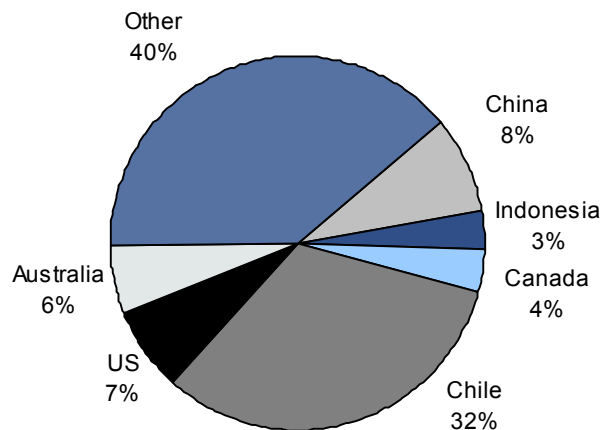


Source: SHFE, Citi Investment Research and Analysis

Production and Prices - continuing concerns over mine supply tempered by slower demand growth.

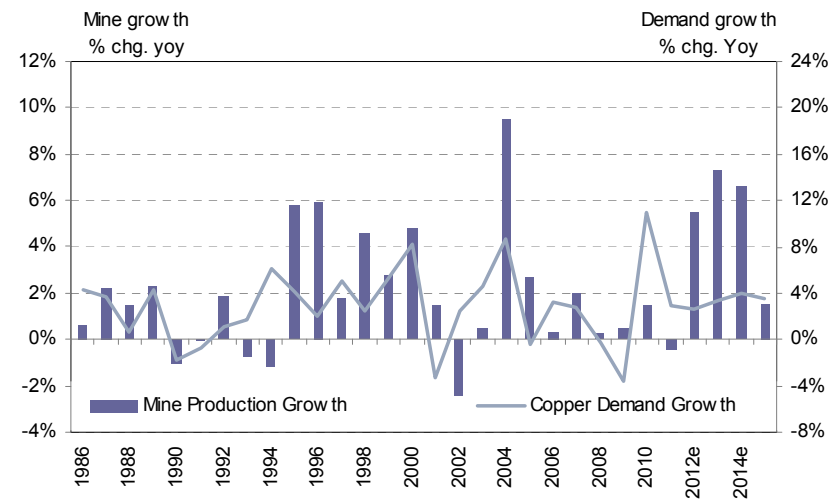
- Chilean mine production in January was reported by Cochilco as falling 5% yoy to 430,000 mt, raising concerns that 2012 could be a repeat of 2011. However, February saw a 2.6% pick in Chilean mine production. The impact of early year supply concerns have been tempered by a clear picture of slower demand growth, leading to prices struggling for upward moment since early February.
- The second half of 2012 should see a number of Greenfield copper projects will be ramping up production, including Antofagasta's Esperanza, and other projects. Brownfield expansions will also contribute, notably from Anglo's Los Broncos operation in Chile, Katanga Mining's KOV operation in Congo, and Buenavista in Mexico, while the issue of declining ore grades at Rio/BHP's Escondida operation will be reversed mid way through the year with the commissioning of its \$554 million Ore Access project. These projects alone should add around 500,000 tons of mine production compared to 2011. Indeed, mine supply is expected to grow by 4.2% in 2012.
- There are clear indicators that the wider copper industry expects mine supply will improve through 2012. Treatment and refining charge (TC/RC) contract deals in China, Europe and Japan have risen 50% compared to 2011 levels, with Anglo's settling at \$60.5/t & 6.05c/lb and Freeport at \$63.5/t & 6.35c/lb. Spot TC/RCs have also picked up, rising to \$53/t in Mid March compared to \$20/t in mid December, helped by Freeport's Grasberg mine resuming operations.
- While demand has been sluggish in Q1, largely as a result of slower real Chinese demand, this situation is likely to improve in the second half of the year, with an expectation of a modest relaxation of controls impacting property markets, while new auto markets stimulus are expected to help improve domestic production rates after a sluggish H1. However, the improving demand scenario is not expected to push copper out of the recent trading ranges. However, looking forward into 2013 and 2014 the combination of normalizing Chinese copper consumption growth with improving mine production pushing the copper market into sizeable surpluses, and forecast prices to trade between \$7,000/t and \$8,000/t on a 5 year time horizon.

Figure 76. 2011 Copper Mine Production by Country/Region



Source: Wood Mackenzie, Citi Investment Research and Analysis

Figure 77 . Mine Supply Outlook – growth coincides with periods of softer demand



Source: Wood Mackenzie, WBMS, Citi Investment Research and Analysis

Aluminum – European / US tightens, China eases, but over supply remains

- A cursory look at Aluminum would suggest a market still in significant over supply. LME Aluminum inventories currently stand at 5.05 million tons, inventory in the warehouses managed by the Shanghai Futures Exchange (SHFE) are currently 367,000 tons, while volumes at producers monitored by the IAI (International Aluminum Institute) are over 1.4 million tons. Indeed total reported inventory levels have remained above 7 million tons so far through 2012.
- The growing levels of reported inventories this year have done little to dent prices, with LME 3-month Aluminum prices rallying year-todate highs of \$2,351/t in early March, though undergoing a subsequent pull back on macro concerns. Physical Aluminum premiums have also risen most notably in those regions where inventory levels are highest, namely the US and Europe. Indeed, quoted rates for in warehouse in Europe rising to around \$202.5/t in April compared to between \$160-\$170/t in early January, while US premiums are now at around \$201/t for P1020 prompt, compared to \$170/t at the beginning of January.
- The key is the levels of freely availability of physical metal within the LME. While it is still estimated that 70% of LME inventory is tied up in financing deals as has been the case since late 2008, it is the surge in cancelled Aluminum warrants in LME warehouses over the last quarter. Levels of cancellations are now at 1.6 million tons, or 31% of total LME Aluminum inventory, rising to around 85% at key european warehouses such as Vlissingen. Strict adherence to LME minimum load out rates has created huge backlogs of material to be shipped, limiting metal availability and tightening markets and supporting prices.
- In contrast, the Chinese market continues to ease, as domestic Chinese smelter production surges in defiance of many western world producer expectations. Chinese daily Aluminum production rates in February hit record highs despite Shanghai prices edging lower since the beginning of the year. In Q4 2011, the Chinese government committed to a new generation of smelter capacity expansions in the West of China, with total installed smelter capacity expeted to reach 40 million mt by 2018. Indeed, the prospect of China being a singificant net Aluminum imports looks increasingly remote.
- In the absence of any major regulatory changes to the operation of the LME warehousing network, we remain braodly positive towards Aluminum. Whilst China will remain balanced in-terms of supply/demand, the continued tightness in metal availability in the West will support prices, with levels returning to \$2,350/t by Q4.

Figure 78. Global Aluminum Supply Demand Balance

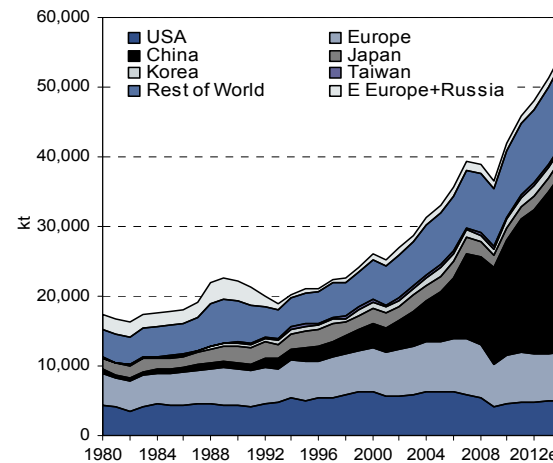
	2009	2010	2011	2012e	2013e	2014e	2015e
Smelter Capacity ktpy	49,474	51,111	53,579	55,972	61,683	66,759	70,560
Refined Production	37,566	41,918	45,317	47,318	50,592	53,946	57,331
Capacity Utilization (%)	79%	83%	87%	87%	86%	84%	84%
Supply Incr (%)	-6.4%	11.6%	8.1%	4.6%	6.8%	6.6%	6.3%
Consumption/Demand	35,409	40,891	44,679	46,733	49,926	53,445	56,776
Consumption Incr. (%)	-6.1%	15.5%	9.3%	4.6%	6.8%	7.0%	6.2%
MARKET BALANCE	2,158	1,027	638	648	666	500	555
Stocks	6,485	6,502	7,271	7,919	8,585	9,085	9,460
Stock Change	1,777	17	769	648	666	500	555
Stocks (weeks)	9.5	8.3	8.5	8.8	8.9	8.8	8.8
Price: US\$/lb	0.78	0.99	1.10	1.03	1.08	1.11	1.16
US\$/t	1,712	2,173	2,422	2,280	2,390	2,450	2,550

Source: Wood Mackenzie, Citi Investment Research and Analysis

Demand – poor Q1, better H2?

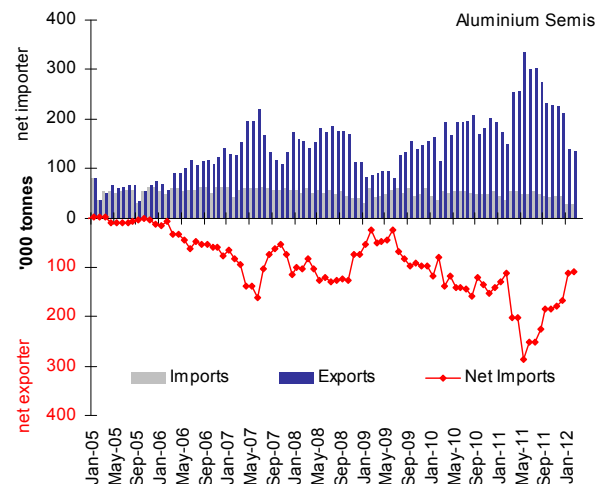
- Global Aluminum demand growth is projected to average 4.6% in 2012, a dramatic slowing compared to 2011 (9.3%) or 2010 (15.5%) largely driven by slower Chinese and European markets.
- Wood Mackenzie estimates Chinese Aluminum demand fell by 7.2% yoy in Q1, while European demand is estimated to have fallen by 3.9%. In the case of China, slower construction activity and weak auto production have impacted while semis export demand has weakened.
- Chinese consumption is expected to improve moving into the second half of the year, driven by the expectation of the new Chinese leadership easing controls on the property market in particular. However demand is still expected to average 8% growth in 2012, the lowest level since 1998.
- Europe has been blighted by strong destocking through January and into February, as fabricators consumed on hand to mouth basis, reluctant to restock in the face of economic uncertainty. Some degree of restocking is expected into Q2, particularly in Germany.
- The bright spot remains the US, where demand is estimated to have risen by over 7%, driven by a continued recovery in the automotive and transport sectors, as well as exports demand for US manufactured goods.

Figure 79. Country/Region Demand



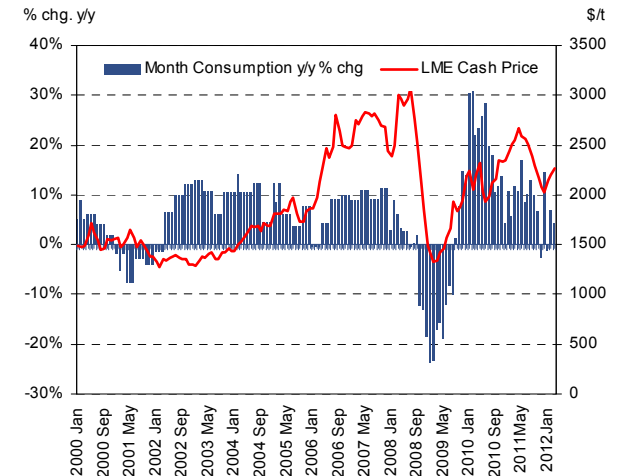
Source: Wood Mackenzie, WBMS, Citi Investment Research and Analysis

Figure 81. China remains a major Aluminum semis exporter



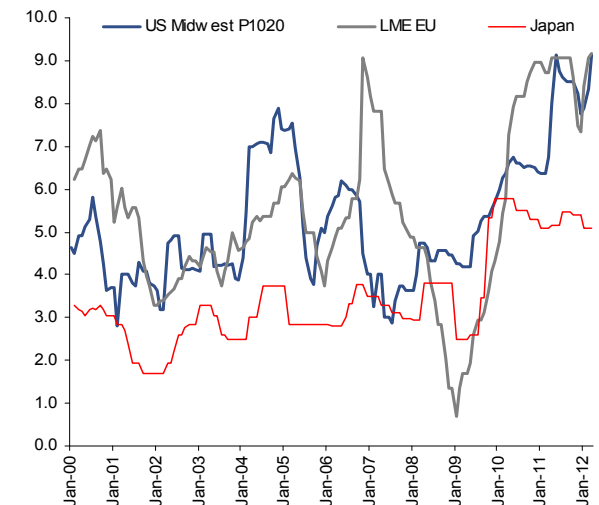
Source: China Customs, Citi Investment Research and Analysis

Figure 80. Monthly Demand vs. Price



Source: Wood Mackenzie, WBMS, Citi Investment Research and Analysis

Figure 82. Merchant Premia (USC/lb)

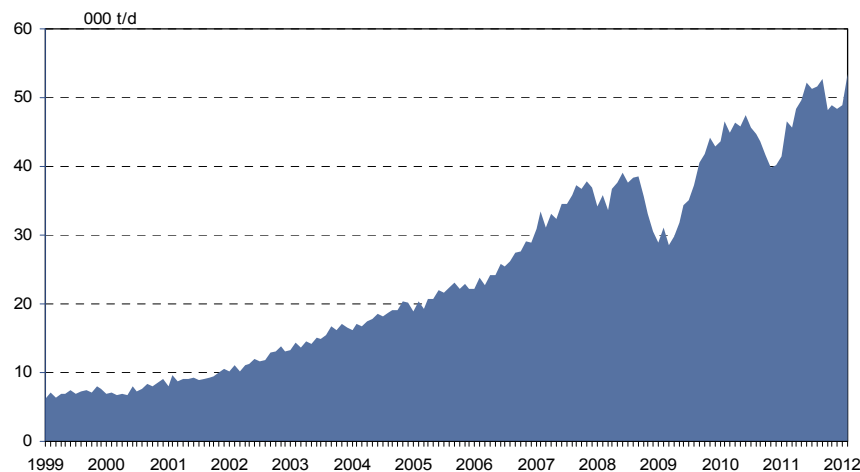


Source: Bloomberg, Citi Investment Research and Analysis

Supply – surging ahead in China

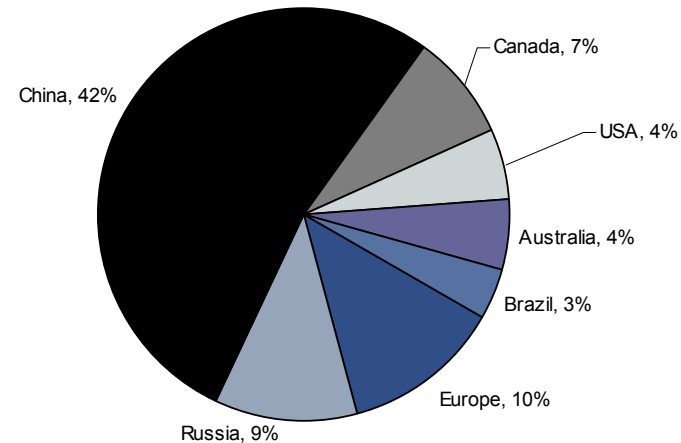
- At current LME prices of around \$2,100/t, approximately 15 million mt of Chinese capacity should be cash negative. Hence the suggestion in some quarters that production cutbacks will be seen in China. However, as mentioned above, production reached record highs in February.
- The simple reason for the lack of any significant production pull back in China is simply the fact that in dollar terms, Shanghai prices remain above 90% percentage marginal production costs (\$2,500/t). Chinese Aluminum production is expected grow by 11% to 20.9 million mt in 2012, with installed capacity rising to 26 million mt.
- Pressure for cutbacks is like to remain a Western world phenomenon. Indeed, the recent closure of capacity by ZALCO, and announcements of upcoming closures by Alcoa (Porto Vesme in Italy, and Aviles and La Coruna in Spain) and Rio Tinto (Lynemouth) which have added to consumer concerns over potential physical tightness in the European market.
- Total Aluminum production is expected to rise by 5% to 47.4 million tons this year, driven largely by Chinese and low cost Middle Eastern production growth.

Figure 84. Chinese Aluminum production – hitting record highs in February



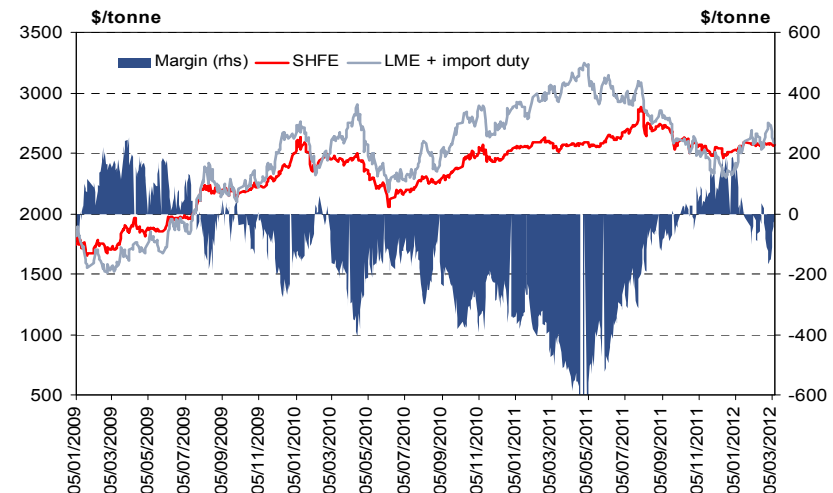
Source: IAI, Citi Investment Research and Analysis

Figure 83. Aluminum Supply by Major Region, 2011



Source: Wood Mackenzie, Citi Investment Research and Analysis

Figure 85. Comparing Chinese production to LME prices is irrelevant

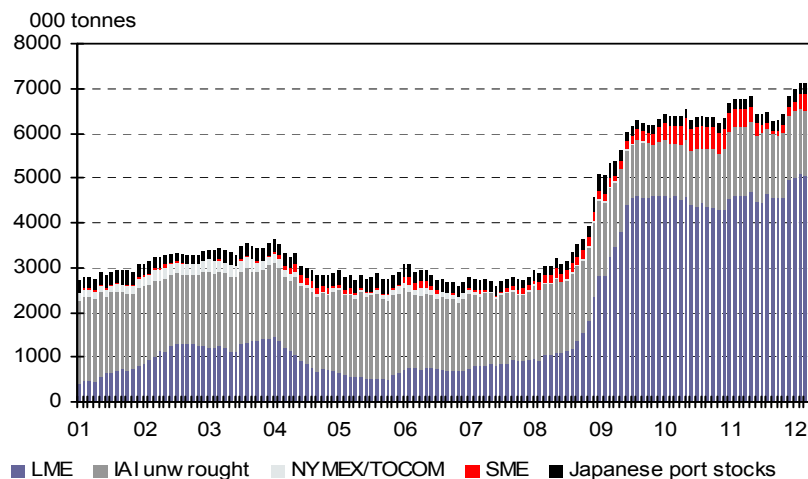


Source: Wood Mackenzie, Citi Investment Research and Analysis

Inventories and Price

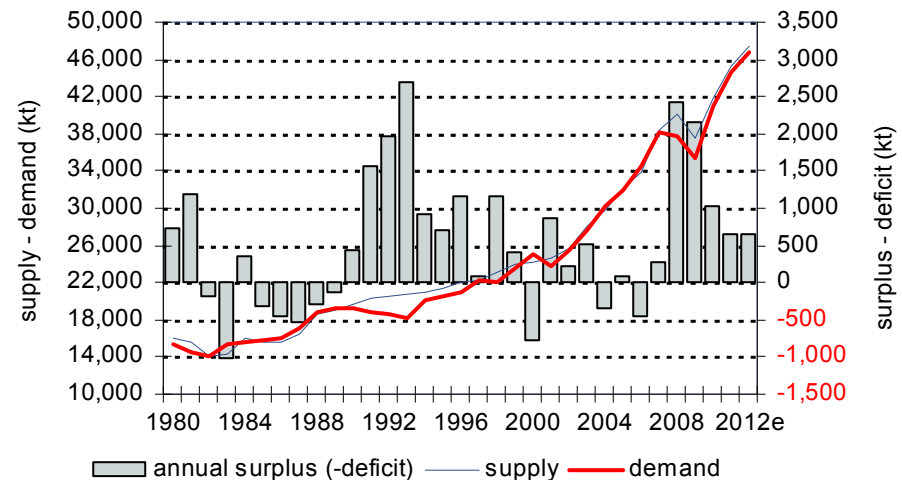
- The Europe/US warehousing bottleneck will likely remain a contentious issue despite the April LME doubling warehouse load-out rates to 3kt per day for warehouses with more than 900 kt of metal. Prompt metal availability may continue to remain tight through 2012 supporting prices.
- Given the wideness of the contango forward structure, financing deals are expected to continue to absorb excess metal, whether in LME warehouses or non-exchange warehouses, particularly in the light of a sustained low interest rate environment. Indeed, reported inventories are projected to rise to close to 8 million met by the end of 2012.
- An improving H2 demand environment, driven by continued US growth, new China stimulus, and an element of European restocking, combined with continued tight prompt metal availability are projected to push Aluminum prices back to March highs of \$2,350/t by the end of the year.
- A key risk to our forecast remains the potential for regulatory intervention into the operation of LME warehouses by banks and traders. Indeed, there also is growing pressure amongst US consumers for such an intervention.

Figure 87. Aluminum inventory – still on the rise



Sources: LME, IAI, SME, Citi Investment Research and Analysis

Figure 86. Little prospect of a significantly tighter market in 2012



Sources: LME, Citi Investment Research and Analysis

Figure 88. Contango spreads continue to widen



Source: LME, Bloomberg, Citi Investment Research and Analysis

Nickel - demand soft on sluggish stainless production, but supply issue could surprise

- Nickel prices managed a sustained rally through January on the back of fund short covering sparked by index fund rebalancing in favor of nickel. However, unlike previous years, there was little consumer buy-in to rising prices. January's rising nickel prices transmitted into high stainless steel prices via the alloy surcharge mechanism did not prompt stainless steel stockists to rush to restock, as has been the case in the last 3 years, largely due to the lack of strong end-user demand. The lack of consumer follow meant prices had little support, with prices falling from their peak of \$22,500/t in early February to lows in \$17,125/t in late March.
- Q1 is usually the strongest period for nickel demand, often featuring strong LME stock draws. However, this year has seen the reversal of the usual trend, with LME inventory levels rising by almost 10,000 tons since the beginning of the year. However, rising concerns over Indonesia have prompted draws in the last week.
- In tandem with sluggish stainless related nickel demand, supply has been picking up in Q1, with year-on-year growth levels estimated at around 9% prompting fears of a nickel glut. The drive has come from a combination of reduced disruption related losses from major producers, and the continued ramp up of production at two Brazilian ferronickel operations. One new HPAL (High Pressure Acid Leach) project, Ravensthorpe, did begin operating in Q4 2011, with Q1 2012 estimates put at 5,600 tons of a mixed nickel hydroxide intermediate. Reports of production from other HPAL projects, Vale's VNC and Sherritt's Ambatovy, remain elusive.
- The one short term positive issue for nickel is the lack over clarity over Indonesia's proposals for managing its mining sector and the result impact on NPI production. Moves are being made to introduce a 25% export tax on all ores this year. In addition, the possibility of outright ore export bans for mining companies who fail to submit concrete investment plans by May 7 of this year for building processing plant in Indonesia could significantly constrain NPI production.
- The market is expected to be in a modest surplus in 2012 of around 28,000 mt. However, the surplus is likely to be largely focused in the front half of the year, with NPI production likely to contract into H2. However, the 2012 price forecast has been left relatively unchanged at \$19,430/t, with levels expected to recover the \$20,000/t level in Q4.

Figure 89 World Nickel Supply Demand Balance

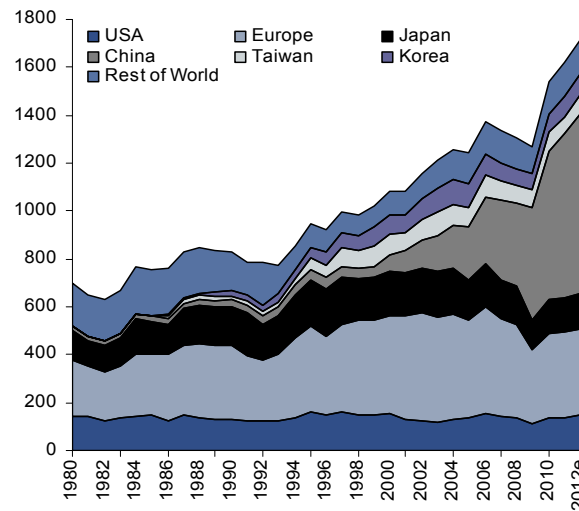
kt	2009	2010	2011	2012e	2013e	2014e	2015e
Mine production	1,468	1,647	1,859	1,922	2,098	2,224	2,313
Refined capacity	2,037	2,115	2,291	2,456	2,493	2,561	2,563
Refinery utilization	64%	68%	71%	72%	75%	76%	80%
Nickel in Pig iron	97	164	232	233	239	244	247
Metal production	1,312	1,435	1,615	1,768	1,870	1,947	2,050
Supply	1,312	1,435	1,615	1,768	1,870	1,947	2,050
Supply (%)	-4.9%	9.4%	12.5%	9.5%	5.7%	4.1%	4.0%
Consumption/Demand	1,299	1,563	1,643	1,739	1,841	1,931	2,024
Consumption (%)	-2.6%	20.4%	5.1%	5.8%	5.9%	4.9%	4.8%
Surplus/Deficit	13.3	-127.5	-27.9	29.4	28.8	15.4	0.4
Reported stocks	235.0	234.1	199.5	228.9	257.7	273.1	273.6
Stock change	78.1	-0.4	-27.9	29.4	28.8	15.4	0.4
Stocks (wks)	9.4	7.8	6.3	6.8	7.3	7.4	7.0
Price - US\$/lb	6.74	9.89	10.38	8.81	10.35	11.18	10.89
- US\$/t	14,862	21,814	22,878	19,430	22,820	24,650	24,000

Source: Wood Mackenzie, Citi Investment Research and Analysis

Demand

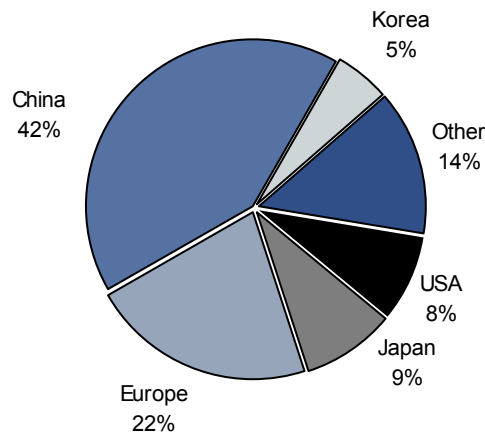
- Stainless steel production grew by only 3.4% in 2011 largely due to savage level of destocking which took place from Q1 onwards. Most stainless stockists and consumers have continued to run very low levels of inventory into 2012, running on a hand-to-mouth basis, with stainless mills running nickel stocks in a similar fashion. Strong nickel buying has been seen at lower price numbers in recent weeks at lower prices, and as Indonesia concerns gather pace.
- As with other metals, a pick up in stainless melt production through 2012 is expected, as the 2011 destocking has run its course. However, 2012 expectations of stainless steel melt production growth have been revised down to 5.7% compared to the previous 6.2% expectation. Total stainless production is therefore expected to rise to 35.5 million tons in 2012.
- Lower and relatively more stable nickel prices prompted modest moves in favor of austenitic (nickel bearing) stainless steel grades during 2011 accounting for 71.9% of total stainless production. This trend is expected to continue in 2012, with austenitic grades accounting for 72.5% of total stainless production, providing an added boost to nickel consumption.
- Non stainless sources of nickel demand have shown strong growth in recent quarters, largely by strong aerospace super alloys demand. In 2012, non stainless uses are expected to account for 580,000 tons of nickel consumption. Long lead times in aerospace orders, and record order books at both Boeing and Airbus, will ensure continued strong super alloys demand for nickel going forward.

Figure 90. China drives nickel demand growth



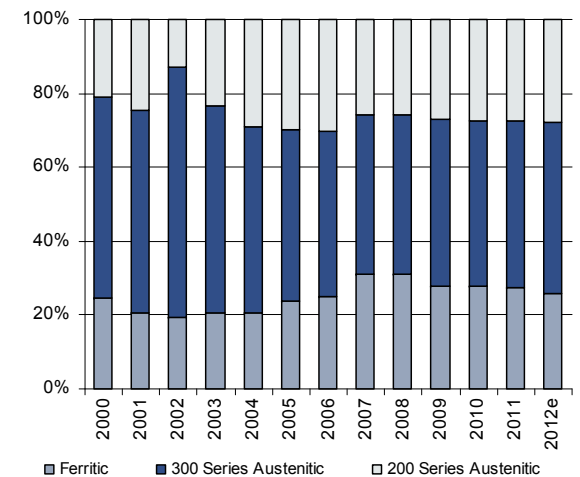
Source: ISSF, Citi Investment Research and Analysis

Figure 92. Nickel Consumption by Country/Region



Source: WBMS, Citi Investment Research and Analysis

Figure 91. Chinese Stainless Production, by Grade

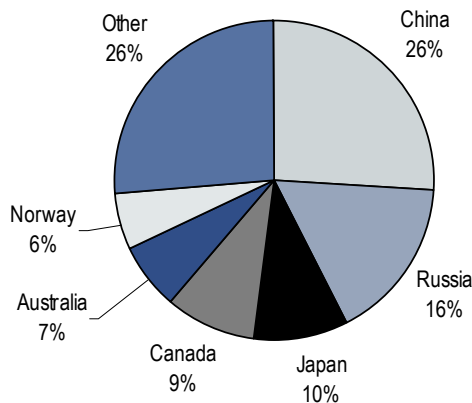


Source: WBMS, Brook Hunt, Citi Investment Research and Analysis

Supply

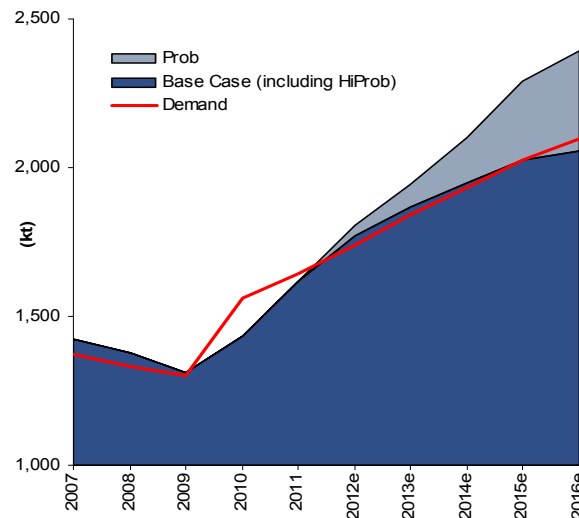
- While First Quantum's Ravensthorpe HPAL project has begun production, and is expected to produce 5,600 t of nickel intermediates in Q1, other projects continue to face problems. Sherritt's Madagascan Ambatovy project has further delays this year after being penciled in to start production in Q1, while information flow on Vale's VNC (Goro) project has again gone quiet.
- The more trusted ferronickel production route is expected to add the greatest volume of new production this year, as Vale's Onca Puma and Anglo's Barro Alto projects ramp up production after commissioning last year.
- Of greater short term concern than even HPAL is the outlook for NPI (Nickel Pig Iron) production in China. With Indonesia threatening to ban ore exports from May of this year for companies which do not submit detail investment plans for building processing capacity in Indonesia, production of NPI is likely to be constrained, as discussed below.
- Longer term, nickel now faces a distinct lack of capex spend going forward. With major projects HPAL/Ferronickel projects costing in the region of US\$5-7 bn, major miners are looking elsewhere to focus exploration and development budgets. Nickel mine supply is expected to begin to contract by 2017.

Figure 93. Share of Refined Production by Country



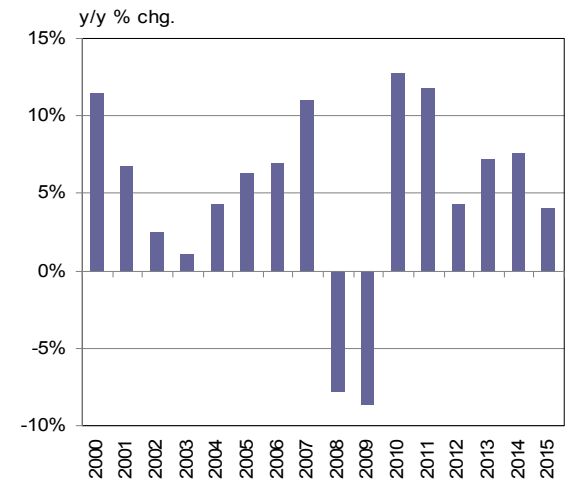
Source: Wood Mackenzie, Citi Investment Research and Analysis

Figure 95. Forecast Refined Nickel Production by Region



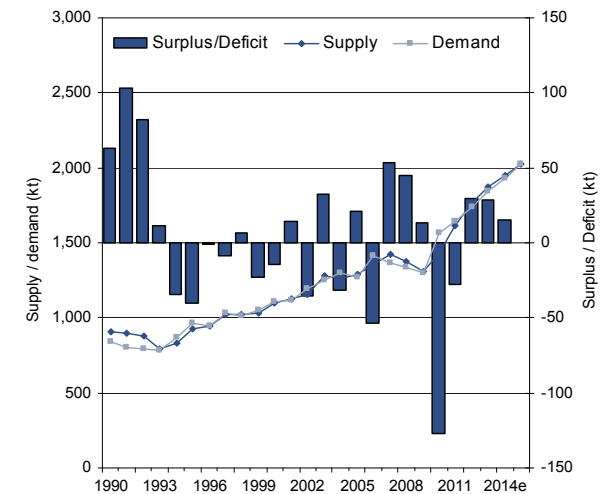
Source: Brook Hunt, Citi Investment Research and Analysis

Figure 94. Mine Supply Growth



Source: WBMS, Citi Investment Research and Analysis

Figure 96. Nickel Supply and Demand



Source: Citi Investment Research and Analysis

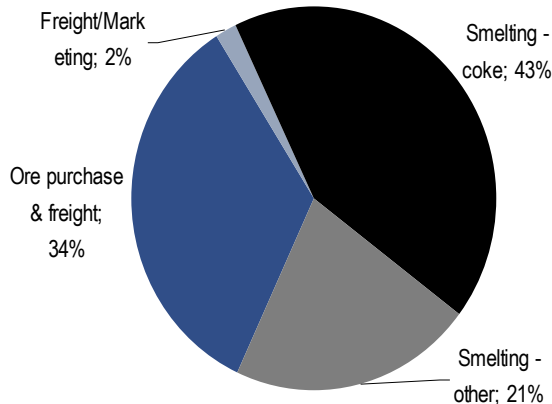
Nickel in Pig Iron

- The expectation of continued exponential growth in Chinese NPI production is now open to question given the Indonesian government's plans to ban ore exports by those companies who don't invest in production facilities in Indonesia.
- Indonesia nickel ore currently accounts for more than 60% of Chinese NPI production. However, Indonesia is not exactly helping attract investment given new measures to restrict foreign owners of mines/plant etc to 49%. Small miners, most notably Chinese operations, are likely to struggle to present viable plans and thus lose mining licenses.
- It is doubtful that full bans can effectively be imposed from May 7th, given the short time frame. However, the possible imposition of a 25% export tax presents a more immediate threat, and is likely to reduce to demand for Indonesian ore through a significant escalation in NPI production costs to uneconomic levels. NPI production costs currently range from \$16,500/t up to around \$20,000/t. It also remains doubtful that the Philippines can quickly step in to make up any shortfall in Indonesian nickel ore exports.

Stocks and Price

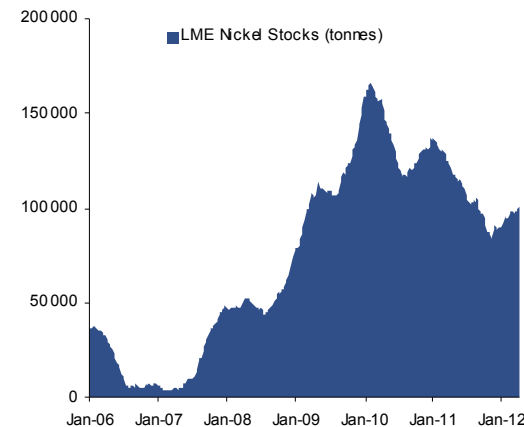
- The stainless sector remains almost fully destocked. The threat of disruptions to Indonesian ore exports by the middle of the year is expected to prompt restocking principally in China over fears for future NPI production. For the year as a whole, nickel prices are expected to average \$19,430/t, but with prices rising through Q3 and Q4 on tightening market expectations. Nickel stocks are expected to draw from current levels of 99,330 mt.

Figure 97. Nickel Pig Iron Costs



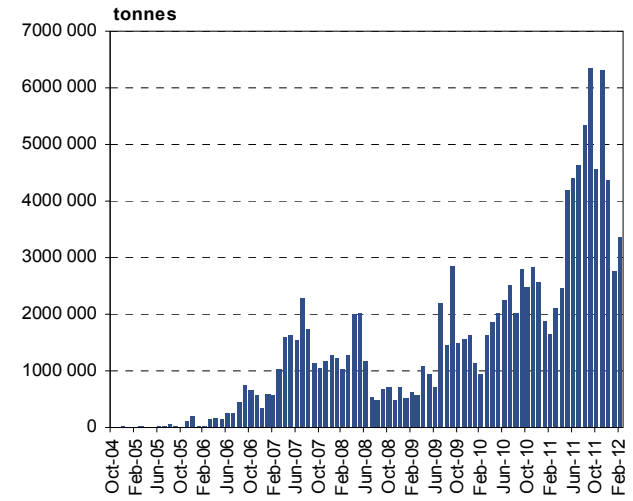
Source: Wood Mackenzie, Citi Investment Research and Analysis

Figure 99. LME Nickel Stocks



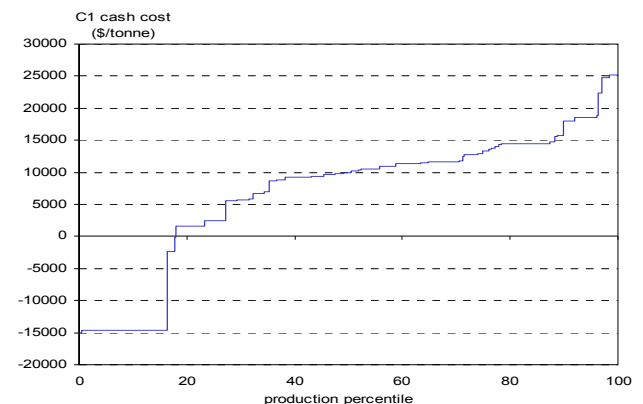
Source: LME, Citi Investment Research and Analysis

Figure 98. Nickel Ore Imports



Source: Wood Mackenzie, Citi Investment Research and Analysis

Figure 100. Nickel operating costs – NPI dominates the top decile



Source: Wood Mackenzie, Citi Investment Research and Analysis

Zinc

- Zinc prices have, perhaps surprisingly, been the second best price performer of the base metals complex during the first quarter of 2012, beaten only by Tin. Indeed, zinc prices have rallied by almost 10% in the year to-date, even allowing for the second week of April sell off. The strength looks surprising given the apparently soft market fundamentals. LME zinc inventory has risen by almost 80,000 mt since the beginning of the year, while Shanghai inventory has risen by 12,000 mt
- However, market indicators such as physical premiums point to a tightening market in the US despite much of the recent build in LME zinc inventory being focused in New Orleans. Indeed, US high grade spot merchant premiums current stand at close to \$180/t up from levels between \$150-160/t in Q1 last year. As with Aluminum, contango drive financing of inventory, made possible by a contango structure stretching more than 36 months forward, is removing the negative impact of excess metal in the market place.
- The zinc market has been in surplus since 2007, and is expected to remain in surplus for the outlook period, albeit at declining levels. However, as with Aluminum we expect surpluses to have little negative impact on prices through the limiting of prompt metal availability of metal through the combination of contango financing and constrained load out rates at LME warehouses.
- Real zinc consumption slowed to 7.6% growth in 2011 compared to 15.8% in 2010 largely as the front load demand effect of China's infrastructure focused fiscal stimulus ran its course. In 2012, this declining demand growth trend is expected to continue, with demand projected to grow by only 3.7% yoy as a result of a significant slowing in construction activity in China, and a continued sluggishness in the US construction sector. Zinc, via galvanizing, is the most exposed metal to building and construction activity. However, with prices close to marginal cost of production, we see a relatively firm floor at \$1,900/t, and expect prices to pick-up through H2 2012 in line with the expectation of recovering Chinese construction activity as the government releases the sector from its 2011 imposed clampdown.

Figure 101 Global Zinc Supply Demand Balance

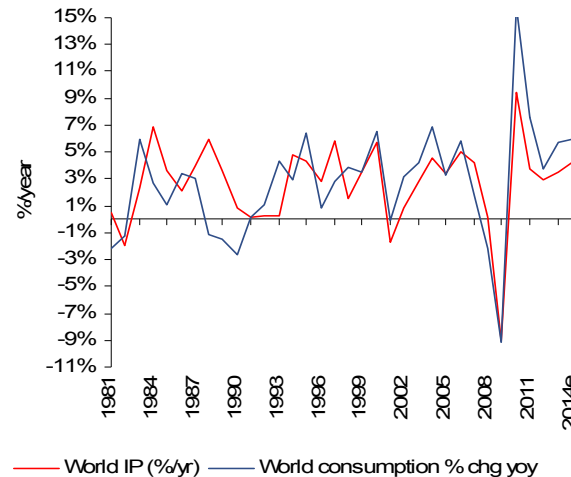
kt	2009	2010	2011	2012e	2013e	2014e	2015e
Mine production	11,537	12,238	12,782	13,258	14,211	14,440	15,164
Concentrate required	11,016	12,522	12,769	12,974	13,611	14,417	15,218
Metal production	11,280	12,829	13,117	13,366	13,977	14,739	15,513
Smelter Capacity	11,174	12,712	13,144	14,529	15,709	16,749	18,381
Primary prodn	10,507	11,943	12,179	12,375	12,982	13,751	14,515
Secondary prodn	773	881	938	992	994	988	998
Supply	11,280	12,829	13,117	13,366	13,977	14,739	15,513
Supply (%)	-3.4%	13.7%	2.2%	1.9%	3.3%	3.0%	3.3%
Consumption	10,124	11,720	12,609	13,094	13,834	14,659	15,453
Consumption (%)	-9.1%	15.8%	7.6%	3.8%	5.7%	6.0%	5.4%
MARKET BALANCE	1,156	1,109	508	272	142	80	60
Reported stock change	288	122	490	272	142	80	60
Total reported stocks	1,005	1,126	1,616	1,888	2,031	2,111	2,171
Stocks (wks)	5.2	5.0	6.7	7.5	7.6	7.3	7.3
Price (US\$/lb)	0.79	0.98	1.00	0.97	1.04	1.15	1.09
(US\$/t)	1,732	2,161	2,212	2,121	2,300	2,525	2,400

Source: Wood Mackenzie, ILZSG, WBMS, Citi Investment Research and Analysis

Demand

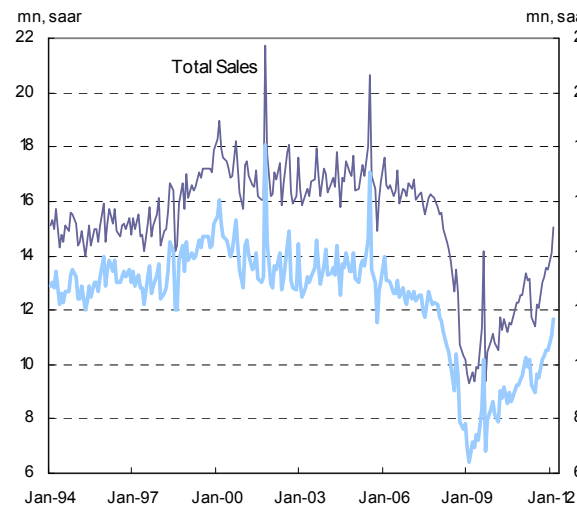
- China currently accounts for 42% of global zinc consumption and thus is crucial to the demand outlook for zinc.
- The re-gearing of Chinese economic growth under the current 5-year plan away from fixed asset investment driven growth to consumer market /service sector growth is will lead to a to continued normalization of China's zinc demand growth. However, in 2012 the downtrend in China's growth consumption growth profile is being exacerbated by the government's policy of clamping down on property speculation in order to bring property price more into line with average incomes.
- Chinese property prices have been decline for over 6 months, which together with still tight credit availability is discouraging residential construction activity. As mentioned in the above copper section, the Citi's China property team expects a 19% yoy drop in gross floor area under construction in 2012.
- However, it is expected that this will be a year of 2 halves, to coin a football phrase, with the second half of the year featuring measures by the incoming new party leader and premier to re-stimulate economic growth. Such measures are likely to take the form of further reserve asset requirement cuts for banks in order to stimulate credit, and new subsidies to promote auto sales growth.
- Outside China, the continued rebound in US auto and transport markets represent one of the few demand bright spots, with February auto sales rising by 15% yoy.

Figure 102. Chinese Zinc Consumption vs. IP Growth



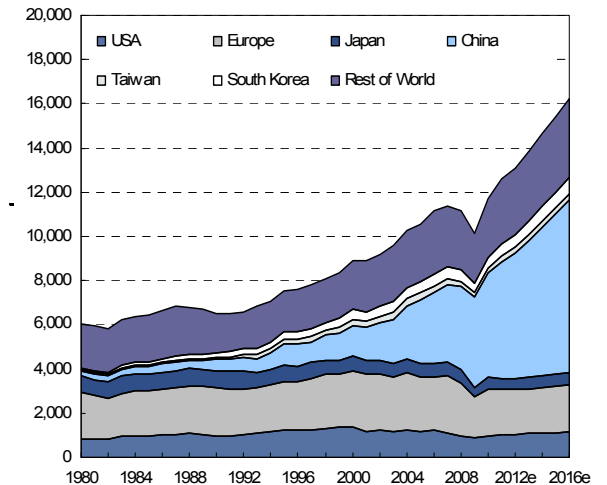
Source: Wood Mackenzie, WBMS, Citi Investment Research and Analysis

Figure 104. US Vehicle Sales



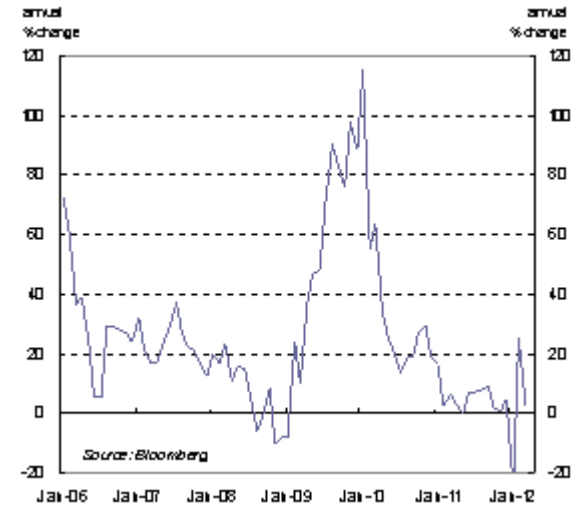
Source: Bloomberg, Citi Investment Research and Analysis

Figure 103. Regional Zinc Consumption



Source: Wood Mackenzie, Citi Investment Research and Analysis

Figure 105. Chinese Vehicle Sales

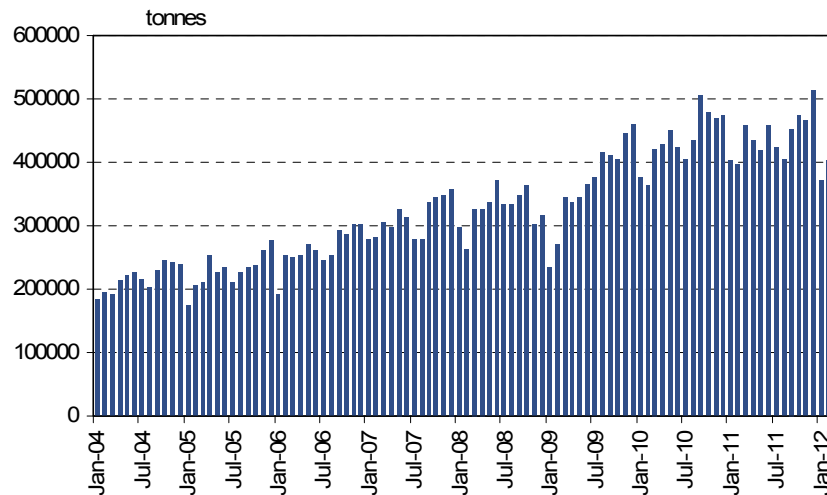


Source: Bloomberg, Citi Investment Research and Analysis

Supply

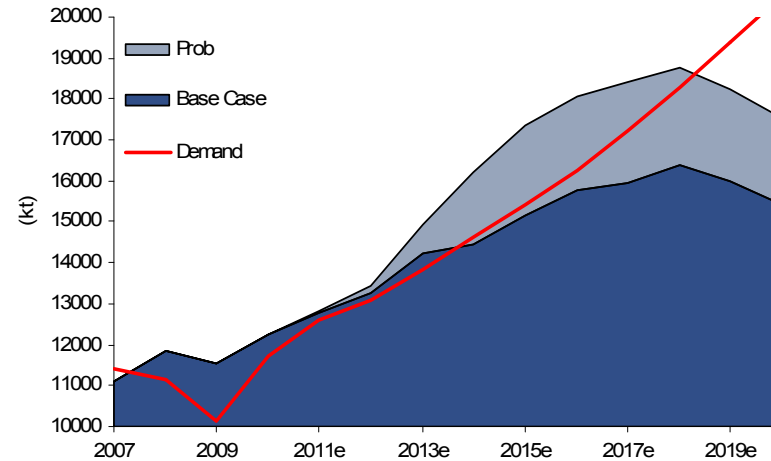
- Chinese mine production started the year off strongly, with production in January and February up 38% yoy to 576,000 mt. In 2011, China's mine and refined zinc production was surprised the market growing 16% respectively, significantly reducing China's import requirements for both refined metal and concentrate.
- It is not expected that such growth rates will be sustainable in 2012, particularly given the fragmented and small scale nature of many of the zinc mining operations. Indeed an expected slowing in China mine supply growth combined with closures of Western world mining complexes such as Brunswick and Skorpion will push the concentrate market into deficit from 2014.
- Given the tightening impact of financing deals on metal availability, zinc prices are seen to have little downside risk from their current levels and would represent a good buying opportunity at \$1,900/t, levels at marginal production costs. However, the continued visible stock overhang will also continue to limit significant upside potential in 2012. Longer term, the mine depletion issue provides support for prices going into 2014.

Figure 107 Chinese Output



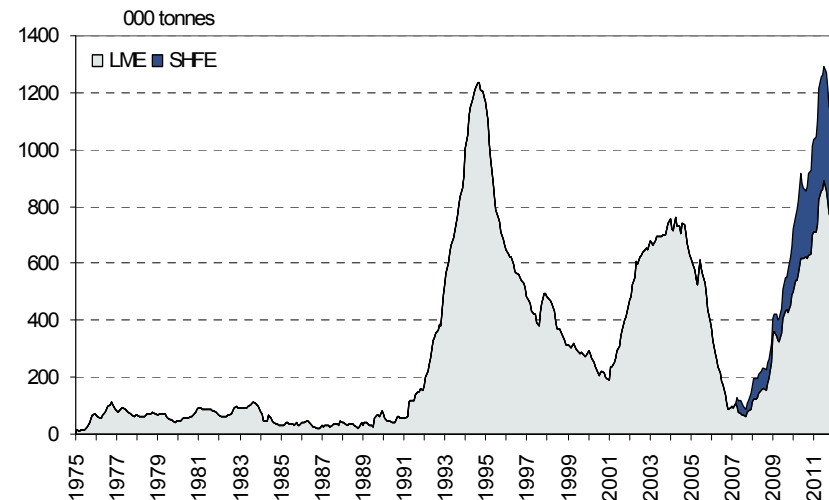
Source: China Customs, Citi Investment Research and Analysis

Figure 106 Growth in Zinc Mine Supply



Source: Wood Mackenzie, WBMS, Citi Investment Research and Analysis

Figure 108 Exchange Zinc Stocks

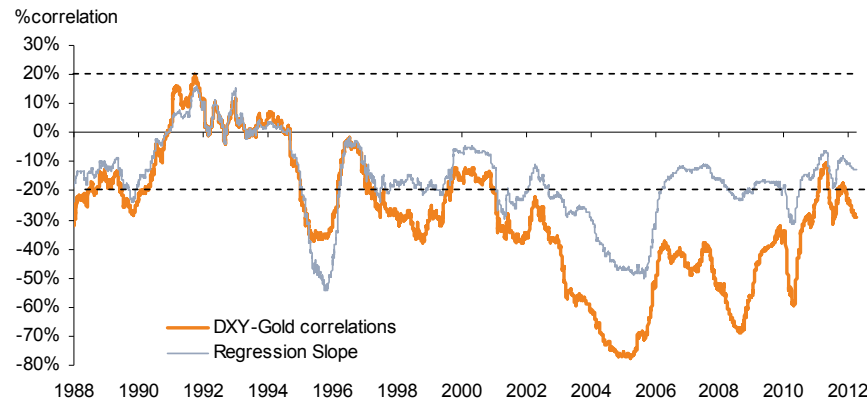


Source: LME, SHFE, Citi Investment Research and Analysis



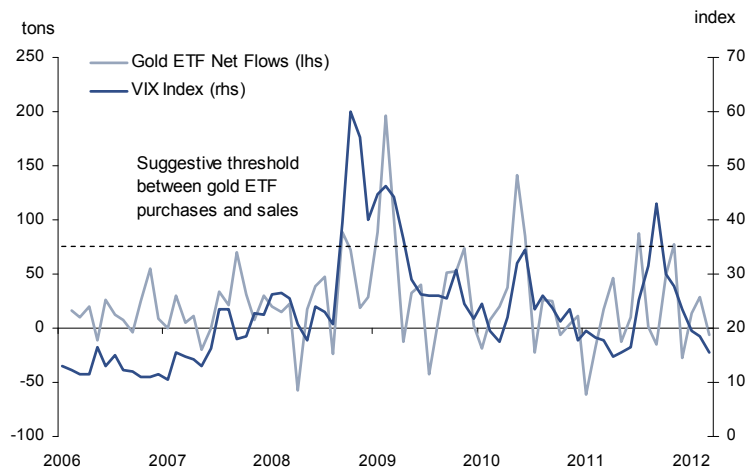
Precious Metals

Figure 109. Gold-DXY 12m Rolling Daily Return Correlations and Regression Slope



Source: Bloomberg, Citi Investment Research and Analysis

Figure 110. Gold ETF Net Flows and VIX Index



Source: Bloomberg, Citi Investment Research and Analysis

Gold

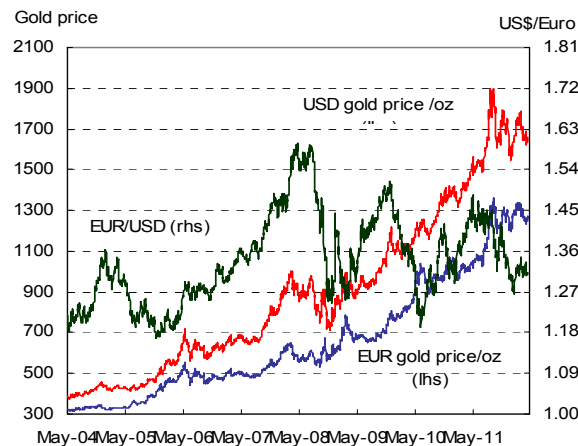
- As previously discussed in the annual outlook, three major macro-financial factors should drive gold returns for the foreseeable future: real interest rates, denomination effects from inflation and currency adjustments, and financial demand for gold as a safe haven and source of liquidity.
- Despite scattered signals of economic pickup, overall the global economy remains under deep pressure and real interest rates should remain low, providing continued support to gold returns. The Fed has slowed its balance sheet expansion but signaled that QE3 remains a possibility as economic conditions warrant it, while the ECB, BoE, and BoJ have been more aggressive with more quantitative easing.
- Citi expects short-term interest rates in the US to not rise from their current 0-0.25% range until 2014. Similarly, Japan's interest rates are expected to remain low until 2014 as well, while rates in Europe may actually fall from 0.81% in 2012 to 0.5% in 2013-2015. Meanwhile, the inflation outlook has ticked slightly up by 0.1% to 3.1% in 2012 and 3.0% in 2013, thanks in part to higher commodity prices as well as mild signs of economic resilience.
- Citi's forecast for a mild rally of the dollar against the euro to 1.25 remains unchanged, suggesting some bearish pressure on dollar-denominated gold prices. This dynamic may strengthen as the Eurozone recession deepens and the ECB loosens relative to the Fed. On the other hand, the tail risk of a catastrophic meltdown of the Eurozone may drive forced liquidations of gold holdings in favor of cash, as seen in the nonlinear relationship between gold ETF flows and the VIX Index.
- We are revising our base forecast for gold prices slightly to reflect the better economic conditions in the US (especially relatively to Europe) and the downward pressure both higher US real interest rates, a stronger dollar, and a still elevated risk of a Eurozone meltdown has on gold returns. Our new forecast revises up 2012 gold prices to about \$1,720/t oz. but revises down 2013 prices to \$1,835/t oz.

Figure 111. Global Gold Supply Demand Balance

kt	2009	2010	2011	2012e	2013e	2014e	2015e
Mine Supply	2,589	2,689	2,811	2,902	2,965	3,084	3,040
Net official Sector Sales	34	0	0	0	0	0	50
Scrap Supply	1,695	1,645	1,627	1,790	1,935	1,557	1,300
Net Producer Hedging	0	0	12	20	86	122	122
Total Supply	4,318	4,334	4,451	4,712	4,986	4,763	4,462
Jewelry	1,814	2,017	1,963	1,873	1,784	2,141	2,200
Electronics	275	327	330	347	364	382	410
Denistry	53	49	44	39	35	34	36
Other Industrial	82	91	89	87	91	97	104
Total Fabrication Demand	2,511	2,779	2,754	2,716	2,637	2,929	3,045
Official Sector Purchases	0	73	440	400	300	300	300
Physical Bar Investment	531	880	1,202	1,230	810	790	700
Net Producer De-hedging	236	103	38	0	0	0	0
Implied Other Investment	1,040	495	55	366	1,239	744	417
- of which: ETFs	617	368	154	250	400	220	150
Coins, Medals, Other	423	161	-99	116	839	524	267
Total Demand	4,318	4,334	4,451	4,712	4,986	4,763	4,462
(US\$/oz)	972	1,225	1,570	1,720	1,835	1,725	1,540

Source: GFMS, Citi Investment Research and Analysis

Figure 112. Gold prices vs. USD/EURO



Source: Bloomberg, Citi Investment Research and Analysis

- Mine supply is expected to grow from 2,811 mt in 2011 to 2,902 in 2012 as new mines and expansions are largely offset by closure of ageing mines. New mine supply is largely driven by two new large scale projects: Pueblo Viejo in the Dominican Republic and Pascua Lama on the Chilean-Argentinean border, as well as notable ramp ups in Mexico and Brazil. On the minus side, major falls in Peruvian mine production are expected over the next five years, largely due depletion at Yanacocha and Lagunas Norte.
- Scrap supply is again expect to pick up on rising gold prices into 2013 and therefore total gold supply (mines + scrap) is expected to rise substantially year-on-year from 2011 to 2012.
- Gold jewelry consumption in 4Q 11 was 15% down on 4Q 10, mostly reflecting the weak economies of the mature market. On the past, strong ETF demand has offset any weak consumer demand but there were net ETF redemptions of 11 tons in March. However, ETF levels are very sensitive to sovereign debt concerns and with these concerns now heightened during April, a resumption of ETF demand is expected.
- Official sector purchases were 440 mt in 2011, a significant increase over 2010 levels and we expect 400 mt in 2012, largely drive by purchases from Thailand, Bolivia and Russia. Other investment will have to rise from 55 mt in 2011 to 366t in 2012 to balance out the expected losses from jewelry demand going forward.

Silver

- On the supply side, the market is likely to remain well supplied. Production is likely to be boosted by several key projects such as Pascua-Lama, Conchenco and Pueblo Viejo.
- Production of silver as a by-product of Gold is likely to maintain growth, growing from 13% of supply in 2011 to 20% in 2014
- A few mines are likely to make large contributions to production in the near future. Pascua-Lama alone is expected to deliver 30m oz of silver in 2014, while Conchenco and Pueblo Vieja should contribute 15m oz by 2015.
- Silver output from lead/zinc mining is expected to grow by 7% in 2012. Price weakness could lead to a marginal decrease of scrap supply.
- Industrial demand is likely to grow at a subdued pace of 1.9% in 2012, a far cry from the growth rates in excess of 10%, seen during the pre-crisis boom years. The slowdown in industrial demand is mainly on account of the weak economic environment. We expect a rebound in growth to 3.8% in 2013 and 4.8% in 2014.
- Photographic demand is likely to stay tepid, as it maintains a decline.
- Momentum in the middle income luxury-goods cycle is likely to result in jewelry demand growth of 2.45 in 2012, 3.5% in 2013 and 5.6% in 2014.
- Implied investment is the balancing item, indicating how much investment demand is needed to balance demand and supply. After 156.8m oz of investment demand in 2011, 187.1m oz of demand is needed in 2012 to balance the market. Such demand levels are unlikely to materialize, particularly if sovereign debt fears dissipate. Indeed, there is always the threat that silver will be sold from ETFs and that the price could fall to well below \$30 / oz.

Figure 113. Silver Supply and Demand (million ounces)

	2010	2011E	2012E	2013E	2014E
Supply					
Mine Production	754.5	783	827	856	890
Net Government Sales	44.8	10	8	4	0
Net Producer Hedging	49.9	32.5	20	10	0
Scrap	214.9	235.3	230	220	210
Implied disinvestment	0	0	0	0	0
Total Supply	1064.1	1060.8	1085	1090	1100
Demand					
Industrial	487.4	496.6	506	525	550
Photographic	72.7	65.1	60	55	50
Jewelry	166.9	168.9	173	179	189
Silverware	50.8	46.3	44	44	44
Coins & Medals	101.5	127.3	115	100	105
Total Fabrication	879.4	904	897.9	903	938
Net Producer de-hedging	0	0	0	0	0
Implied investment	184.7	156.8	187.1	187	162
Total Demand	1064.1	1060.8	1085	1090	1100

Source: GFMS Historic, Citi Investment Research and Analysis

Figure 114. Silver price and Gold/Silver ratio



Source: Datastream

Platinum Group Metals Outlook

- FY12-16 dollar platinum price assumptions have been upgraded by 2-5%, on the back of a stronger rand outlook but remain cautious on platinum's 12-24 month outlook. We upgrade our FY12 assumptions for palladium by 3% and our FY16 price by 9%.
- The medium-term 100-350k ounce surplus outlook for platinum remains intact. This is due to estimates for 1) a 5% decrease in Western European LV production in 2012, 2) a decrease in the diesel penetration rate, and 3) significantly lower investment demand in 2012. Our surplus outlook is despite a 1.5% (75k ounce) downgrade to our SA mine supply assumptions, following illegal strikes at Impala Platinum and a number of safely related production stoppages.
- A rising deficit market for palladium is highly likely, mainly due to growth in light vehicle (LV) production in gasoline-based markets (in particular China and the US). The sheer size of these two markets combined (40% of global vehicle production) implies significant uplift in demand for palladium, even in a muted growth environment.

Figure 115. Platinum Demand – Supply Balance

(000 ounces)	2009	2010	2011	2012e	2013e	2014e	2015e
Demand							
Gross Autocatalysts	2,185	3,125	3,160	3,347	3,402	3,586	3,689
Net Jewelry	2,245	1,680	1,765	1,825	1,978	2,052	2,139
Investment	660	650	495	280	166	122	122
Net Industrial	1,140	1,681	1,960	2,019	2,079	2,150	2,223
Total demand	6,230	7,136	7,380	7,471	7,626	7,911	8,173
Supply							
Mining			0	0	0	0	0
Southern Africa	4,865	4,915	5,110	5,026	5,207	5,438	5,548
Russia	785	825	825	815	798	767	752
North America	260	210	360	325	381	376	371
Rest of world	115	110	100	120	120	120	120
Total mine supply	6,025	6,060	6,395	6,286	6,506	6,701	6,790
Autocatalyst Recycling	840	1,096	1,180	1,307	1,400	1,464	1,532
Total Supply	6,865	7,156	7,575	7,593	7,905	8,166	8,322
Surplus/(Deficit) balance	635	20	195	122	280	255	149

Source: Johnson Matthey, Citi Investment Research and Analysis

Figure 116. Palladium Demand – Supply Balance

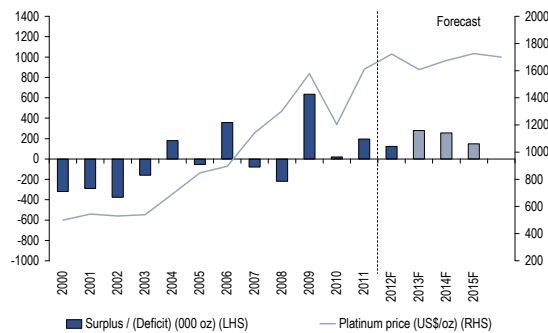
(000 ounces)	2009	2010	2011	2012e	2013e	2014e	2015e
Demand							
Gross Autocatalysts	4,050	5,450	5,915	7,046	7,774	8,451	8,985
Net Jewelry	705	550	335	304	332	359	390
Investment	625	1,085	-215	585	406	271	257
Net Industrial	1,885	2,020	2,165	2,317	2,432	2,530	2,616
Total demand	7,265	9,105	8,200	10,251	10,945	11,610	12,248
Supply							
Mining							
Southern Africa	2,550	2,795	2,870	2,930	3,073	3,167	3,240
Russia	3,635	3,720	3,450	3,450	3,400	3,400	3,400
North America	755	590	945	795	870	980	1,050
Rest of world	160	185	155	180	180	180	180
Total mine supply	7,100	7,290	7,420	7,355	7,523	7,727	7,870
Autocatalyst Recycling	965	1,325	1,505	1,774	1,924	2,038	2,138
Total Supply	8,065	8,615	8,925	9,129	9,447	9,764	10,009
Surplus/(Deficit) balance	800	-490	725	-1,122	-1,498	-1,846	-2,240

Source: Johnson Matthey, Citi Investment Research and Analysis

Platinum

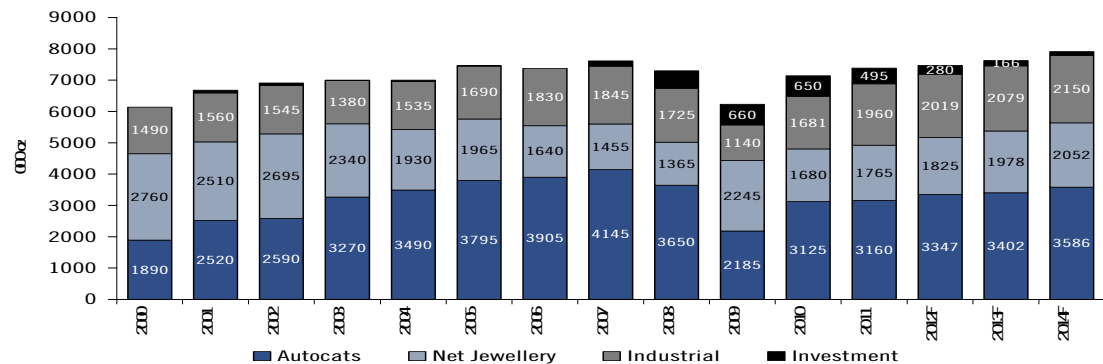
- A medium-term (2012-2015) surplus in all three macroeconomic scenarios considered is highly likely. This is as growth in auto catalyst recycling and mine supply (even though lower than previously expected) is likely to more than offset muted growth in demand for platinum. Even after downgrading Southern African supply, the 100-350koz platinum surplus outlook remains. This is due to lower supply assumptions, which have been offset by lower auto catalyst and investment demand assumptions.
- The market is likely to be in surplus of 122k ounces in 2012 and 280k in 2013. This is as global growth remains sluggish, resulting in only marginal increases in global LV production in 2012. This growth is mainly driven by continued growth in China and a recovery in the US (13% and 12% respectively), while the recessionary environment in Western Europe results in a 5% contraction in LV production in this region.
- The marginal increase in LV production is, however, somewhat offset by lower investment demand as economic outlook improves moderately.
- Auto catalyst recycling is likely to increase 11% to 1.31m ounces in 2012. This is as improved consumer confidence and increasing LV sales result in more old vehicles being traded-in and scrapped.

Figure 117. Platinum Surplus (deficit) forecasts



Source: Citi Investment Research and Analysis

Figure 118. CIRA Platinum demand by application forecasts

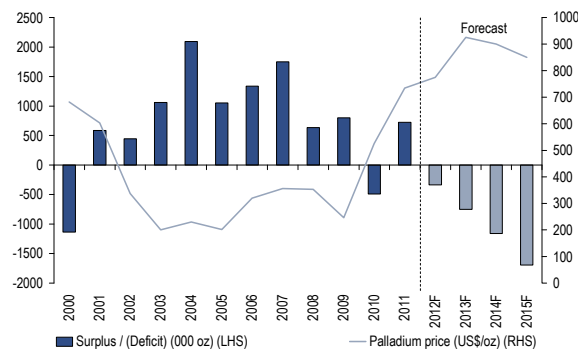


Source: Johnson Matthey, Citi Investment Research and Analysis estimates

Palladium

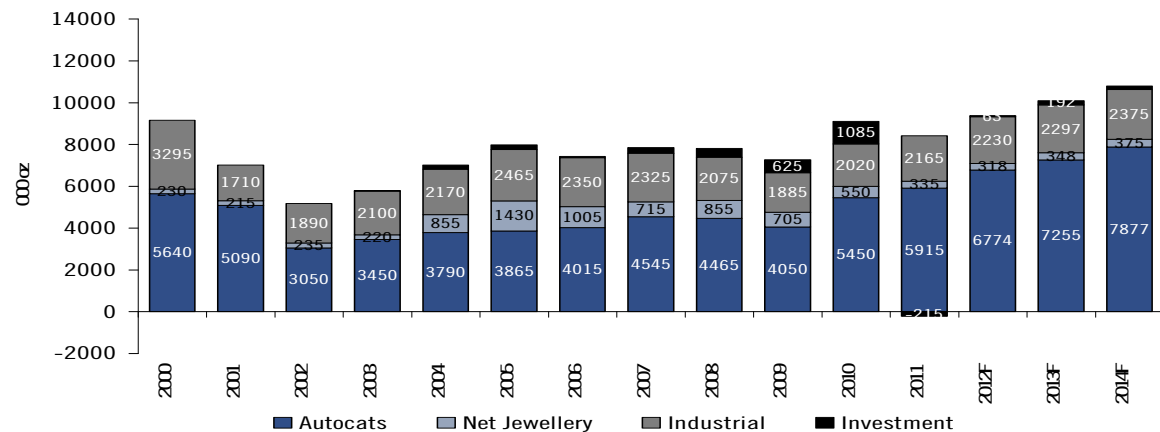
- Assuming a further 750k ounce stock sales from Russia in 2012, a 335k ounce deficit market for palladium in 2012 is the most likely outcome under the base case scenario. Any decrease in Russian stock sales will push the market further into deficit.
- A 335k ounce deficit in 2012 followed by higher deficits in subsequent years is most likely. This is mainly due to expectations for a recovery in US auto production and sustained 8-10% medium-term growth in Chinese LV demand. A significant slow-down in 2011's ETF sales in a fragile recovery scenario can also be expected, as investors are likely to keep their holdings in a slowly improving economic environment.
- The positive effect is likely to be somewhat offset by lower jewelry demand and a pick-up in auto catalyst recycling.
- The recovery in global LV production and a likely rise in PGM prices should result in a decrease in net jewelry demand, especially in price-sensitive regions like China.
- Auto catalyst recycling is likely to increase 12.5% to 1.70m ounces in 2012. This is as improved consumer confidence and increasing LV sales result in more old vehicles being traded-in and scrapped. Rising PGM prices also incentivize refineries to recover and recycle more PGMs.

Figure 119. Palladium Surplus (deficit) forecasts



Source: Citi Investment Research and Analysis

Figure 120. CIRA Palladium demand by application forecasts



Source: Johnson Matthey, Citi Investment Research and Analysis estimates

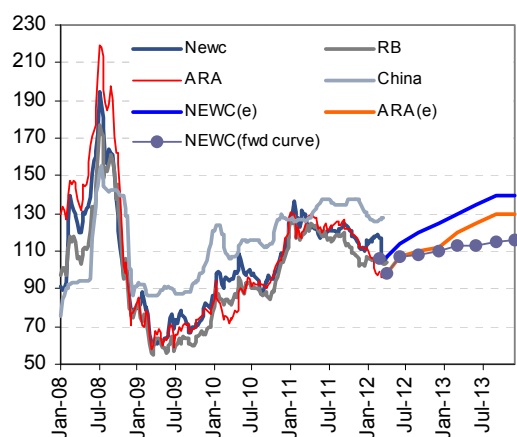


Bulk Commodities

Thermal Coal Outlook – No short term remedy for struggling spot coal prices

- A near term recovery in thermal coal prices remains unlikely. Demand from emerging markets in Asia for thermal coal looks like it will remain lackluster over the coming months. A combination of slowing domestic demand as well as diverted tonnages from Europe has resulted in relatively high inventories in China heading into the normally strong seasonal demand period. At the same time, a surge in imports from India is unlikely to meet expectations as financial and infrastructure constraints are taking longer to rectify. This should result in limited growth from Asia over the next few months.
- A pick up in demand from China and India remains the key to any improvement in prices this year. In China, electricity demand has been impacted by relatively weak manufacturing activity, resulting in a rise in inventories and a fall in imports this year. This is partly due to strong domestic coal production but also due to weakening international prices, which has pushed the import price arbitrage back to record highs.
- Underlying demand for coal in India looks favorable but a strong pick up in consumption appears allusive at the moment. A bottom up analysis suggests that India's domestic shortfall could be as high as 140Mt this year. But despite ample port capacity and viable economics, utilities have been reluctant to significantly increase the use of imported coal. If left unresolved, imports are unlikely to surge as much as the market has been expecting. But if India were to make imports more financially attractive, then there is the possibility that buying from Indian coal consumers could step up. Outside of emerging markets; Japan also remains weak as earthquake-related issues linger on.
- Therefore, with demand from Asia uncertain over the next couple of months, prices should remain depressed. But later this year, as domestic shortages in India are rectified, all of Japan's damaged coal-fired capacity comes back online as expected and Chinese industrial activity picks up, the thermal coal market will tighten up considerably. Hence the disparity between forecast prices and forward curves (Figure 121).

Figure 121. Thermal Coal Prices & Forecasts



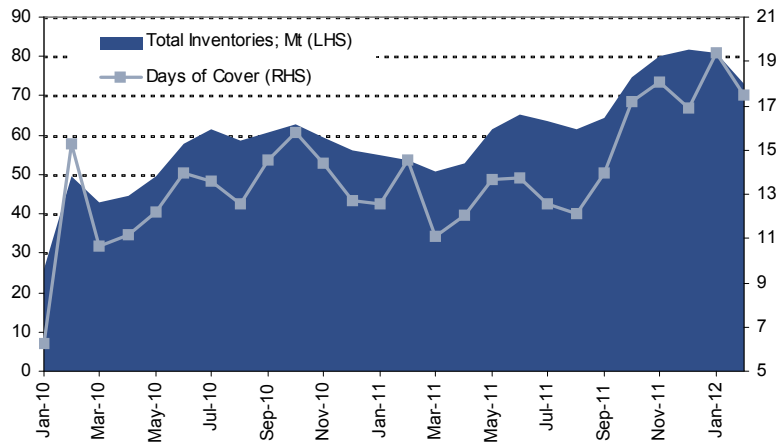
Source: Platts, Bloomberg, SXCoal, Citi Investment Research and Analysis

Figure 122. Thermal Coal Supply & Demand Forecasts

IMPORTS (Mt)	2010	2011	2012	2013	2014	2015	2016
Japan	119.6	113.2	123.8	125.5	127.3	128.4	132.8
S.Korea	87.8	86.0	91.4	97.2	103.8	110.8	120.7
Taiwan	53.2	62.4	62.4	62.4	62.4	62.4	61.9
India	48.6	92.5	139.1	158.4	176.9	191.0	201.4
EC	108.7	127.4	131.4	130.6	133.3	132.0	133.8
Others	241.2	266.2	268.9	289.4	302.5	333.2	360.2
Total	659.2	747.7	817.0	863.4	906.2	957.8	1,010.8
EXPORTS (Mt)	2010	2011	2012	2013	2014	2015	2016
Australia	140.9	152.9	177.9	182.5	196.9	205.5	206.1
South Africa	70.0	73.0	74.0	77.0	80.0	82.3	82.0
Russia	80.4	88.1	96.4	96.4	102.6	117.2	118.4
Indonesia	291.2	323.6	320.0	348.8	365.4	397.4	434.0
Columbia	62.0	64.0	69.1	69.1	69.1	75.2	79.2
US	11.0	22.0	20.0	18.0	18.0	13.0	13.0
Others	76.8	69.8	64.6	51.5	57.8	55.6	57.4
Total	732.2	793.4	822.0	843.2	889.8	946.2	990.2
IMPLIED MARKET BALANCE			5.0	-20.2	-16.4	-11.6	-20.6

Source: Citi Investment Research and Analysis

Figure 123. Thermal Coal inventories at Chinese IPPs

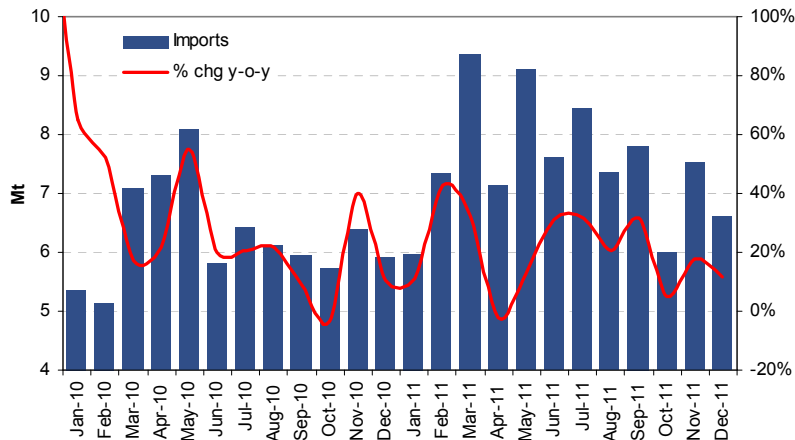


Source: Bloomberg, SXCoal, Citi Investment Research and Analysis

China Demand

- Short term demand in China may be driven by IPPs' desire to maintain high stocks through to summer. Inventories need to be maintained above 75Mt to provide the 15 days burn cover that IPPs have tried to enter the summer with in recent years. Consequently, while current high inventories enable IPPs to act as opportunistic buyers, picking up cargoes that would have found a European home in a normal Atlantic market, they do not have an option to completely step back from the market.
- Therefore, any recovery in demand will be reliant on a pick up in industrial activity. This generally occurs in 2Q, when utilities start ramping up electricity production as industrial activity picks up. But with our economists still expecting economic growth to moderate through 2Q12, we anticipate this year's seasonally strong demand period to be somewhat muted.

Figure 124. Indian coal imports have been sporadic

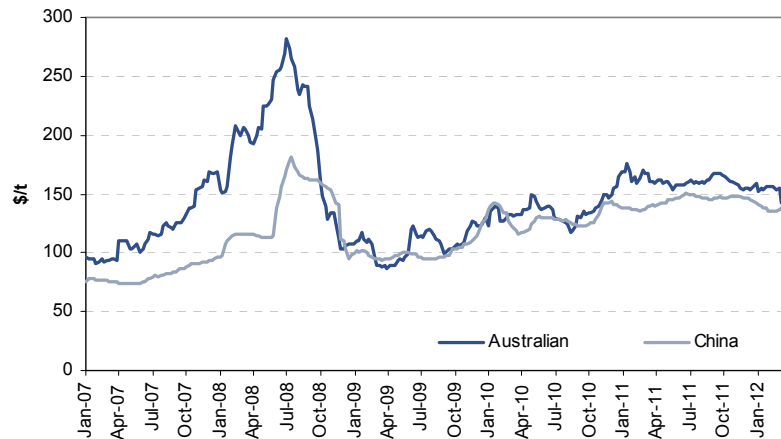


Source: Platts, ABS, Tex, Citi Investment Research and Analysis

India

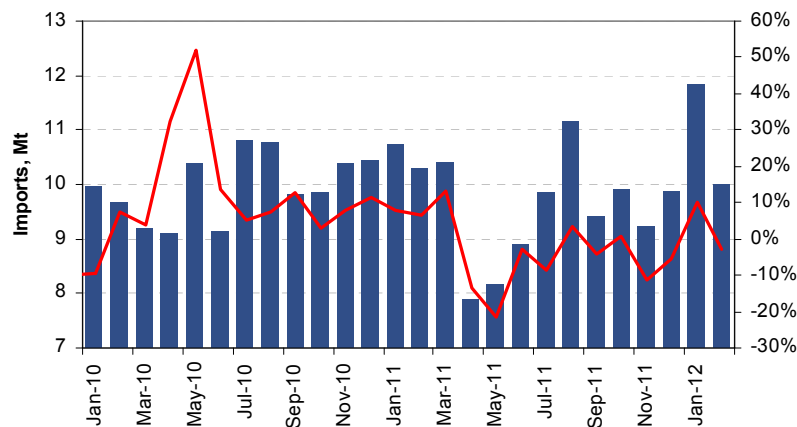
- Over the longer term, underlying demand for coal in India looks favorable. A bottom up analysis suggests that India's thermal coal demand should grow a CAGR of 13% (FY11-15E) driven by rising demand from the power sector. This equates to coal demand of 608Mt in 2012 (+13% yoy) and 686Mt in 2013 (+13%). At the same time, India's domestic supply continues to lag demand due to environmental issues and poor infrastructure.
- In the short term, domestic supplies are unlikely to solve the coal shortage problem and thus India will continue to be reliant on imports. After a strong start to 2011, imports have been on a steady decline (Figure 124). But imports are unlikely to surge to meet this expected shortage until imports are made financially more attractive. This could be achieved a number of ways, including pooling domestic and international prices, removing the import duty and raising power tariffs.

Figure 125. The recent fall in the price premium of Australian landed coal over Chinese domestic coal could support imports into China



Source: Bloomberg, SXCool, Citi Investment Research and Analysis

Figure 126. We expect Japan's thermal coal imports to increase by nearly 10% in 2012 as the shutdown in nuclear capacity continues

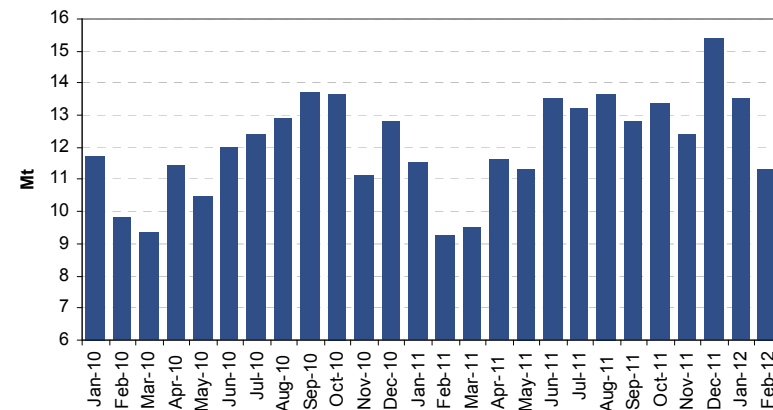


Source: Tex, Citi Investment Research and Analysis

Japan

- While all of Japan's 54 nuclear reactors are effectively shut for safety tests, coal-fired capacity may not reach the heights expected due to some plants still being repaired. Most likely, 2.5 GW of coal fire power station capacity remains curtailed, due to damage by the earthquake and tsunami last year. This represents approximately 6% of Japanese total installed coal fired capacity. This has curtailed trade, with imports down 4.5% yoy in 2H11.
- But in 2012 the tight power situation (due to lower nuclear power) will result coal-fired power generation utilization rates pushing above historical norms (of around 80%). This has already been seen in trade data which showed that thermal coal imports jumped 4% y-o-y to a record high 21.9Mt in Jan-Feb 12.
- It's also expected that damaged coal-fired capacity will come back online in 2H12. When combined with an increase in coal-fired power utilities utilization rate increasing to around 85%, coal imports will increase by 10mt to 124Mt in 2012.

Figure 127. Weather related disruptions in Australia have dampened exports in 2012 but they remain well above levels seen last year

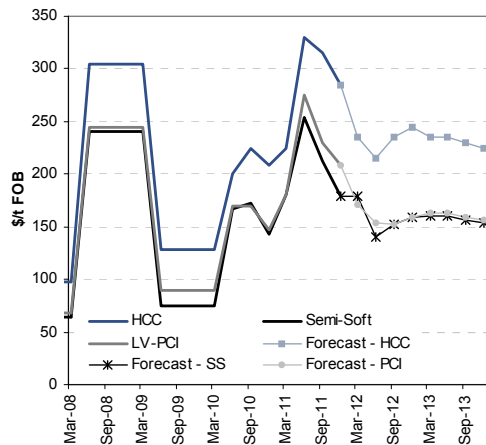


Source: ABS, Bloomberg, Citi Investment Research and Analysis

Metallurgical Coal Outlook – The worst is over

- The outlook for metallurgical coal is looking brighter after a weak couple of quarters. There are signs of a recovery in Chinese and Japanese steel markets, which should help improve demand just as disruptions in Australia limit growth in supply. Despite this, prices have likely to remain subdued as consumers work down inventory before any substantial improvement in imports will be seen. As such, forecasts for hard coking coal (HCC) in 2012 have been downgraded by 9% to \$232/t, with smaller cuts to forecasts in 2013 and 2014 (of around 6-7%).
- Supply disruptions appear to be greater than the market's expectations. Australian supply is being curtailed by wet weather and strike action, with 2Q exports likely to be subdued. US producers are also finding the market difficult.
- There have been some promising signs of a pick up in the Japanese steel market (see below) but levels remain subdued. Steel output dropped 7% yoy in Dec11-Feb12. Met coal imports from India, China, South Korea and Japan have held up a little better, but are still down 1% y-o-y over the same period. Stronger economic growth in 2H12 should see Japanese demand for met coal improve but this remains wholly reliant on a reconstruction lead rebound in Japanese steel output.
- Despite coal supply coming out of the market, slowing industrial activity and robust inventories (both of steel and coking coal) may see Chinese imports of met coal remain lackluster in the short term. This is despite the increasingly attractive pricing of imports relative to domestic coking coal. If, as expected, this inventory is exhausted relatively quickly (particularly if steel production remains above 1.9Mtpd), China will be forced back in to the international market in a more meaningful way. But the major risk remains Mongolia. If supply beats expectations (of around 2.25Mt), then Chinese demand for imported met coal may be muted, despite strong underlying consumption.

Figure 128. Met Coal Prices & Forecasts



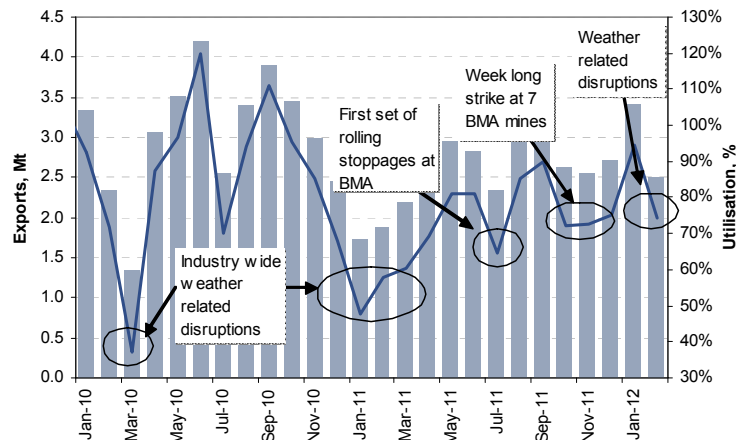
Source: Platts, Tex, Citi Investment Research and Analysis

Figure 129. Metallurgical Coal Supply & Demand Forecasts

IMPORTS (Mt)	2010	2011	2012	2013	2014	2015	2016
Japan	64.8	54.0	59.8	59.9	61.6	59.9	61.1
South Korea	27.4	30.9	34.0	34.0	34.6	35.2	37.7
India	35.7	32.7	36.3	46.1	78.4	85.1	91.7
Europe	56.8	64.8	53.6	53.1	35.9	31.1	26.7
China (excl Mongolia)	38.2	24.6	41.7	45.0	49.9	59.0	55.6
Brazil	17.7	15.8	18.1	20.6	24.1	25.6	27.7
Other	26.1	31.7	36.5	43.2	39.4	43.9	44.4
Total	266.7	254.5	280.1	302.0	323.9	339.9	345.0
EXPORTS (Mt)	2010	2011	2012	2013	2014	2015	2016
Australia	158.9	132.7	155.1	168.5	193.0	201.7	212.5
US	47.8	53.0	59.0	56.0	56.0	56.0	55.0
Canada	26.1	26.1	26.1	29.0	27.0	25.0	25.0
Russia	12.4	14.0	12.0	12.0	15.0	15.0	15.0
Mozambique	0.0	4.4	6.0	9.6	12.2	12.2	17.2
Other	5.9	8.1	9.5	13.1	8.3	12.8	14.7
Total	251.2	238.3	267.8	288.3	311.6	322.6	339.4
IMPLIED MARKET BALANCE			-12.3	-13.7	-12.3	-17.3	-5.6

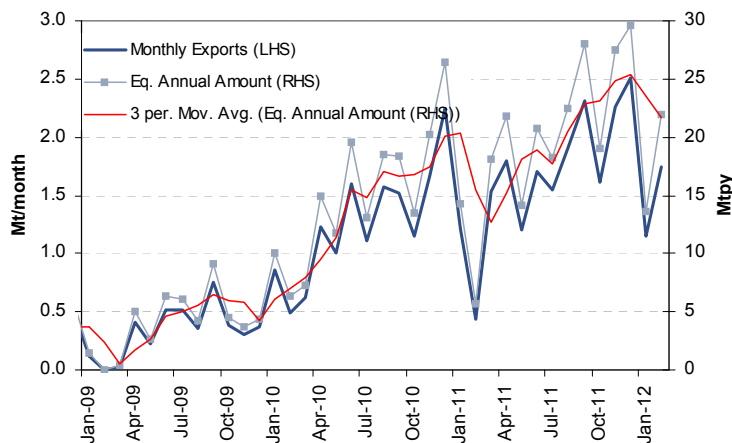
Source: Wood Mackenzie, Platts, Tex, Citi Investment Research and Analysis

Figure 130. Over the past 10 months, numerous strikes and wet weather at BMA operations have resulted in significant declines in exports from Hay Point



Source: Port of Hay Point, Citi Investment Research and Analysis

Figure 131. Mongolian exports of coking coal have taken the edge of seaborne imports into China



Source: GTIS, Platts, Tex, Citi Investment Research and Analysis

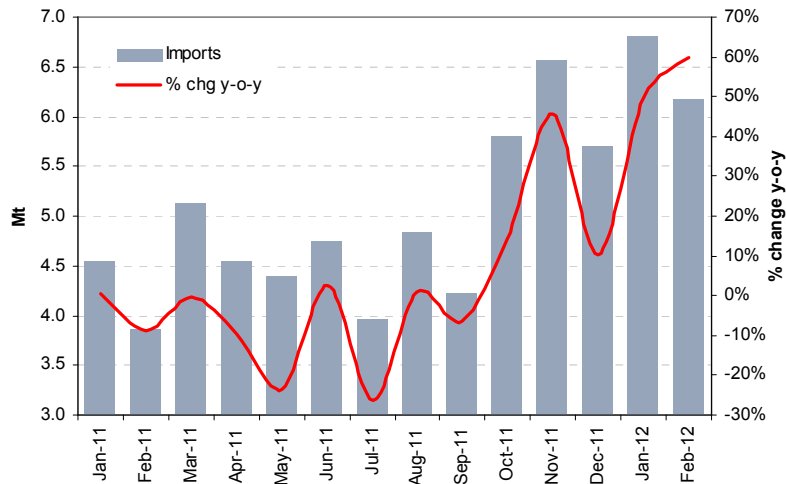
Supply disruptions still an issue in the market

- Strike action and weather related disruptions continue to impact the Australian coking coal market. The BHP Billiton Mitsubishi (BMA) operations have suffered from major strikes over the past 10 months. At the same time, record rainfall in March disrupted mining and transportation of coal. As a consequence, BMA has called force majeure on deliveries during 2Q12.
- This region produces approximately 100Mt of met coal or 37% of global trade. With the La Nina weather pattern (which has brought above average rainfall to Eastern Australia) now officially over, wet weather related disruptions aren't expected to impact the market going forward. But the strike at BMA operations continues to be an issue. Predicting the length of such an even is difficult but assuming the disruption is settled within a month, Australian met coal exports should fall by at least 2Mt in 2Q12.
- There have also been some cutback in US supply; although this appears to be driven by weak European markets and a lack of storage capacity, rather than price induced.

Mongolian supply the wild card

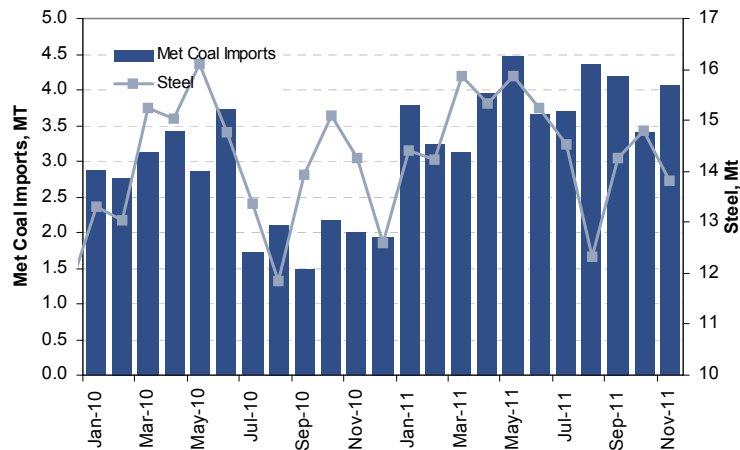
- Growth in new supply is relatively limited, but one area that does have the ability to significantly impact the market is Mongolia. The volume of landborne Mongolian supply crossing the border to China and availability of domestic supply will determine the level to which China remains in the international market.
- Mongolian coking coal producers are ramping up aggressively to fill the supply deficit in China. Based on company announcements, Mongolian coal miners are planning to produce additional supplies of 6.5-8.8Mt of raw coal each year over 2011-13. This implies 4.6-6.2Mt additional clean coking coal supply to the region each year in 2010-13 if a washing yield of approximately 70% for the coal produced in Mongolia is assumed. This also indicates a 20-42% yoy increase in Mongolian coking coal exported to China.
- At the moment, coal is exported to China via the road network on trucks. Therefore the effective capacity of coking coal exports to China should be no more than 25Mtpy. But if a rail network is constructed (highly unlikely in the short term), China could effectively disappear from the seaborne market.

Figure 132. Japanese imports of met coal have risen strongly over the past five months



Source: Tex, GTIS, Citi Investment Research and Analysis

Figure 133. European met coal imports

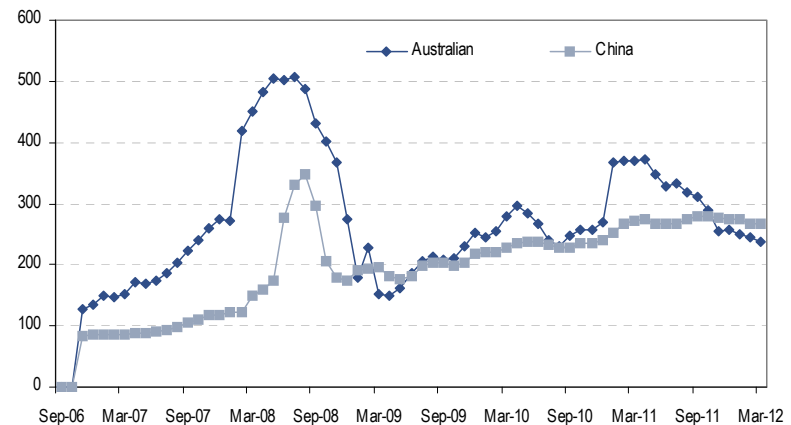


Source: GTIS, Tex, Citi Investment Research and Analysis

Demand

- Japan's met coal imports in Feb reached 6.2Mt, which is up 60% yoy (Figure 132). This is also supported by several macro drivers; auto production has been growing at double digit growth rates over the past 4 months, while steel production has recovered well (from the earthquake/tsunami in Mar-11) and is not far below levels seen this time last year. Over the medium term, it's assumed that steel production will hold up relatively well, with output reaching 123Mt this year. This equates to imports of 60Mt, up 11% from last year (of 54Mt).
- In China, the pace at which surpluses are exhausted and manufacturing activity improves will, in part, determine when the Chinese are back in the international market in a more meaningful way. A pick up in steel output in 2Q should see the inventories fall back to normalized levels quickly. When combined with a positive import arb (Figure 134). Chinese imports should pick up strongly in 2H12.
- A worst case scenario in Europe, where imports fall nearly 20% to 53Mt has been incorporated into the model. But European met coal imports have picked up strongly over the past 6 months and could be a positive surprise this year.

Figure 134. The coking coal Arb between China and Australia is still conducive to China remaining a net importer

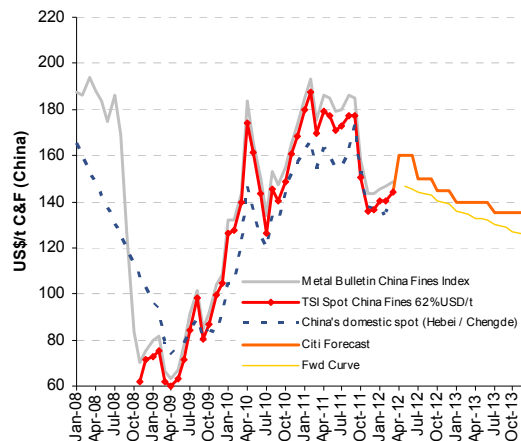


Source: SXCoal, Platts, Citi Investment Research and Analysis

Iron Ore Outlook – Market picking up after a weak start to the year

- The outlook for the iron ore market is steadily improving and iron ore prices are expected to continue to rise over the course of 2Q12. After several months of weak steel output lead by a collapse in Chinese housing & construction sectors, there are signs that things are turning around. Major steel mills have stopped cutting capacity; which has shown up in the latest steel production figures issued by China's CISA showing that daily production in the last 10 days of March was 1.89Mt (equivalent to 690-700Mtpy). Steel mills in Hebei have reported that utilization rates have been rising since February and mill inventory is decreasing. Inventory peaked in mid Feb, and then gradually fell back. Loosening liquidity and improving seasonality also appears to be helping. Improving economics in the steel industry could help also improve demand. Hebei mills are currently just breaking even; the rate at which steel prices are rising in China should see them turn positive shortly.
- But the iron ore market is not out of the woods. The Chinese housing and construction sectors are still weak and the government has showed no signs that it will lift restrictions on the sector. FAI growth continues to fall and is headed for 20% YTD growth (compared with 35% last year), amid increasing signs of weakening investment activity for commodity housing, including sluggish new starts and land acquisition. High inventory could also curb appetite for imported ore. Hebei mills have some 2 months inventory in-house (against normalised levels of 4-6 weeks). Elsewhere, the total inventory at port is 98 Mt, which equates to over 36 days of cover (well above the normal range of 28-32 days). The likely scenario is for inventories to be slowly worked down before any significant pick up in imports resumes.
- At the same time, the market seems to be over the worse of the supply disruptions that kept the market relatively tight in 1Q12. Lower than normal Indian iron ore exports remain in place but Australian & Brazilian supply is recovering and should post solid 6-8% qoq growth in 2Q12. All this should keep the market relatively tight but prevent prices from spiking. The 2Q12 forecast of \$160/t is significantly higher than the forward curve on the basis of a stronger than expected recovery in the Chinese steel market and thus highlights the one main risk in the short term. But the forecasts essentially track the curve downwards as the market tightness eases.

Figure 135. Iron Ore Prices & Forecasts



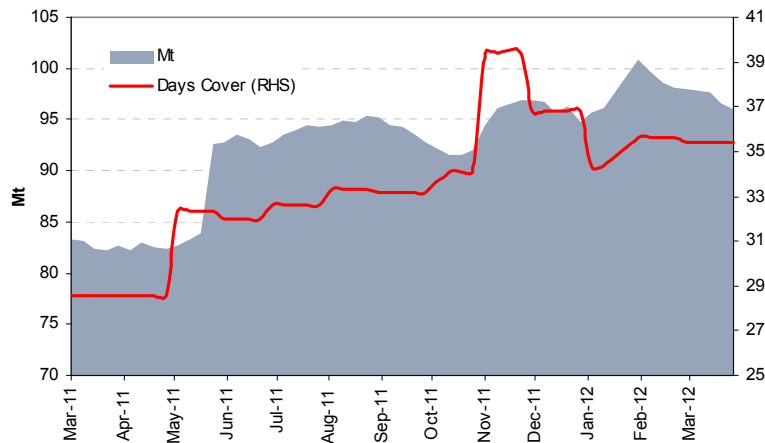
Source: MB, Bloomberg Citi Investment Research and Analysis

Figure 136. Iron Ore Supply & Demand Forecasts

IMPORTS (Mt)	2011	2012	2013	2014	2015	2016
China	686.7	681.8	728.6	783.4	815.5	838.0
Japan	128.4	132.9	133.2	136.8	133.2	135.9
Taiwan	20.5	19.2	19.2	19.5	19.9	21.2
EEC	81.4	101.2	101.9	101.9	101.9	101.7
USA	5.3	11.1	11.1	11.5	11.6	11.7
Others	105.7	113.0	113.0	153.4	202.2	298.5
Total	1,028.0	1,059.2	1,107.0	1,206.5	1,284.3	1,406.9
EXPORTS (Mt)	2011	2012	2013	2014	2015	2016
Australia	437.4	475.9	540.3	609.8	676.6	737.3
Brazil	330.8	313.3	329.7	359.9	387.4	438.5
India	90.0	70.0	65.0	60.0	62.5	65.6
Canada	25.0	25.0	25.0	25.0	25.0	25.0
Africa	59.0	70.5	82.7	100.1	106.7	111.0
Other	85.8	76.5	50.5	47.5	49.5	44.5
Total	1,028.1	1,031.2	1,093.2	1,202.3	1,307.6	1,421.8
IMPLIED MARKET BALANCE		-28.0	-13.9	-4.3	23.3	14.9

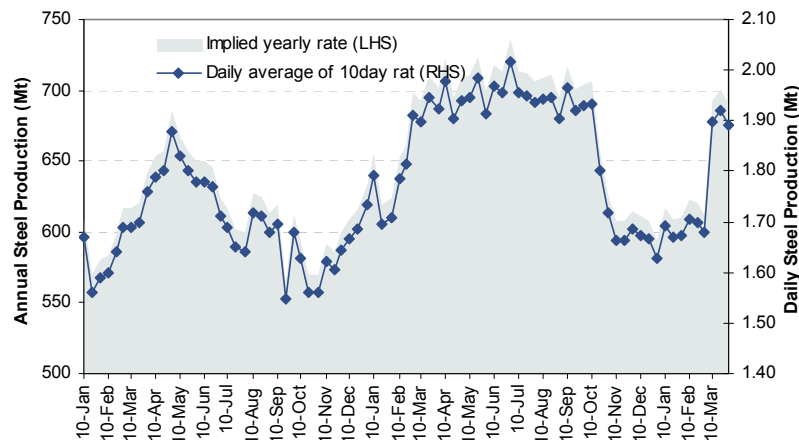
Source: Citi Investment Research and Analysis

Figure 137. Iron ore inventories are still high but have started to fall, indicating that higher prices are inducing some consumers to draw down on inventory before importing



Source: Bloomberg, Citi Investment Research and Analysis

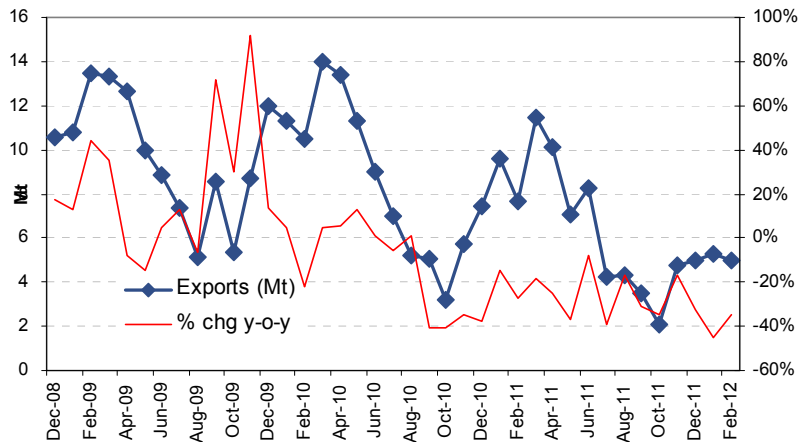
Figure 138. Chinese steel output has jumped significantly in March



Source: CISA, Citi Investment Research and Analysis

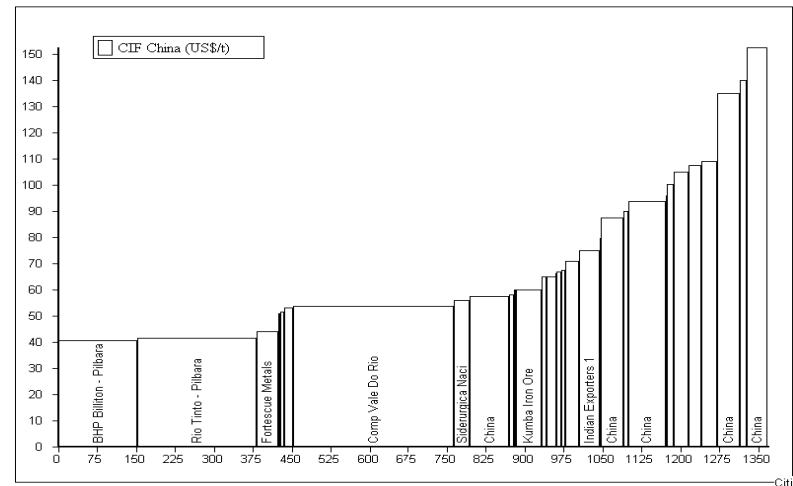
- Iron ore inventories at the ports steadily increased during 2011, in particular in the later part of the year. That seemed to correlate with the bounce in prices in October, suggesting that some of this buying has not been for immediate consumption (Figure 137). Inventories have started to fall in recent weeks although on days of cover level they remain high at 35 days. At the steel mills, inventory of rebar and hot rolled coil are at relatively comfortable levels, despite having fallen from historically levels seen earlier this year.
- There is no doubt that domestic supply of iron ore in China was impacted by falling prices in late 2011. But while Chinese domestic producers are relatively price elastic, the recovery in prices has been so that the response may have been lower than normal. This will be mitigated somewhat by falling grades, which has averaged only 15% over the past six months.
- But high costs and falling grades should keep domestic Chinese iron ore as a swing producer in the market. Therefore the demand for imported iron ore should remain high.
- To what levels Chinese steel production rebounds is the key to how the iron ore market will perform in 2012. A bull case scenario would be if steel production tracks a 2007 like path, the IISI data should pick up by ~11% from the Feb NBS data to 62.1mn tons and peak at 65-66mn tons mid-year. This path would get us to full year production of 752mn tons, up 9.9% yoy.
- A more reasonable scenario would be similar to 2010, with a pick up in Q2, peak production in May and production beginning to tail off in Q4. This would imply full year production of ~ 693mn tons, up 1.5% yoy. This seems to marry up with what the market sees in the latest CISA data (Figure 138)
- Some crude steel production is likely slipping through the data collection net. It is most likely that several smaller furnaces, including recently constructed ones are not captured in the CISA/IISI reporting. It is hard to put an exact number to this problem, but we think there could be 20-30mn tons of under-reporting. Our forecast of 723Mt is split into 693Mt as the IISI number (the number the market will track) and a 30Mt adjustment to reflect under-reporting of production.

Figure 139. Indian exports have fallen substantially due to a ban on illegal mining in Karnataka. We believe exports will remain subdued indefinitely



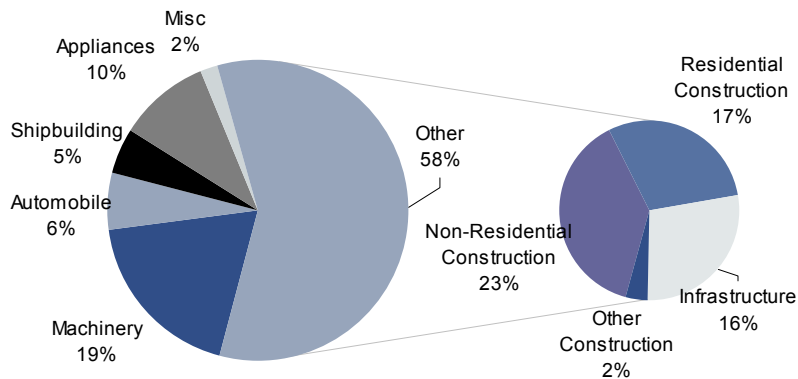
Source: Bloomberg, GTIS, Tex, Citi Investment Research and Analysis

Figure 140. 2011 Iron Ore Costs - CIF China



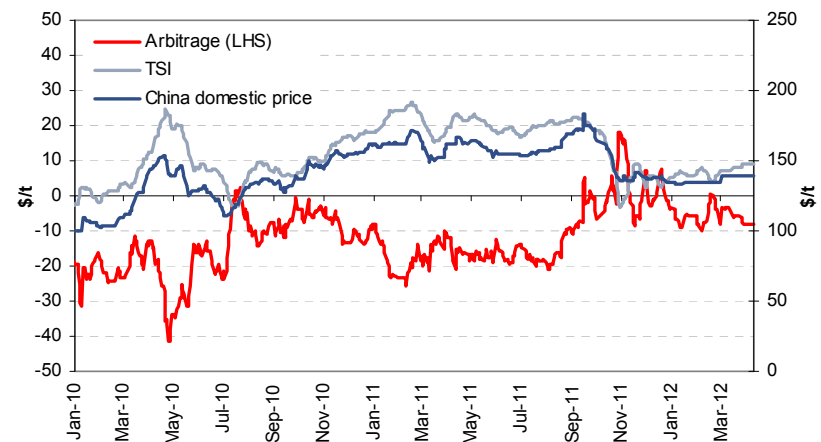
Source: Citi Investment Research and Analysis

Figure 141. With residential construction making up 17% of demand, iron ore will suffer while the housing market remains weak. But strong infrastructure spending should lessen the blow



Source: Tex, CISA, Citi Investment Research and Analysis

Figure 142. International iron ore prices have pushed above Chinese domestic prices, which could curtail any opportunistic buying in the short term



Source: China Customs, MB, Platts, Citi Investment Research and Analysis

Steel

- Chinese steel production data started the year on a very weak note, implying 600-620mn tons of annual production. The latest CISA data for the first ten days of March suggests a yearly production figure of 692.8mn tons, up 1.2% yoy. To complicate things further, the recent NBS data revision suggests a stronger production number of 113mn tons in Jan-Feb 2012 (10.7% higher than CISA). If the NBS data is correct, the bigger question mark is how much acceleration can be seen in iron ore or met coal demand post Chinese New Year?
- US demand is holding up well – both autos and residential construction are healthy, although public sector construction is still fairly muted. Europe demand has had a wobbly start to the year – passenger car registrations have fallen sharply in Jan'12 and even prior pockets of strength like Germany are now down yoy. Some of this strength is due to the mild winter in the Western Hemisphere, which has led to positive surprises in construction activity and will probably normalize around April/May.
- Margins are on the rise – coking coal in particular has been quite helpful. Cyclone season in Australia has spared the coal basins and North American supply has been high (attempts to keep market share gained in 2011). There have also been incremental increases in Mongolian supply. All three forces have pushed down coking coal prices for five consecutive months. Margins are likely to peak in Q2.
- With the exception of the US, where prices were the first to rise (and are now the first to fall), global steel prices have risen through Q1 and are stable at the moment. Coupled with weak met coal prices and stable iron ore prices, spot margins in regions like Europe have continued the 6m trend of expansion. Most of this improvement should be seen in Q2 financial results for steel mills, given the 4-6 week lag in price realizations.

Figure 143 Regional Crude Steel Production

Regional Production - Crude Steel	2009	2010	2011	2012e	2013e	2014e	2015e
EU (15)	116	144	150	146	147	147	147
Other Europe	48	54	60	64	64	66	66
CIS	96	107	112	116	121	121	121
NAFTA	81	111	118	123	125	131	131
Central/South America	38	44	50	57	65	76	81
China (IISI)	565	626	684.3	693	717	737	776
Adjustment (under-reporting)	25	27	30	30	30	30	30
China total	590	654	714	723	747	767	806
Japan	88	110	108	111	111	114	111
India	56	66	72	78	90	106	112
Other Asia/Pacific	80	95	104	116	116	118	120
Africa/Middle East	32	36	34	48	55	57	57
Global Production	1,227	1,421	1,522	1,581	1,639	1,703	1,752
Estimate Production Excess/(Deficit)	26	62	46	85	76	73	53
Finished Steel Production	1165	1350	1446	1502	1557	1618	1664

Source: CRU, IISI, MB, Citi Investment Research and Analysis estimates

Figure 144 Regional Finished Steel Demand

Regional Demand - Finished Steel	2009	2010	2011	2012e	2013e	2014e	2015e
EU (15)	102	122	125	124	125	127	129
Other Europe	34	43	44	44	45	45	46
CIS	38	48	51	52	54	56	58
NAFTA	77	103	111	114	116	120	124
Central/South America	31	38	39	41	42	44	45
China	558	596	682	683	724	763	803
Japan	66	84	81	82	83	85	86
India	55	59	63	67	73	78	85
Other Asia/Pacific	112	129	132	137	142	148	154
Africa/Middle East	67	68	70	73	75	77	79
Global Demand	1,139	1,289	1,400	1,417	1,479	1,542	1,609
Global Ex China	581	693	718	734	755	779	805

Source: CRU, IISI, MB, Citi Investment Research and Analysis estimates

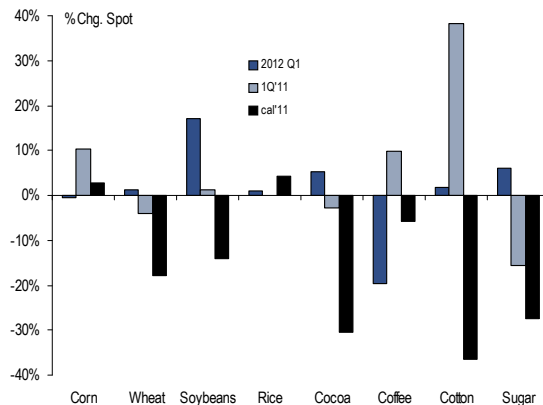


Agriculture

Macro View

- After a volatile and steep sell-off in 2H'11, 2012 began with a bullish tinge for 'ag' markets on the specter of weather disruptions adversely impacting Southern hemisphere output, tighter global s/d prospects and a stronger outlook for commodity financial flows. In line with the Citi 2012 Commodity Outlook, geopolitical risks to crop balances, retrenchment in South American grain and oilseed output and advancing investor risk appetite helped foster positive-to-neutral price returns for most agriculture commodities; +3.7% during 1Q'12 with soybeans leading the charge. Such 'tail-risks' are likely to continue unfolding in 2012 and support markets.
- On the aggregate, we forecast range bound agriculture prices with a slightly bullish to neutral bias for the sector on a fundamental basis, expecting corn and oilseeds to set the tone for the market. Cal'12 prices for key grains and soybeans are upgraded although a less constructive view is held for the thinly traded soft commodity complex. USDA and local government data point to adverse La Nina weather patterns significantly impacting 11/12 South American production of maize and oilseeds, an ongoing concern that appears likely to tighten US export markets this summer and potentially into 2013. Chinese stockpiling and import demand should further strain balances and support prices. Vis-à-vis the forward curve, soybeans and coarse grains appear more favorable and bullish against a robustly supplied wheat market. On a prompt month basis, we still favor the old corn crop against wheat and view soybeans as having the potential to break out above \$1500/bu.
- Soft commodity markets are poised to be less eventful this year versus last with fewer risks to supply and the absence of policy price catalysts. Chinese inventory builds have buttressed cotton and the sugar market looks poised to marginally strengthen. But weakness in Arabica coffee is likely to persist. Cocoa was one of our more favored crops at the start of the year and we would continue buying on dips near \$2000/MT but believe sustained gains above \$2500/MT are unlikely.
- Headwinds to the revised forecast—particularly to the upside—include weaker global growth, US dollar appreciation (EURUSD forecast to decline to 1.25 in 6-12 months) and uncertainty surrounding outright QE3 in the US. However, agriculture is a generally more resilient commodity sector in light of macro weakness.

Figure 145. Agriculture Spot Prices, 1Q'12



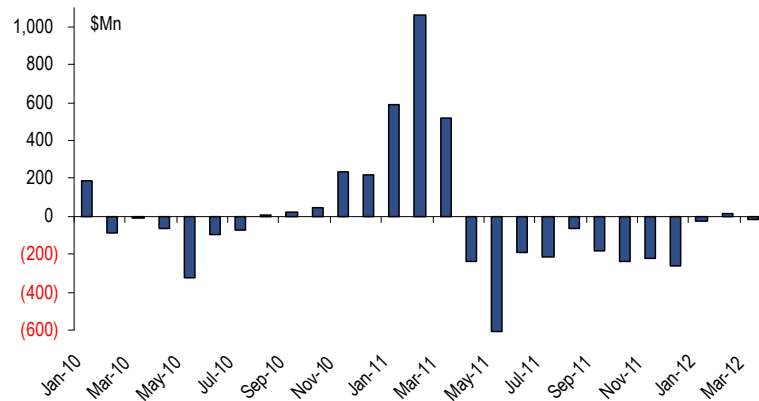
Source: Bloomberg, Citi Investment Research and Analysis

Figure 146. Agriculture Commodity Price Forecast

Apr-12	2010	2011	0-3m	6-12m	1Q12	2Q12f	3Q12f	4Q12f	2012f	1Q13f	2Q13f	3Q13f	4Q13f	2013f	11 vs. 10	12 vs. 11	13 vs. 12
Corn (\$/bu)	428	680	660	630	641	660	640	620	640	600	610	590	600	600	252	(39)	(40)
Wheat (\$/bu)	582	709	650	630	643	650	630	630	638	640	660	700	700	675	127	(70)	37
Soybeans (\$/bu)	1049	1317	1425	1390	1272	1425	1400	1380	1369	1325	1305	1305	1275	1303	268	52	(67)
Rice (\$/cwt)	12.49	15.11	15.15	15.08	14.31	15.15	15.05	15.10	14.90	15.15	15.20	15.25	15.00	15.15	2.62	(0.21)	0.25
Cocoa (\$/mt)	2942	2921	2275	2308	2308	2275	2315	2300	2300					2400	(21)	(622)	101
Coffee (\$/lb)	164	253	185	182.5	205	185	185	180	189					200	89	(64)	11
Cotton (\$/lb)	94	137	90	90	93	90	90	90	91					90	43	(46)	(1)
Sugar (\$/lb)	22	27	24	24.50	24.5	24.0	24.0	25.0	24.4					24	5	(3)	(0)

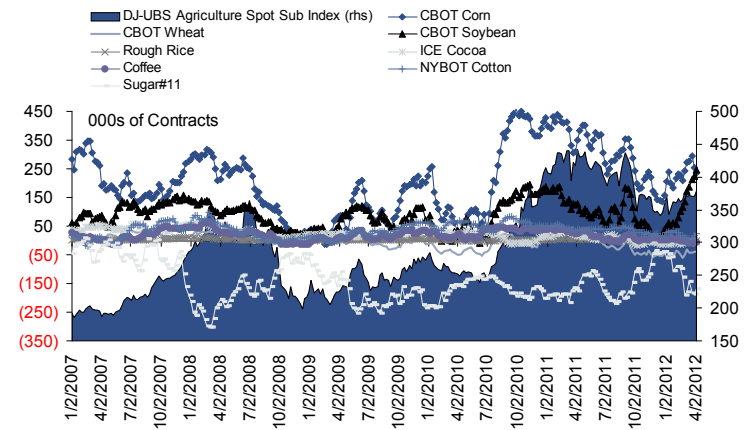
Source: Citi Investment Research and Analysis

Figure 147. Agriculture Commodity Linked ETF Net Flows



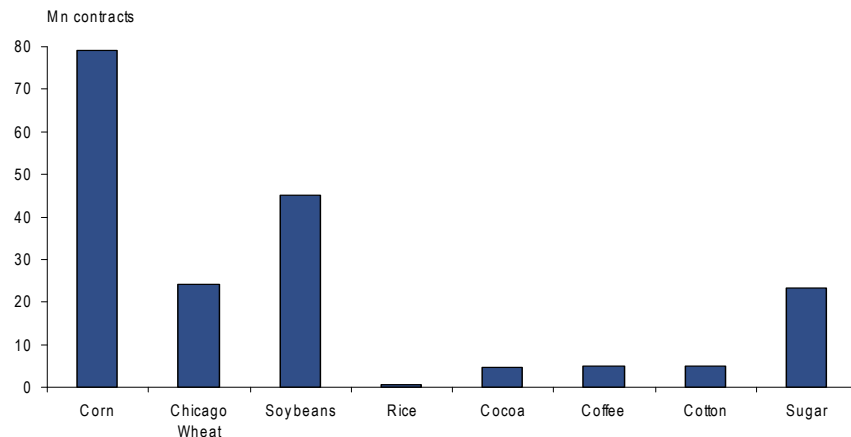
Source: Citi Investment Research and Analysis

Figure 148. Non-Commercial Combined Net Length (Short)



Source: CFTC, Citi Investment Research and Analysis

Figure 149. Annual Futures Turnover (2011)



Source: CBOT, ICE, NYBOT, Citi Investment Research and Analysis

- Retail and fund manager financial flows into the agriculture sector have been more constructive this year after a tumultuous 2H'11; serving to support or stabilize beaten down price levels. Year-on-year 'ag' sector investor positioning is a hair below the peaks achieved during the Arab Spring but overall sentiment has firmed on the back of LatAm supply disruptions and emerging market geopolitical risks. The boost in aggregate year-to-date commodity flows has also helped. Speculative interest has been particularly bullish for the more liquid corn and bean contracts—that together with wheat constitute ~17% of key commodity indices—setting the tone for the 'ag' complex as a whole. In the short-term, we expect fundamentals to buttress neutral-to-bullish flows and price action, driven by corn and oilseeds. But the uncertain specter of QE3 in the US could be a headwind. Non-commercial activity in many thinly traded soft commodities has also been generally weak with few bullish catalysts; a fillip from a wild 1Q 2011.
- The 25 largest US listed 'ag' exchange traded funds (ETF) with a total market capitalization of over \$3Bn had net redemptions of \$33.6Mn during all of 1Q'12 vis-à-vis \$250Mn average net outflows each month during 2Q'11 – 4Q'11. CFTC trader commitments data show managed money combined net length surging for soybeans (+536% during 1Q'12) and +17% for corn; bullish trends likely to hold.

Figure 150. Global Corn Supply/Demand Balance

(000 MT)	08/09	09/10	10/11E	11/12E*	12/13E*
Beginning Stocks	131,320	144,893	128,720	114,607	111,513
Total Production	799,300	813,400	828,000	868,000	905,000
y-o-y change	0.60%	1.76%	1.79%	4.83%	4.26%
US Production	307,100	332,500	315,000	316,000	370,000
% of world	38.4%	40.9%	38.0%	36.4%	40.9%
Imports	82,450	89,750	91,338	92,838	95,633
Total Supply	1,013,070	1,048,043	1,048,058	1,075,445	1,112,146
Exports	84,477	96,823	90,451	94,932	100,000
Consumption	783,700	822,500	843,000	869,000	875,000
Total Demand	868,177	919,323	933,451	963,932	975,000
Stock Bal Change	13,573	-16,173	-14,113	-3,094	25,633
Ending Stocks	144,893	128,720	114,607	111,513	137,146
% Leftover	17%	14%	12%	12%	14%

Notes: US yield: 155-bu/acre, 94-m planted acres

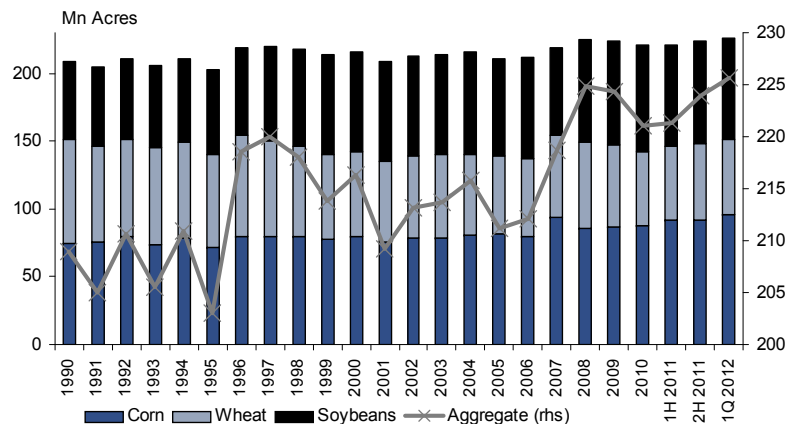
Source Citi Investment Research and Analysis

CBOT Corn

- Corn prices averaged 20 cents above our initial 1Q'12 forecast of \$620/bu in the three months ended 31st March as global balances tightened. Dry weather and yield reductions reduced output in Latin America—particularly for the world's second largest corn exporter, Argentina, which saw its record 11/12 production forecast reduced to 22.5-m tons from 30-m tons over the course of 1Q'12 and export capacity plummet by 30% to 14-m tons. China's annual 190-m tons of demand also pushed prices higher as healthy local margins boosted stockpiling.
- 2012f prices are raised to \$640/bu from \$635/bu dictated by mark-to-market upgrade of 1Q and more constructive outlook for deferred 4Q'12 contracts from \$615/bu to \$620/bu. Corn—along with soybeans—are expected to lead the 'ags' and we remain bullish coarse grains particularly old crop, compared to wheat.
- 2013f price of \$600/bu initiated for the yellow grain assuming normal weather conditions and higher yields. Corn markets could see some tightness driven by China this year before stronger new crop potential ease markets in 2013.

- Bottom Line: Bullish old crop corn, upgrading 4Q'12 corn, upside corn vs. wheat Supply

Figure 151. US Plantings and Intentions: Key Grains and Oilseeds



Source: USDA, Citi Investment Research and Analysis

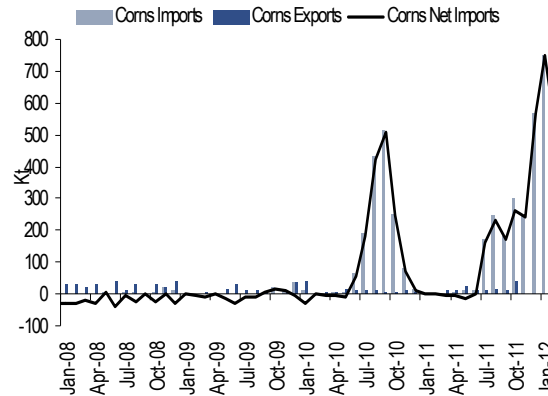
- The 30th March USDA corn planting intentions report came in bearish at 95.9-m acres representing the largest acreage in seven decades for the crop; a measurable 4% jump from 2011. Corn acres come at the expense of soybeans and wheat which are both down on the year. Aggregate acres of 226-m—driven by the yellow grain—are also the highest in decades with the USDA providing its next update at the end of 2Q'12. This should provide some room for switching particularly for beans (1-2m acres) if the soybean-corn ratio continues rallying.
- Quarterly grain stocks for March were bullish coming in at 6,009-m bu or 2.5% shy of market consensus for corn, implying greater feed and residual use. Evidence of early seasonal planting across the US corn-belt (versus the late May planting in 2011) could lead to an early US harvest to offset old crop demand.
- 11/12 carryout is down to 111,513mt but ending stocks are expected to build in 12/13 despite higher usage on the back of increasing acres and yields returning above 150bu/acre. The new US crop could see a record 370-m tons production. Expectations this year for Argentina (22.5-m tons) and Brazil (58-m tons) output have been downgraded placing greater emphasis on this US supply.

- Chinese official supply estimates wrapped around 191-m tons seem overstated based on trade data and could potentially print as low as 185-m tons.

Demand

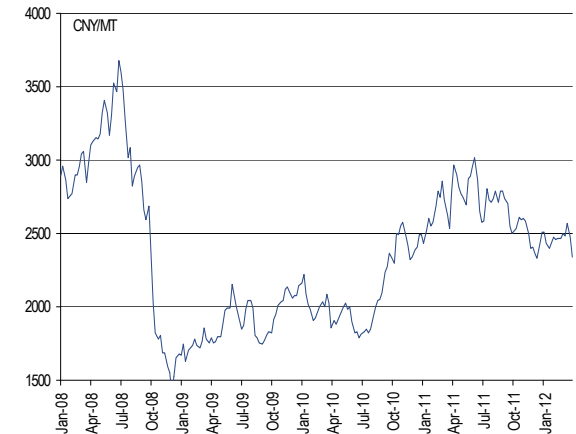
- Chinese corn prices remain robust as does the local arbitrage of \$1.5/bu on a spot basis although it is unclear how long this remains open. Chinese net imports this year are possibly 1-2-m tons higher than USDA estimates of 4-m tons; data releases this year show Jan/Feb net imports a hefty 1.3-mt compared to 0.2-mt 1Q'11. Global use is expected to increase 3% and 1.1% in the current and subsequent cycle, partially offsetting greater global crop and at-risk Southern hemisphere supplies which should serve as price support at around the 600-level.
- US feeding and resid rates expected to stay level at 4,650-mbu in 11/12 and jump to 5,000-mbu in 12/13.
- Strong oil prices could encourage ethanol production over 900-k b/d levels; demand above the '10%' US ethanol blend wall driven by exports to Latin America given the secular decline in US gasoline use. More recently ethanol production has faded but strong margins remain. Aided by hefty progression toward E15 waiver from the EPA, corn demand longer term should rise but policy has de minimis impact this year. E10 increases RVP (as would E15) but full implementation has only occurred for E10 with labeling and pump requirements a ways off for E15. Corn-wheat spread averaged -\$2/bu during Q1 as the most prolonged period of corn-wheat 'parity' in history holds. Upsides in corn—particularly old crop—vis-à-vis a more well supplied global wheat market appears likely. Prompt price spreads are expected to blow out in fits and starts to 20 cents or more as they have since Jan'12.

Figure 152. China Corn Trade



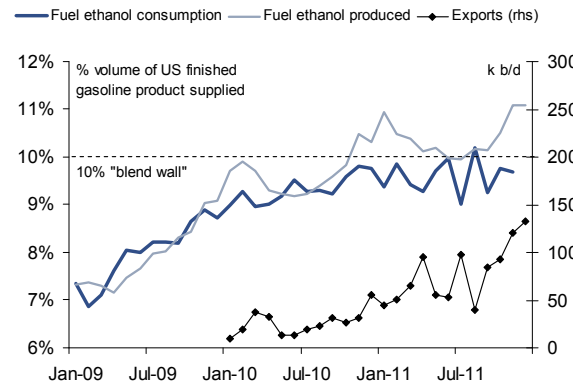
Source: China Customs, WIND, Citi Investment Research and Analysis

Figure 153. Local Corn Prices in China



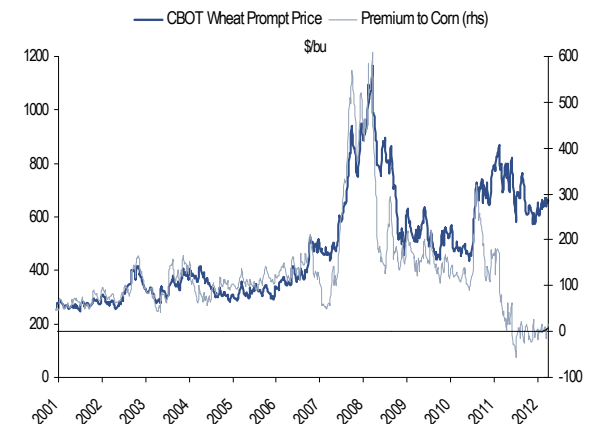
Source: Shanghai JC Intelligence, Citi Investment Research and Analysis

Figure 154. US Fuel Ethanol Had Hit a Blend Wall...For Now...



Source: EIA, Citi Investment Research and Analysis

Figure 155. Corn-Wheat Spread



Source: Bloomberg, Citi Investment Research and Analysis

Figure 156. Global Wheat Supply/Demand Balance

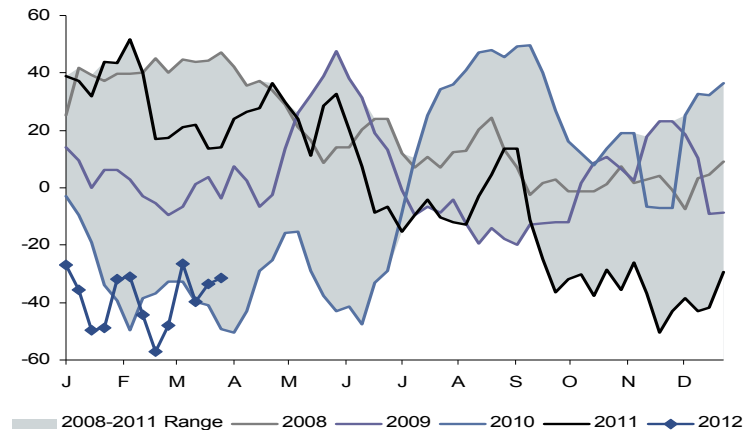
(000 MT)	08/09	09/10	10/11E	11/12E*	12/13E*
Beginning Stocks	126,903	167,050	200,110	195,510	200,310
Total Production	682,815	685,590	651,510	694,020	670,000
y-o-y change	12%	0.4%	-5.0%	6.5%	-3.5%
US Production	68,020	60,370	60,060	54,410	60,901
Euro Area	151,122	138,816	135,674	137,500	137,000
Russia	63,700	61,770	41,510	56,230	55,000
India	78,570	80,680	80,800	83,060	84,460
Other	321,403	343,954	333,466	362,820	332,639
Imports	136,949	133,580	130,070	138,010	138,277
Total Supply	946,667	986,220	981,690	1,027,540	1,008,587
Exports	143,520	135,800	131,820	142,930	142,783
Consumption	636,097	650,310	654,360	684,300	696,911
Total Demand	779,617	786,110	786,180	827,230	839,694
Stock Bal Change	40,147	33,060	-4,600	4,800	-31,417
Ending Stocks	167,050	200,110	195,510	200,310	168,893
% Leftover	21%	25%	25%	24%	20%

Source: Informa, USDA, Citi Investment Research and Analysis

CBOT Wheat

- Wheat prices averaged \$643/bu during 1Q'12; \$0.33/bu above our 8th January forecast. Wheat outperformed despite healthy supply in the US and abroad. Geopolitics—specifically the specter of export restrictions on Russian and Ukrainian wheat in advance of federal elections in the region as well as evidence of Iranian stockpiling from Europe, Australia and most notably India spooked traders into short covering rallies during late January and late February. The market traded in a wide range, \$590-\$675/bu, in affinity to CBOT corn.
- The 2012f price is revised upwards to \$638/bu from \$625/bu in part due to mark-to-market adjustments for the first quarter and relatively tighter balances heading into next year. Wheat prices are expected to continue trading near parity to corn with old crop levels in part supported by the stronger fundamentals in coarse grains and oilseeds. 2013f crop prices are expected to strengthen to \$675/bu as new production cuts and aforementioned inventories draw down.
- Money managers and speculative flows are unlikely to provide positive support for wheat as they have for corn and soybeans as the category maintains its net short although volatile price action is likely to continue. Bottom line: neutral/weak

Figure 157. Fund Buying Likely to Remain Unsupportive for CBOT Wheat (000s of contracts)

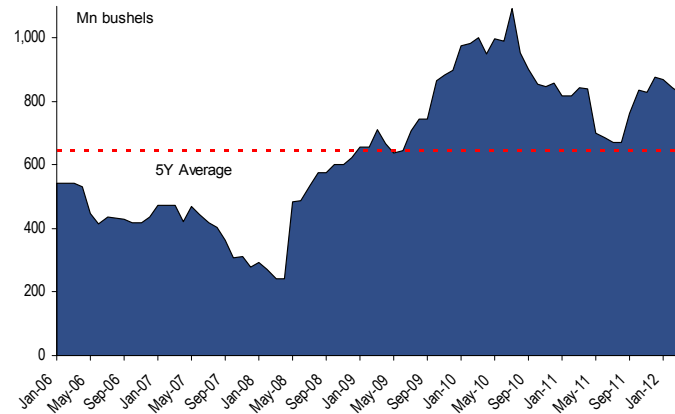


Source: CFTC, Citi Investment Research and Analysis

Supply

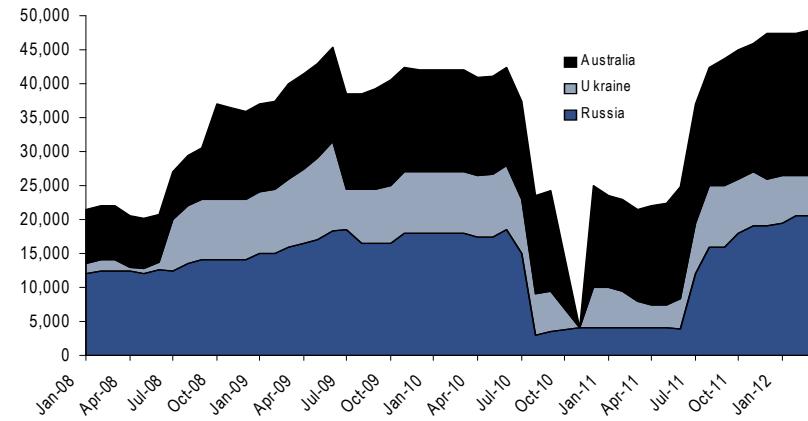
- Overall supply picture remains more bearish in 11/12 before picking up in 12/13.
- US old crop wheat stocks have tightened but are still a healthy 793-m bushels and well above the 680-m bushel average in the past five marketing cycles. Planting intentions in the US of 55.9-m acres while among the lowest since 1970 is up 3% from 2011 bringing 12/13 US production back above 60,000-k tons. Moisture and weather conditions thus far appear favorable according to reports out of the Great Plains. Local output in Asia is at record levels this year including China's 118-m tons and 86.9-m tons in India, offsetting flat-to-declining production in Europe and the US. Global ending stocks are expected to exceed 200,000-k tons for 11/12 before balances tighten in 12/13.
- Exports of wheat from Russia and Australia—a combined 41,500-k tons/month on average during 1Q'12 could also weigh on bullish sentiment this year. After the lifting of the export ban last July, the Black Sea grain trade has surged to multi-year highs. In contrast to Latin American corn, export capacity for wheat remains strong across the Southern hemisphere; buttressing subpar US exports and unlikely to meaningfully push prices back above \$700/bu until 2H'13.

Figure 158. US Wheat Stocks



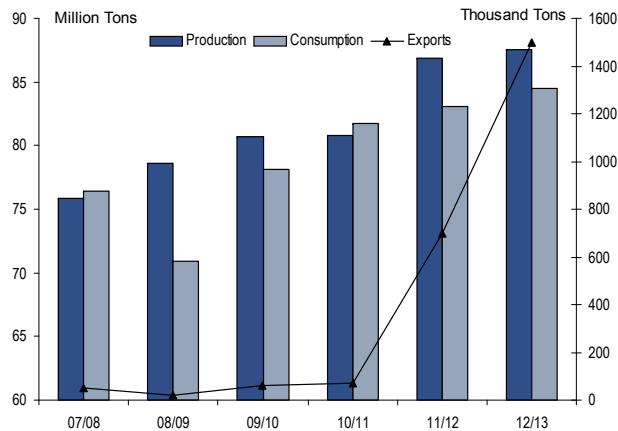
Source: USDA, Citi Investment Research and Analysis

Figure 159. Black Sea and Australian Exports (000 MT)



Source: USDA, Citi Investment Research and Analysis

Figure 160. Indian Wheat Balance and Trade



Source: USDA, Citi Investment Research and Analysis

Demand

- Iran's reported 'stockpiling' of 2-m tons of wheat from Europe in February (in advance of the EU wide sanctions) and a 3-m ton purchase from India in March as part of an oil-swap agreement is perhaps the most intriguing wheat headline causing the USDA to raise its import estimate for Iran five-fold since December to 1-m tons through March and perhaps 2-m tons through June. Data show that even US crops were headed to Persia as recently as this month. But in context it should be noted that Iranian trade represents a tiny (<1%) portion of global wheat supply although should such reported trends continue it could curtail India's export capacity elsewhere. Total global demand in 11/12 forecast as 826.9-m tons and up slightly for 12/13 at 827.8-m tons.
- Projected food use for the crop has weakened across the OECD (US and EU) although imports are expected to be healthier across the developing world. Wheat prices in parity with coarse grains such as maize should provide additional support for feed use. The April WASDE forecast feed and residual use for wheat was raised by 35-m bushels and imports for the crop were boosted 1.6-m tons driven by EM demand from China and Latin America.

Figure 161. Global Soybeans Supply/Demand Balance

(000 MT)	08/09	09/10	10/11E	11/12E*	12/13E*
Beginning Stocks	51,788	42,831	59,821	68,761	53,201
Total Production	211,607	261,030	264,250	241,070	260,500
y-o-y change	-4%	23.4%	1.2%	-8.8%	8.1%
US Production	80,750	91,420	90,610	83,170	89,000
Brazil	57,800	69,000	75,500	67,500	64,000
Argentina	32,000	54,500	49,000	46,500	45,000
Other	41,057	46,110	49,140	43,900	62,500
Imports	77,395	86,830	88,830	89,260	90,000
Total Supply	340,790	390,691	412,901	399,091	403,701
Exports	76,894	92,850	92,670	90,890	92,000
Consumption	221,065	238,020	251,470	255,000	258,000
Total Demand	297,959	330,870	344,140	345,890	350,000
Stock Bal Change	-8,957	16,990	8,940	-15,560	500
Ending Stocks	42,831	59,821	68,761	53,201	53,701
% Leftover	14%	18%	20%	15%	15%

Notes: US yield 2.93MT/HA, 75-m acres

Source: Citi Investment Research and Analysis

CBOT Soybeans

■ Soybean prices in Chicago traded an average \$1272/bu during 1Q'12; \$0.72/bu higher than our initial outlook in January with current spot levels trading around \$1400/bu. The oilseed has outperformed grains and our own short-term point price target of \$1300/bu on a perfect storm of robust Chinese demand and the declining supply outlook for key Latin American producers. The 2012f average price is upgraded to \$1369/bu, marking-to-market 1Q and lifting each subsequent quarter this year. A 2013f price of \$1303/bu is initiated.

■ Tight balances and fundamentals in the soybean complex are further buttressed by speculative fund flows. Money managers began the year with futures and options combined net long of +23.7k and ending March at +210k—just 15k contracts shy of CBOT corn (which for comparison does double the annual traded volume). Unlike grains which saw a much choppy market—bean prices generally trended upwards 1Q and are likely to remain relatively strong this year.

■ Bottom line: Bullish near-term market with potential to spike above \$15/bu. Fundamentals remain tight but could ease on crop switching in US or turnaround in Latin American production. Market noised for a 'higher range' of prices.

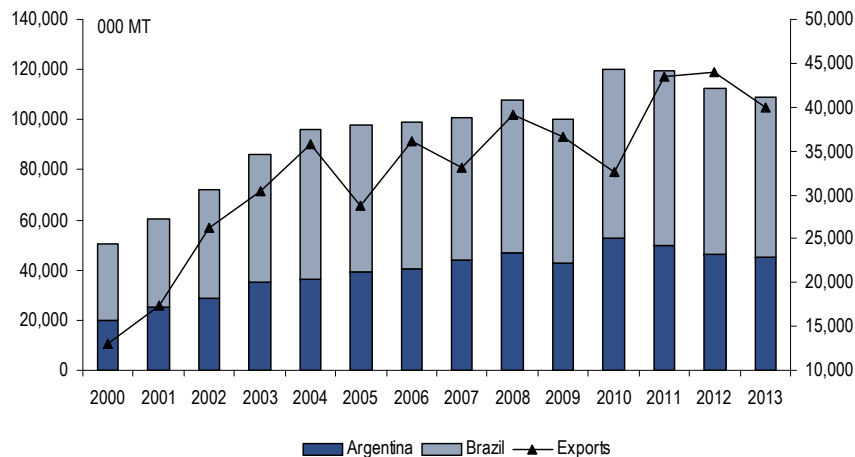
Supply

■ Since January, 11/12 Argentinean crop has been cut 5.5-m tons to 46.5-m tons and Brazilian output 9-m tons to 66-m tons, a 5% loss of global production. Exports are forecast flat on the year at 44-m tons but come at the expense of dwindling regional inventory; ending stocks for the world's two largest producers (after the US) expected to drop 9.5-m tons y-o-y to under 35-m tons. The outlook for 12/13 may be even more challenging with production expected to decline a further 3.5-m tons and exports dropping 10% to 40-m tons. Greater pressure on US markets to satiate global consumption is thus expected to continue this year.

■ US planting intentions for soybeans came in at 73.9-m acres. Down 1% y-o-y and a 6% drop from 2010. However, this survey could be on the 'low-end' of actual acres which we estimate could increase 1-2 million acres by the June USDA report as US farmers make a switch. With South American supply weakness supporting oilseed prices vis-à-vis grains, US producers have motive.

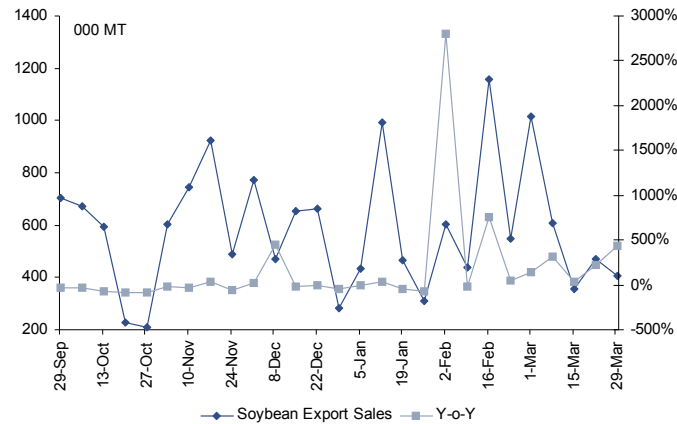
■ 11/12 and 12/13 global stocks-to-use are expected to remain a tight 16% and 17% that should keep prices supported above \$1300/bu for the time being although our forecast calls for the market to ease into next year.

Figure 162. South American Production Profile



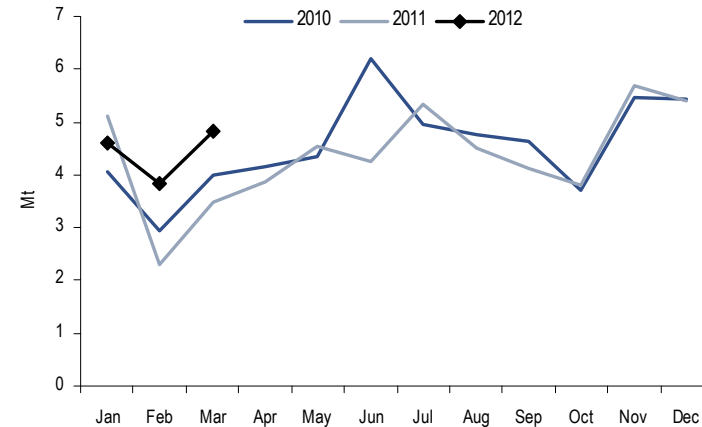
Source: USDA, Citi Investment Research and Analysis

Figure 163. US Export Sales



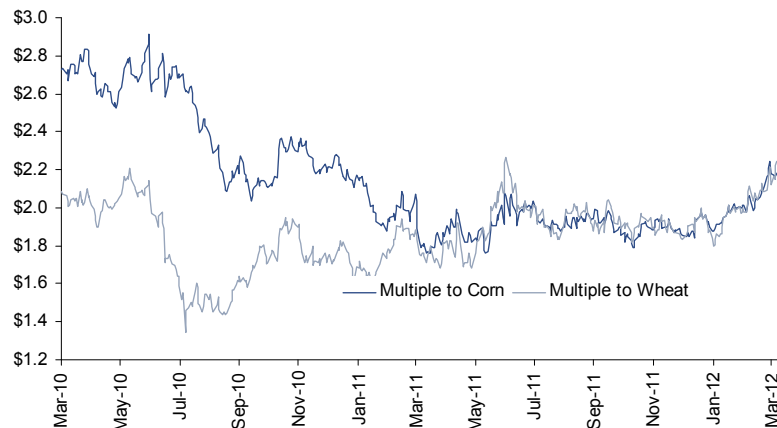
Source: USDA, Citi Investment Research and Analysis

Figure 164. China Soybean Net Imports



Source: China Customs, WIND, Citi Investment Research and Analysis

Figure 165. Soybean Price Ratio to Corn and Wheat



Source: Bloomberg, Citi Investment Research and Analysis

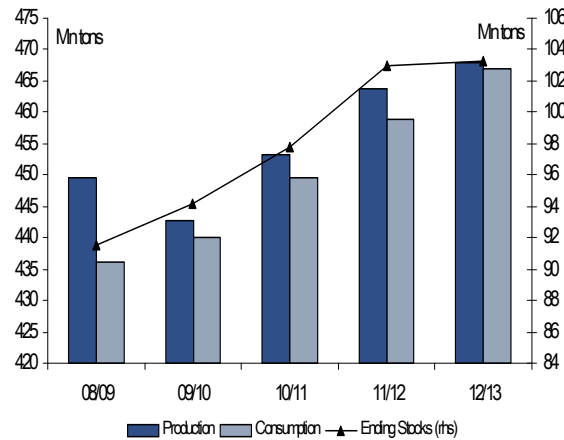
Demand

- China's soybean net imports in February were a record 3.83-m tons followed by a record 4.83-m tons in March. Crush margins for the world's largest importer have improved steadily this year as well. Unlike corn, where its supply and demand are near equilibrium, China doesn't have sufficient capacity to grow soybeans. Its 11/12 imports of over 55-m tons is quadruple its domestic production. Its heavy buying and stockpiling should continue through the US summer in light of Southern hemisphere declines and what for now remains an uncertain US production picture. After the summer, China's buying may ease if it finds itself hedged to the global supply risk currently in the market.
- The US has been and is poised to be an integral part of the global soybean trade going forward as export sales have surged year-on-year, particularly on the Chinese buying. US 11/12 exports of 35.1-m tons might need to jump to a record 41-m tons or higher for 12/13 to make-up lost production globally. This would be over 46% of its expected production compared to 42% in 11/12. Soybeans appear poised to continue outperforming grain markets with the April WASDE downgrading exports across all of South America, raising price targets and cutting oilseed trade: identifying a tighter market ahead

Rough Rice

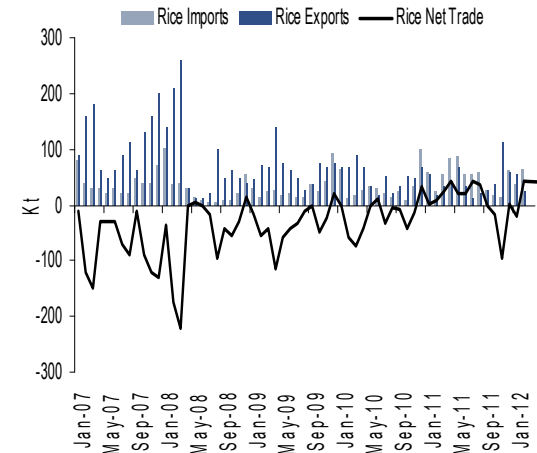
- CBOT rough rice futures averaged \$0.54/cwt—or 3.6% below our 1Q'12 average target price of \$14.85/cwt as of 31st March. Weak import demand and a rise in 11/12 global ending stock expectations to 103-m tons (up over 3% y-o-y and the largest aggregate figure since 02/03) weighed on bullish sentiment despite the staple grain's 1.1% 1Q'12 return. Investors may recall that rice outperformed corn, wheat and beans in 2011. But this is unlikely to repeat itself in 2012.
- 2012f price for Chicago rice is adjusted to \$14.90/cwt after marking down first-quarter performance and a \$0.10/cwt reduction in 2Q'12 prices to \$15.15/cwt. Deferred 2H'12 prices are left unchanged, implying a range bound 2011 market generally near current traded levels of \$15/cwt. 2013f prices are expected to rise \$0.25/cwt to \$15.15/cwt as market balances expected to tighten.
- Asian output in India and China—representing over half of global production are both at record levels this year: 140.5-m tons and 102.75-m tons respectively. But global consumption growth might be poised to move in parity with production into 2013 based on 1.3% demand growth. After exporting through much of 2H'11 China has become net importer of rice this year and notably food inflation accelerated in March; 11/12 domestic demand for the world's largest consumer of 139-m tons leaving little in the way of exports that were only 30-kt last month. India's record 6.5-m tons of exports forecast this year help. The WASDE lowered both 11/12 rice use and supply but ending stocks +3% to 103.3-mt.
- Bottom line: Neutral/slightly bullish. Liquidity in rough rice is poor and subject to a squeeze on unwinds.

Figure 166. Milled Rice Supply/Demand Balance



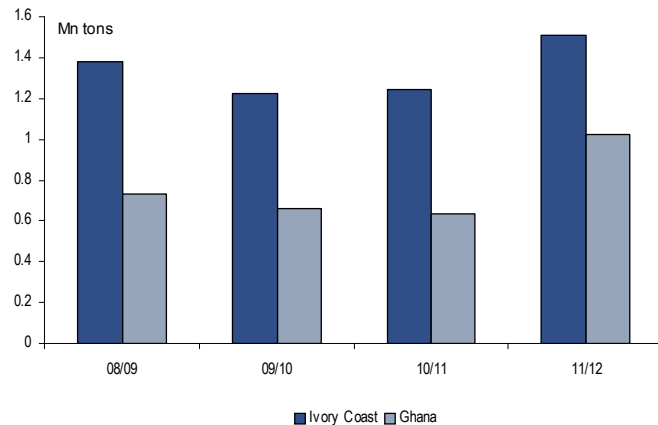
Source: USDA, Citi Investment Research and Analysis

Figure 167. China Paddy and Rice Trade



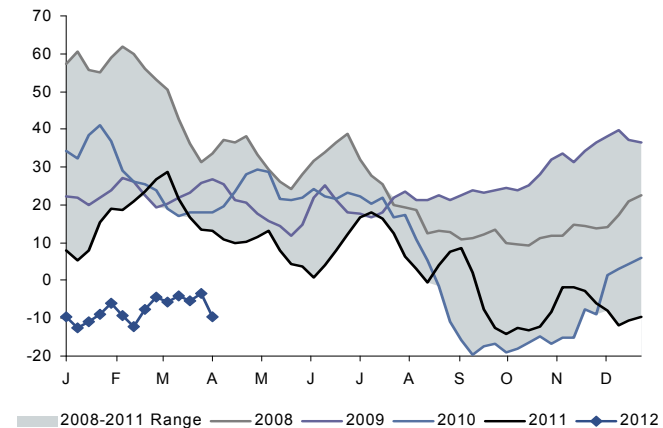
Source: China Customs, WIND, Citi Investment Research and Analysis

Figure 168. West African Cocoa Bean Supply



Source: ICCO, Citi Investment Research and Analysis

Figure 169. Managed Money Combined Net Length (000s of contracts)

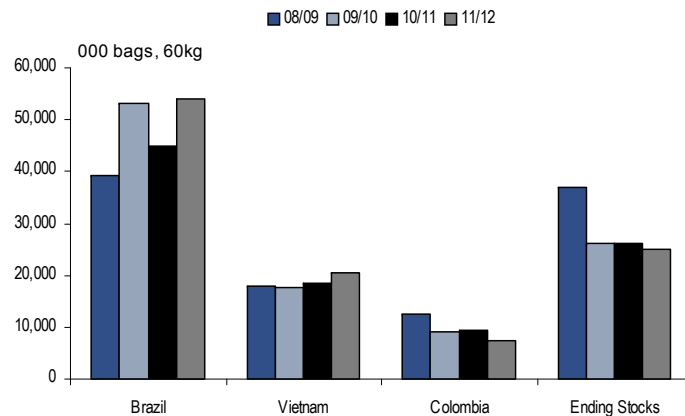


Source: CFTC, Citi Investment Research and Analysis

NYBOT-ICE Cocoa

- After a chaotic ride in 2011 including record high prices during 1H'11 and multi-year lows during late 2H'11, 2012 began with cocoa as one of our most favored crops. Beginning at a low base, expectations of short covering rallies and technical strength was expected to boost the market. Prices finished 1Q'12 5.2% higher averaging \$2308/MT; in line with the old 2012f forecast of \$2375/MT and 0-3m and 6-12m point price target mean of \$2300/MT. Going forward we expect a range bound market for the cocoa crop.
- The 2012f average price is updated to \$2300/MT marking-to-market 1Q'12 and prices expected to choppily hover below \$2600/MT and above \$2000/MT. Our 2013f is for \$2400/MT expecting user demand, particularly in Europe, to rebound and emerging market demand to continue its structural upward trend.
- Unlike last year—when the specter of export bans stemmed from elections in the world's largest producer, Ivory Coast—2012 is likely to be a more quiet year for the delicious bean. 11/12 output from the West African producing region is forecast a record 2.54-m tons, up 35% year-on-year and likely to lead to inventory builds in the near-term
- The International Cocoa Organization is forecasting consumption to outstrip demand by 71-k tons this year although this could be seen as premature. To be sure, non-OECD powder demand for sweets remains supportive based on our conversations with large manufacturers. But luxury chocolate and related confectionary consumption remains more muted particularly out of Europe. To be sure, it was lack of European buying in late 3Q'11 that sparked the fast money sell-off for the crop. Overall, the demand story for cocoa is quite bullish but in the longer term but unlikely to provide a major price catalyst this year.
- Active producer selling and hedging programs could be a drag on prices further out the curve with broker markets noting volume in advance of next year's crop. Managed money had curtailed its net short in fits during 1Q'12 but remains bearish by historical standards; unlikely to reestablish a substantial net long.
- Bottom line: Choppy cocoa market prone to volatility but in a tighter range versus cal'11. Prefer buying on dips and fading moves above \$2500/MT. Geopolitical risk in the producing region appears less of a concern vis-à-vis 2011.

Figure 170. Coffee Supply Outlook

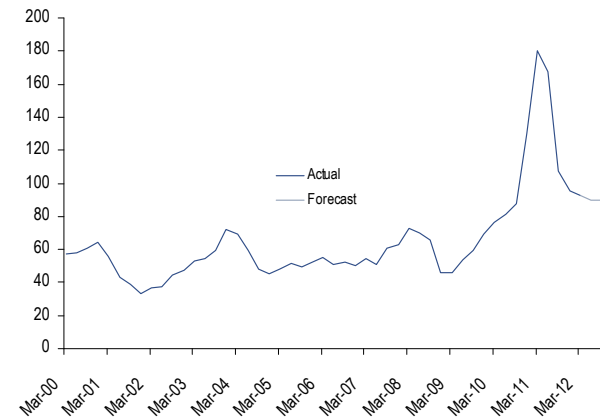


Source: NFCG, USDA, Citi Investment Research and Analysis

NYBOT-ICE Coffee

- The caffeinated bean was among the worst performing commodities in 1Q'12 as Arabica prices plummeted steadily about 20% to average \$2.05/lb with current markets a quarter lower. Our bearish view at the start of the year calling for cal'12 prices to average \$2.10/lb has been reduced further to \$1.89/lb and 2013f to \$2.00/lb. Money managers that began the year at a net long of +6.2k lots now maintain a net short of around -10k contracts; lower than any period during the past five years. Speculative flows are likely to keep pressure on coffee prices.
- Although Colombian harvests are expected to decline year-on-year to 7.5-m bags on heavy rain and crop disease according to its state trade association, forcing the second largest producer in LatAm to triple its purchases from Peru this year, Brazilian harvest appears level at 54-m bags. Vietnamese coffee production is up on the year leaving what were expected to be tight global inventories generally flat. Domestic demand in South America remains strong.
- Bottom line view is bearish KC prices and levels unlikely to break measurably above \$2/lb for the time being. Crop rust in Colombia has not proved bullish.

Figure 171. Cotton Prices Expected to be Stable and Range Bound



Source: Bloomberg, Citi Investment Research and Analysis

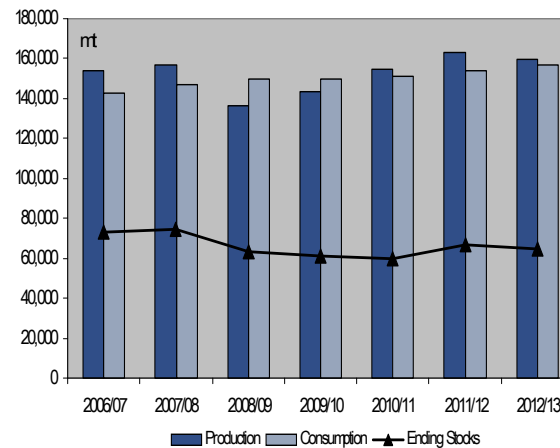
NYBOT Cotton

- Cotton prices are expected to be tightly range bound in line with our unexciting expectations at the start of the year. The 2012f remains flat at \$0.91/lb and at \$0.90/lb for 2013f without meaningful directional price catalysts and a largely uneventful market vis-à-vis 2011. 1Q'12 was a quiet quarter with the brief specter of Indian protectionist export bans serving short-lived price momentum although 2011 data point to strong local inventories and state officials have stepped in to address Indian farmer concerns over any such policy. Indian exports are forecast to rise to a record 9-m bales this year as are exports for US, Pakistan and Brazil. The April WASDE was largely neutral or perhaps a bit bearish for cotton. World production in 11/12 was cut 500-k bales but offset by larger retrenchment in global consumption; down 6% from 10/11 to 107.6-m bales in 11/12. US cotton production was cut 0.5-m bales even though exports are to be higher, lowering US ending stocks although global ending stocks this marketing year are expected to increase on higher adjustment to South Asian beginning stocks. China's inventory build and record import demand has and should support prices with its stocks expected to represent 1/3 of global inventory although actual consumption has been weak. Bottom Line: Neutral

Sugar #11 (NY)

- First quarter prices for the sweet cane averaged a penny above our 0-3m point price outlook in January of \$0.23/lb. The 2012f upgraded to \$0.244/lb with prices expected to rise to \$0.25/lb in 4Q'12. 2013f prices are initiated at a baseline of \$0.24/lb and will be revised further during 2H'12.
- Sugar is amongst the most resilient commodities in response to weakness in global growth and market volatility so price action should be driven via fundamentals. Output in the key producing states of Asia and Latin America is generally strong this year.
- 11/12 global production outlook is pacing on healthy footing. Indian supply near record levels above 28-m tons and Brazilian output forecast at 38.9-m tons per CONAB. The USDA has downgraded US and Mexican production for the fiscal 11/12 year but overall supply growth should grow 5.5%.
- After a tighter 10/11, sugar markets are easing in 11/12 with a 7-8-m ton projected surplus as demand grows only 2% compared to 10/11. Ending stocks rise 12% to 66-m tons. The market is expected to tighten into 12/13, October the likely heavy month as the new Indian crop calendar begins. UNICA's initial projection for 12/13 Brazil sugar production is to grow 5.7%.
- Unless Brazil or India disappoint this year, it seems unlikely the sugar market will break out above \$0.27/lb or below \$0.21/lb.
- Bottom line: Neutral

Figure 172. Sugar Supply/Demand Balance



Source: F.O. Licht, CONAB, Citi Investment Research and Analysis

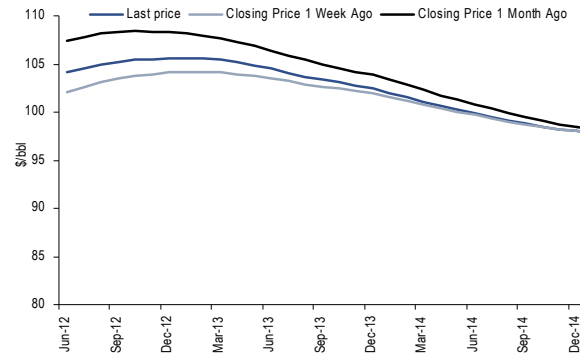
Figure 173. Sugar Volatility



Source: Bloomberg

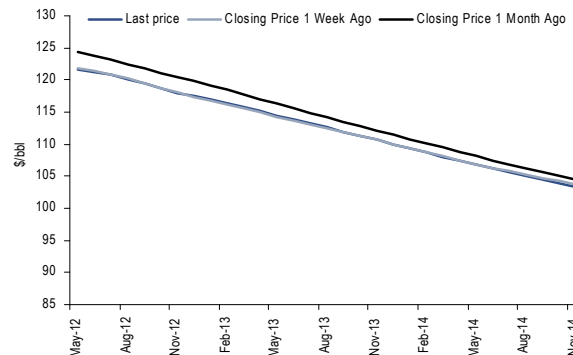
Appendix: Selected Curves and Calendar

Figure 174. WTI



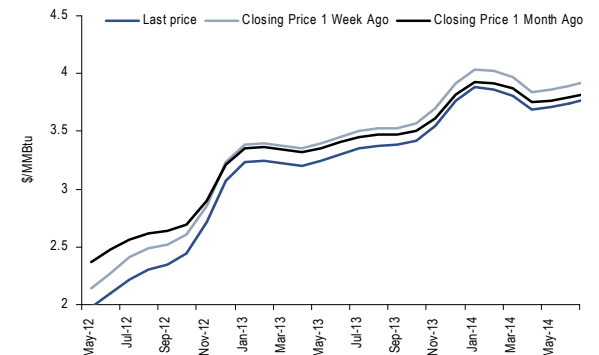
Source: Citi Investment Research and Analysis

Figure 175. Brent



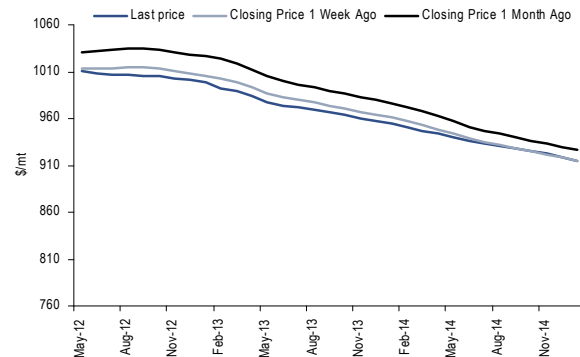
Source: Citi Investment Research and Analysis

Figure 176. US Natural Gas



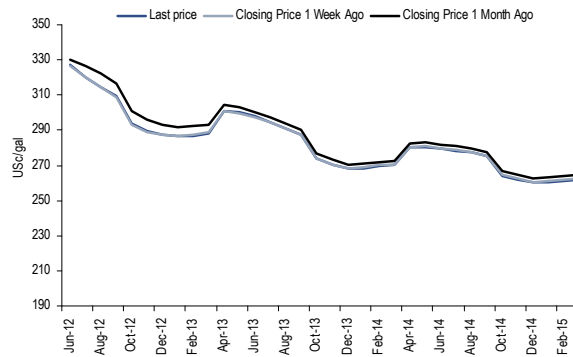
Source: Citi Investment Research and Analysis

Figure 177. Gasoil



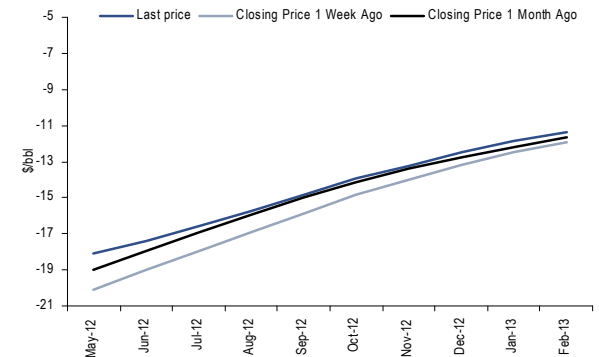
Source: Citi Investment Research and Analysis

Figure 178. RBOB



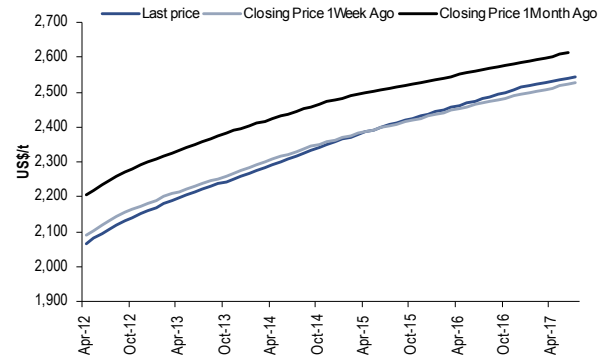
Source: Citi Investment Research and Analysis

Figure 179. WTI-Brent Spread



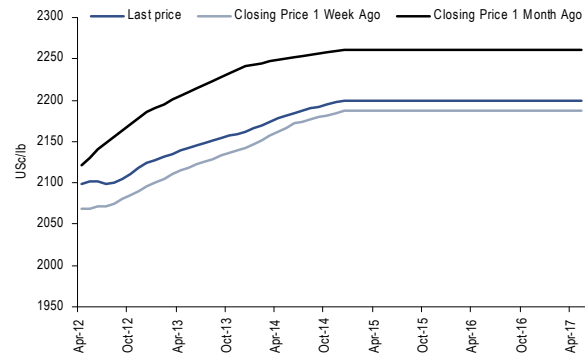
Source: Citi Investment Research and Analysis

Figure 180. Aluminum



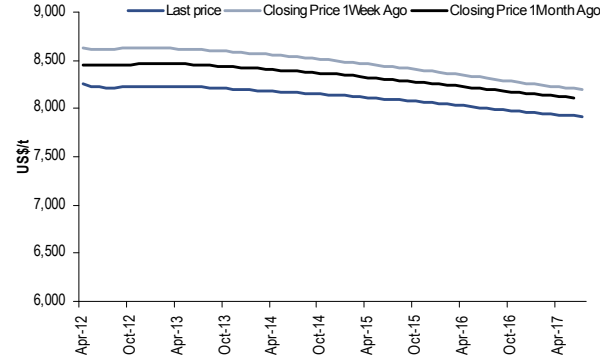
Source: Citi Investment Research and Analysis

Figure 183. Lead



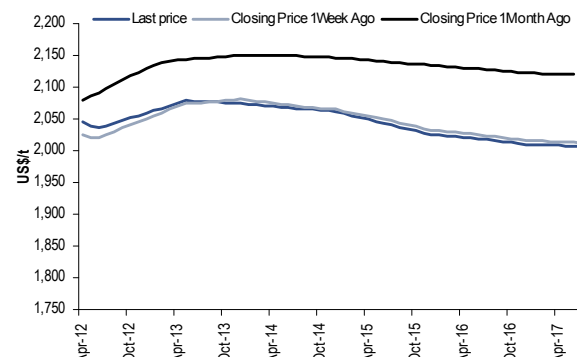
Source: Citi Investment Research and Analysis

Figure 181. Copper



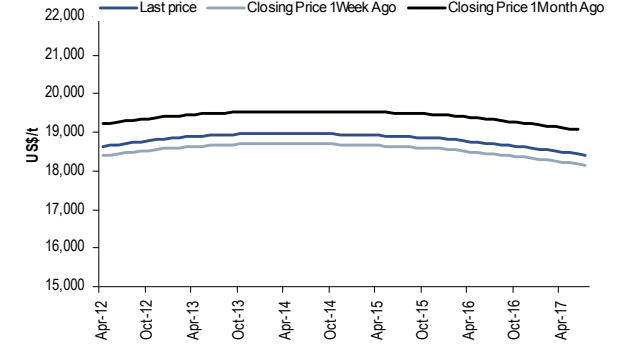
Source: Citi Investment Research and Analysis

Figure 184. Zinc



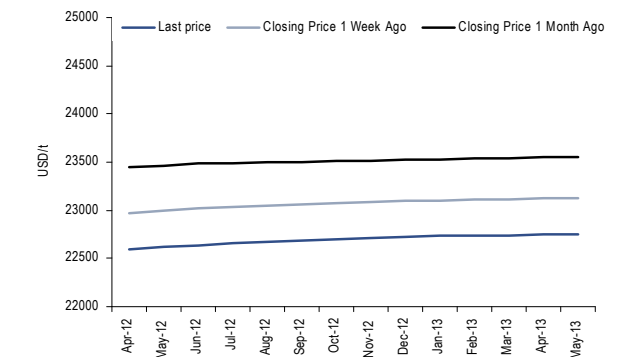
Source: Citi Investment Research and Analysis

Figure 182. Nickel



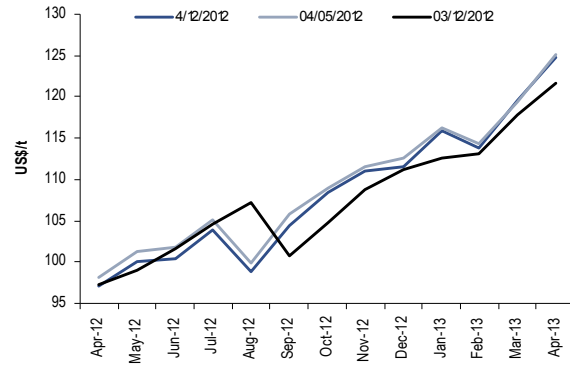
Source: Citi Investment Research and Analysis

Figure 185. Tin



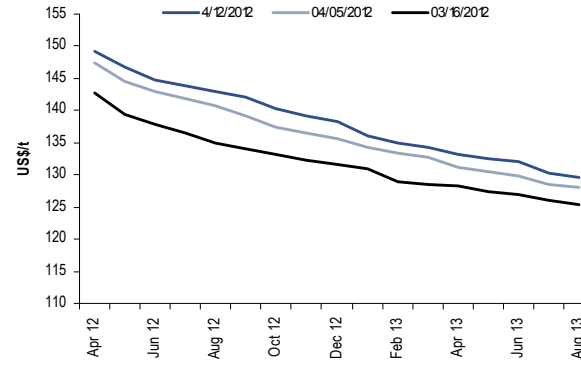
Source: Citi Investment Research and Analysis

Figure 186. Coal (API2)



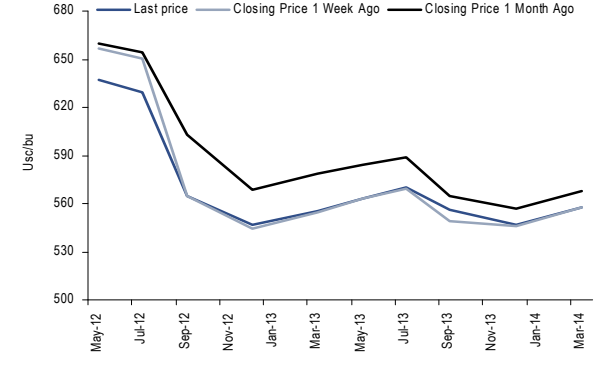
Source: Citi Investment Research and Analysis

Figure 187. Iron Ore



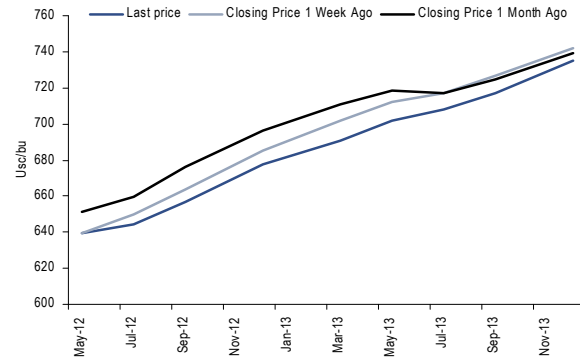
Source: Citi Investment Research and Analysis

Figure 188. Corn



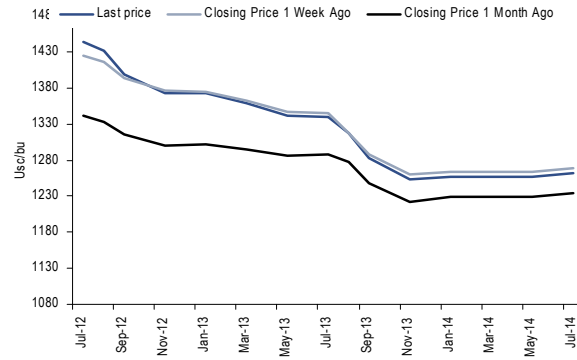
Source: Citi Investment Research and Analysis

Figure 189. Wheat



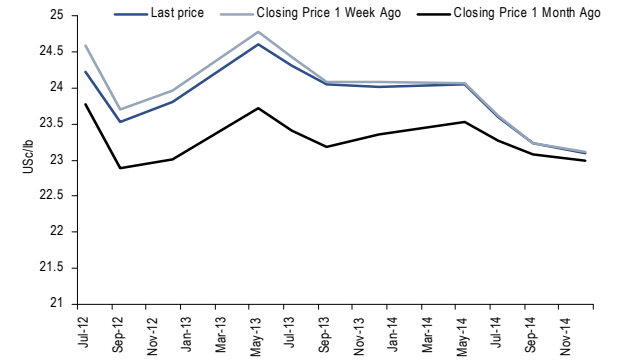
Source: Citi Investment Research and Analysis

Figure 190. Soybean



Source: Citi Investment Research and Analysis

Figure 191. Sugar



Source: Citi Investment Research and Analysis

Figure 192. Global Market Economic Calendar

Date Time	Date	Event	Survey	Actual	Prior	Revised
04/16/2012	04/16/2012 18:00	US Empire Manufacturing	APR 18	--	20.21	--
04/16/2012	04/16/2012 18:00	US Advance Retail Sales	MAR 0.40%	--	1.10%	--
04/16/2012	04/16/2012 18:00	US Retail Sales Less Autos	MAR 0.60%	--	0.90%	--
04/16/2012	04/16/2012 18:00	US Retail Sales Ex Auto & Gas	MAR --	--	0.60%	--
04/16/2012	04/16/2012 18:00	US Retail Sales "Control Group"	MAR 0.50%	--	0.50%	--
04/16/2012	04/16/2012 18:30	US Total Net TIC Flows	FEB --	--	\$18.8B	--
04/16/2012	04/16/2012 18:30	US Net Long-term TIC Flows	FEB --	--	\$101.0B	--
04/16/2012	04/16/2012 19:30	US Business Inventories	FEB 0.50%	--	0.70%	--
04/16/2012	04/16/2012 19:30	US NAHB Housing Market Index	APR 28	--	28	--
04/16/2012	04/16/2012 14:30	EC Euro-Zone Trade Balance sa	FEB --	--	5.9B	--
04/16/2012	04/16/2012 14:30	EC Euro-Zone Trade Balance	FEB --	--	-7.6B	--
04/16/2012	04/16/2012 11:00	JN Nationwide Dept. Sales (YoY)	MAR --	--	-0.40%	--
04/16/2012	04/16/2012 11:00	JN Tokyo Dept. Store Sales (YoY)	MAR --	--	-1.80%	--
04/17/2012	04/17/2012 18:00	US Housing Starts	MAR 700K	--	698K	--
04/17/2012	04/17/2012 18:00	US Housing Starts MOM%	MAR 0.30%	--	-1.10%	--
04/17/2012	04/17/2012 18:00	US Building Permits	MAR 716K	--	717K	715K
04/17/2012	04/17/2012 18:00	US Building Permits MOM%	MAR 0.10%	--	5.10%	--
04/17/2012	04/17/2012 18:45	US Manufacturing (SIC) Production	MAR --	--	0.30%	0.40%
04/17/2012	04/17/2012 18:45	US Industrial Production	MAR 0.30%	--	0.00%	--
04/17/2012	04/17/2012 18:45	US Capacity Utilization	MAR 78.60%	--	78.70%	78.40%
04/17/2012	04/17/2012 14:30	GE Zew Survey (Current Situation)	APR --	--	37.6	--
04/17/2012	04/17/2012 14:30	GE ZEW Survey (Econ. Sentiment)	APR --	--	22.3	--
04/17/2012	04/17/2012 11:30	EC EU 25 New Car Registrations	MAR --	--	-9.70%	--
04/17/2012	04/17/2012 14:30	EC Euro-Zone CPI - Core (YoY)	MAR --	--	1.50%	--
04/17/2012	04/17/2012 14:30	EC Euro-Zone CPI (MoM)	MAR --	--	0.50%	--
04/17/2012	04/17/2012 14:30	EC Euro-Zone CPI (YoY)	MAR --	--	--	--
04/17/2012	04/17/2012 14:30	EC ZEW Survey (Econ. Sentiment)	APR --	--	11	--
04/17/2012	04/17/2012 09:30	JN Tokyo Condominium Sales (YoY)	MAR --	--	13.00%	--
04/17/2012	04/17/2012 10:00	JN Industrial Production (MoM)	FEB F --	--	-1.20%	--
04/17/2012	04/17/2012 10:00	JN Industrial Production	FEB F --	--	1.50%	--

			YOY%						
04/17/2012	04/17/2012 10:00	JN	Capacity Utilization (MoM)	FEB F	--	--	3.40%	--	
04/17/2012	04/17/2012 10:30	JN	Consumer Confidence	MAR	--	--	39.5	--	
04/18/2012	04/18/2012 16:30	US	MBA Mortgage Applications	13-Apr	--	--	-2.40%	--	
04/18/2012	04/18/2012 13:30	EC	Euro-Zone Current Account nsa	FEB	--	--	-12.3B	--	
04/18/2012	04/18/2012 13:30	EC	ECB Euro-Zone Current Account SA	FEB	--	--	4.5B	--	
04/18/2012	04/18/2012 14:30	EC	Construction Output SA MoM	FEB	--	--	-0.80%	--	
04/18/2012	04/18/2012 14:30	EC	Construction Output WDA YoY	FEB	--	--	-1.40%	--	
04/19/2012	04/19/2012 18:00	US	Initial Jobless Claims	14-Apr	--	--	--	--	
04/19/2012	04/19/2012 18:00	US	Continuing Claims	7-Apr	--	--	3338K	--	
04/19/2012	04/19/2012 19:15	US	Bloomberg Consumer Comfort	15-Apr	--	--	--	--	
04/19/2012	04/19/2012 19:15	US	Bloomberg Economic Expectations	APR	--	--	1	--	
04/19/2012	04/19/2012 19:30	US	Philadelphia Fed.	APR	12.9	--	12.5	--	
04/19/2012	04/19/2012 19:30	US	Existing Home Sales	MAR	4.62M	--	4.59M	--	
04/19/2012	04/19/2012 19:30	US	Existing Home Sales MoM	MAR	0.70%	--	-0.90%	--	
04/19/2012	04/19/2012 19:30	US	Leading Indicators	MAR	0.20%	--	0.70%	--	
04/19/2012	04/19/2012 19:30	EC	Euro-Zone Consumer Confidence	APR A	--	--	-19.1	--	
04/19/2012	04/19/2012 05:20	JN	Merchnds Trade Balance Total	MAR	--	--	¥32.9B	¥29.4B	
04/19/2012	04/19/2012 05:20	JN	Adjusted Merchnds Trade Bal.	MAR	--	--	¥313.2B	--	
04/19/2012	04/19/2012 05:20	JN	Merchnds Trade Exports YoY	MAR	--	--	-2.7	--	
04/19/2012	04/19/2012 05:20	JN	Merchnds Trade Imports YoY	MAR	--	--	9.2	--	
04/19/2012	04/19/2012 05:20	JN	Japan Buying Foreign Bonds	13-Apr	--	--	¥1905.2B	--	
04/19/2012	04/19/2012 05:20	JN	Japan Buying Foreign Stocks	13-Apr	--	--	¥94.4B	--	
04/19/2012	04/19/2012 05:20	JN	Foreign Buying Japan Bonds	13-Apr	--	--	¥105.1B	--	
04/19/2012	04/19/2012 05:20	JN	Foreign Buying Japan Stocks	13-Apr	--	--	¥55.1B	--	
04/20/2012	04/20/2012 11:30	GE	Producer Prices (MoM)	MAR	--	--	0.40%	--	
04/20/2012	04/20/2012 11:30	GE	Producer Prices (YoY)	MAR	--	--	3.20%	--	
04/20/2012	04/20/2012 13:30	GE	IFO - Business Climate	APR	--	--	109.8	--	
04/20/2012	04/20/2012 13:30	GE	IFO - Current Assessment	APR	--	--	117.4	--	
04/20/2012	04/20/2012 13:30	GE	IFO - Expectations	APR	--	--	102.7	--	
04/20/2012	04/20/2012 05:20	JN	Tertiary Industry Index (MoM)	FEB	--	--	-1.70%	--	

04/20/2012	04/20/2012 12:30	JN	Convenience Store Sales YoY	MAR	--	--	4.80%	--
04/23/2012	04/23/2012 13:00	GE	PMI Manufacturing	APR A	--	--	48.4	--
04/23/2012	04/23/2012 13:00	GE	PMI Services	APR A	--	--	52.1	--
04/23/2012	04/23/2012 13:30	EC	PMI Composite	APR A	--	--	49.1	--
04/23/2012	04/23/2012 13:30	EC	PMI Manufacturing	APR A	--	--	47.7	--
04/23/2012	04/23/2012 13:30	EC	PMI Services	APR A	--	--	49.2	--
04/23/2012	04/23/2012 14:30	EC	Euro-Zone Govt Debt/GDP Ratio	2011	--	--	85.40%	--
04/23/2012	04/23/2012 10:30	JN	Coincident Index CI	FEB F	--	--	93.7	--
04/23/2012	04/23/2012 10:30	JN	Leading Index CI	FEB F	--	--	96.6	--
04/23/2012	04/23/2012 10:30	JN	Supermarket Sales (YoY)	MAR	--	--	0.30%	--
04/24/2012	04/24/2012 18:30	US	S&P/CaseShiller Home Price Ind	FEB	--	--	135.46	--
04/24/2012	04/24/2012 19:30	US	Consumer Confidence	APR	--	--	70.2	--
04/24/2012	04/24/2012 19:30	US	Richmond Fed Manufact. Index	APR	--	--	7	--
04/24/2012	04/24/2012 19:30	US	House Price Index MoM	FEB	--	--	0.00%	--
04/24/2012	04/24/2012 19:30	US	New Home Sales	MAR	--	--	313K	--
04/24/2012	04/24/2012 19:30	US	New Home Sales MoM	MAR	--	--	-1.60%	--
24-30 APR	24-30 APR	GE	Import Price Index (MoM)	MAR	--	--	1.00%	--
24-30 APR	24-30 APR	GE	Import Price Index (YoY)	MAR	--	--	3.50%	--
04/24/2012	04/24/2012 14:30	EC	Eurostat Discontinues the Release of Industrial Orders					
04/24/2012	04/24/2012 05:20	JN	Corp Service Price Index (YoY)	MAR	--	--	-0.60%	--
04/24/2012	04/24/2012 11:30	JN	Small Business Confidence	APR	--	--	48.7	--
04/24/2012	04/24/2012 07:30	CH	Conference Board China March Leading Economic Index					
04/25/2012	04/25/2012 16:30	US	MBA Mortgage Applications	20-Apr	--	--	--	--
04/25/2012	04/25/2012 18:00	US	Durable Goods Orders	MAR	--	--	2.20%	2.40%
04/25/2012	04/25/2012 18:00	US	Durables Ex Transportation	MAR	--	--	1.60%	1.80%
04/25/2012	04/25/2012 18:00	US	Cap Goods Orders Nondef Ex Air	MAR	--	--	1.20%	--
04/25/2012	04/25/2012 18:00	US	Cap Goods Ship Nondef Ex Air	MAR	--	--	1.40%	--
04/25/2012	04/25/2012 22:00	US	FOMC Rate Decision	25-Apr	--	--	0.25%	--
04/25/2012	04/25/2012 11:30	JN	Machine Tool Orders (YoY)	MAR F	--	--	2.40%	--
04/26/2012	04/26/2012 18:00	US	Chicago Fed Nat Activity Index	MAR	--	--	-0.09	--
04/26/2012	04/26/2012 18:00	US	Initial Jobless Claims	21-Apr	--	--	--	--

04/26/2012	04/26/2012 18:00	US	Continuing Claims	14-Apr	--	--	--	--
04/26/2012	04/26/2012 19:15	US	Bloomberg Consumer Comfort	22-Apr	--	--	--	--
04/26/2012	04/26/2012 19:30	US	Pending Home Sales MoM	MAR	--	--	-0.50%	--
04/26/2012	04/26/2012 19:30	US	Pending Home Sales YoY	MAR	--	--	13.90%	--
04/26/2012	04/26/2012 20:30	US	Kansas City Fed Manf. Activity	APR	--	--	9	--
04/26/2012	04/26/2012 12:30	GE	CPI - Saxony (MoM)	APR	--	--	0.30%	--
04/26/2012	04/26/2012 12:30	GE	CPI - Saxony (YoY)	APR	--	--	2.20%	--
04/26/2012	04/26/2012 13:30	GE	CPI - Brandenburg (MoM)	APR	--	--	0.20%	--
04/26/2012	04/26/2012 13:30	GE	CPI - Brandenburg (YoY)	APR	--	--	2.10%	--
04/26/2012	04/26/2012 13:30	GE	CPI - Hesse (MoM)	APR	--	--	0.20%	--
04/26/2012	04/26/2012 13:30	GE	CPI - Hesse (YoY)	APR	--	--	2.00%	--
04/26/2012	04/26/2012 15:30	GE	CPI - Bavaria (MoM)	APR	--	--	0.10%	--
04/26/2012	04/26/2012 15:30	GE	CPI - Bavaria (YoY)	APR	--	--	2.30%	--
04/26/2012	04/26/2012 17:30	GE	Consumer Price Index (MoM)	APR P	--	--	--	--
04/26/2012	04/26/2012 17:30	GE	Consumer Price Index (YoY)	APR P	--	--	--	--
04/26/2012	04/26/2012 17:30	GE	CPI - EU Harmonised (MoM)	APR P	--	--	--	--
04/26/2012	04/26/2012 17:30	GE	CPI - EU Harmonised (YoY)	APR P	--	--	--	--
04/26/2012	04/26/2012	GE	CPI - Baden Wuerttemberg (MoM)	APR	--	--	0.30%	--
04/26/2012	04/26/2012	GE	CPI - Baden Wuerttemberg (YoY)	APR	--	--	2.40%	--
04/26/2012	04/26/2012	GE	CPI - North Rhine-West. (MoM)	APR	--	--	0.40%	--
04/26/2012	04/26/2012	GE	CPI - North Rhine-West. (YoY)	APR	--	--	1.80%	--
04/26/2012	04/26/2012 14:30	EC	Business Climate Indicator	APR	--	--	-0.3	--
04/26/2012	04/26/2012 14:30	EC	Euro-Zone Consumer Confidence	APR F	--	--	--	--
04/26/2012	04/26/2012 14:30	EC	Euro-Zone Economic Confidence	APR	--	--	94.4	--
04/26/2012	04/26/2012 14:30	EC	Euro-Zone Indust. Confidence	APR	--	--	-7.2	--
04/26/2012	04/26/2012 14:30	EC	Euro-zone Services Confidence	APR	--	--	-0.3	--
04/26/2012	04/26/2012 05:20	JN	Japan Buying Foreign Bonds	20-Apr	--	--	--	--
04/26/2012	04/26/2012 05:20	JN	Japan Buying Foreign Stocks	20-Apr	--	--	--	--
04/26/2012	04/26/2012 05:20	JN	Foreign Buying Japan Bonds	20-Apr	--	--	--	--

04/26/2012	04/26/2012 05:20	JN	Foreign Buying Japan Stocks	20-Apr	--	--	--	--
04/26/2012	04/26/2012 10:00	JN	All Industry Activity Index (MoM)	FEB	--	--	-1.00%	--
04/27/2012	04/27/2012 18:00	US	Employment Cost Index	1Q	--	--	0.40%	--
04/27/2012	04/27/2012 18:00	US	GDP QoQ (Annualized)	1Q A	--	--	3.00%	--
04/27/2012	04/27/2012 18:00	US	Personal Consumption	1Q A	--	--	2.10%	--
04/27/2012	04/27/2012 18:00	US	GDP Price Index	1Q A	--	--	0.90%	--
04/27/2012	04/27/2012 18:00	US	Core PCE QoQ	1Q A	--	--	1.30%	--
04/27/2012	04/27/2012 19:25	US	U. of Michigan Confidence	APR F	--	--	--	--
04/27/2012	04/27/2012 11:30	GE	GfK Consumer Confidence Survey	MAY	--	--	5.9	--
04/27/2012	04/27/2012 05:00	JN	Jobless Rate	MAR	--	--	4.50%	--
04/27/2012	04/27/2012 05:00	JN	Job-To-Applicant Ratio	MAR	--	--	0.75	--
04/27/2012	04/27/2012 05:00	JN	Overall Hhold Spending (YoY)	MAR	--	--	2.30%	--
04/27/2012	04/27/2012 05:00	JN	Natl CPI YoY	MAR	--	--	0.30%	--
04/27/2012	04/27/2012 05:00	JN	Natl CPI Ex-Fresh Food YoY	MAR	--	--	0.10%	--
04/27/2012	04/27/2012 05:00	JN	Natl CPI Ex Food, Energy YoY	MAR	--	--	-0.60%	--
04/27/2012	04/27/2012 05:00	JN	Tokyo CPI YoY	APR	--	--	-0.10%	--
04/27/2012	04/27/2012 05:00	JN	Tokyo CPI Ex-Fresh Food YoY	APR	--	--	-0.30%	--
04/27/2012	04/27/2012 05:00	JN	Tokyo CPI Ex Food, Energy YoY	APR	--	--	-1.00%	--
04/27/2012	04/27/2012 05:20	JN	Industrial Production (MoM)	MAR P	--	--	--	--
04/27/2012	04/27/2012 05:20	JN	Industrial Production YOY%	MAR P	--	--	--	--
04/27/2012	04/27/2012 05:20	JN	Retail Trade YoY	MAR	--	--	3.50%	--
04/27/2012	04/27/2012 05:20	JN	Retail Trade MoM SA	MAR	--	--	2.00%	--
04/27/2012	04/27/2012 05:20	JN	Large Retailers' Sales	MAR	--	--	0.20%	--
04/27/2012	04/27/2012 10:30	JN	Construction Orders (YoY)	MAR	--	--	-1.80%	--
04/27/2012	04/27/2012 10:30	JN	Annualized Housing Starts	MAR	--	--	0.917M	--
04/27/2012	04/27/2012 10:30	JN	Housing Starts (YoY)	MAR	--	--	7.50%	--
04/27/2012	04/27/2012	JN	BOJ Target Rate	27-Apr	--	--	0.10%	--
04/27/2012	04/27/2012 07:00	CH	Industrial Profits YTD YoY	MAR	--	--	-5.20%	--
04/27/2012	04/27/2012 07:05	CH	MNI April Business Condition Survey					
04/30/2012	04/30/2012 18:00	US	Revisions: Retail Sales					
04/30/2012	04/30/2012 18:00	US	Personal Income	MAR	--	--	0.20%	--
04/30/2012	04/30/2012 18:00	US	Personal Spending	MAR	--	--	0.80%	--
04/30/2012	04/30/2012 18:00	US	PCE Deflator (MoM)	MAR	--	--	--	--
04/30/2012	04/30/2012 18:00	US	PCE Deflator (YoY)	MAR	--	--	2.30%	--
04/30/2012	04/30/2012 18:00	US	PCE Core (MoM)	MAR	--	--	0.10%	--

04/30/2012	04/30/2012 18:00	US	PCE Core (YoY)	MAR	--	--	1.90%	--
04/30/2012	04/30/2012 19:15	US	Chicago Purchasing Manager	APR	--	--	62.2	--
04/30/2012	04/30/2012 19:30	US	NAPM-Milwaukee	APR	--	--	51.8	--
04/30/2012	04/30/2012 20:00	US	Dallas Fed Manf. Activity	APR	--	--	10.8	--
04/30/2012	04/30/2012 05/05	GE	Retail Sales (MoM)	MAR	--	--	-1.10%	--
04/30/2012	04/30/2012 05/05	GE	Retail Sales (YoY)	MAR	--	--	1.70%	--
04/30/2012	04/30/2012 13:30	EC	Euro-Zone M3 s.a. 3 mth ave.	MAR	--	--	2.30%	--
04/30/2012	04/30/2012 13:30	EC	Euro-Zone M3 s.a. (YoY)	MAR	--	--	2.80%	--
04/30/2012	04/30/2012 14:30	EC	Euro-Zone CPI Estimate (YoY)	APR	--	--	2.60%	--
04/30/2012	04/30/2012 04:45	JN	Markit/JMMA Manufacturing PMI	APR	--	--	51.1	--
05/01/2012	05/01/2012 19:30	US	Revisions: Construction Spending					
05/01/2012	05/01/2012 19:30	US	Construction Spending MoM	MAR	--	--	-1.10%	--
05/01/2012	05/01/2012 19:30	US	ISM Manufacturing	APR	--	--	53.4	--
05/01/2012	05/01/2012 19:30	US	ISM Prices Paid	APR	--	--	61	--
05/01/2012	05/01/2012 10:30	JN	Vehicle Sales (YoY)	APR	--	--	78.20%	--
05/01/2012	05/01/2012 06:30	CH	PMI Manufacturing	APR	--	--	53.1	--
05/01/2012	05/01/2012 08:00	CH	HSBC Manufacturing PMI	APR	--	--	48.3	--
05/02/2012	05/02/2012 02:30	US	Total Vehicle Sales	APR	--	--	14.32M	--
05/02/2012	05/02/2012 02:30	US	Domestic Vehicle Sales	APR	--	--	11.09M	--
05/02/2012	05/02/2012 16:30	US	MBA Mortgage Applications	27-Apr	--	--	--	--
05/02/2012	05/02/2012 17:45	US	ADP Employment Change	APR	--	--	209K	--
05/02/2012	05/02/2012 19:15	US	ISM New York	APR	--	--	67.4	--
05/02/2012	05/02/2012 19:30	US	Factory Orders	MAR	--	--	1.30%	--
05/02/2012	05/02/2012 13:25	GE	April Unemployment Data Released by Federal Labor Agency					
05/02/2012	05/02/2012 13:25	GE	Unemployment Change (000's)	APR	--	--	-18K	--
05/02/2012	05/02/2012 13:25	GE	Unemployment Rate (s.a)	APR	--	--	6.70%	--
05/02/2012	05/02/2012 13:25	GE	PMI Manufacturing	APR F	--	--	--	--
05/02/2012	05/02/2012 13:30	EC	PMI Manufacturing	APR F	--	--	--	--
05/02/2012	05/02/2012 14:30	EC	Euro-Zone Unemployment Rate	MAR	--	--	10.80%	--
05/02/2012	05/02/2012 05:20	JN	Monetary Base (YoY)	APR	--	--	-0.20%	--
05/02/2012	05/02/2012 07:00	JN	Labor Cash Earnings YoY	MAR	--	--	0.70%	--
05/03/2012	05/03/2012 17:00	US	Challenger Job Cuts YoY	APR	--	--	-8.80%	--

05/03/2012	05/03/2012 17:30	US RBC Consumer Outlook Index	MAY	--	--	46.6	--
05/03/2012	05/03/2012 18:00	US Nonfarm Productivity	1Q P	--	--	0.90%	--
05/03/2012	05/03/2012 18:00	US Unit Labor Costs	1Q P	--	--	2.80%	--
05/03/2012	05/03/2012 18:00	US Initial Jobless Claims	28-Apr	--	--	--	--
05/03/2012	05/03/2012 18:00	US Continuing Claims	21-Apr	--	--	--	--
05/03/2012	05/03/2012 19:15	US Bloomberg Consumer Comfort	29-Apr	--	--	--	--
05/03/2012	05/03/2012 19:30	US ISM Non-Manf. Composite	APR	--	--	56	--
03-04 MAY	03-04 MAY	US ICSC Chain Store Sales YoY	APR	--	--	4.10%	--
05/03/2012	05/03/2012 14:30	EC Euro-Zone PPI (MoM)	MAR	--	--	0.60%	--
05/03/2012	05/03/2012 14:30	EC Euro-Zone PPI (YoY)	MAR	--	--	3.60%	--
05/03/2012	05/03/2012 17:15	EC ECB Announces Interest Rates	3-May	--	--	1.00%	--
05/03/2012	05/03/2012 06:30	CH China Non-manufacturing PMI	APR	--	--	58	--
05/04/2012	05/04/2012 18:00	US Change in Nonfarm Payrolls	APR	--	--	120K	--
05/04/2012	05/04/2012 18:00	US Change in Private Payrolls	APR	--	--	121K	--
05/04/2012	05/04/2012 18:00	US Change in Manufact. Payrolls	APR	--	--	37K	--
05/04/2012	05/04/2012 18:00	US Unemployment Rate	APR	--	--	8.20%	--
05/04/2012	05/04/2012 18:00	US Avg Hourly Earning MOM All Emp	APR	--	--	0.20%	--
05/04/2012	05/04/2012 18:00	US Avg Hourly Earning YOY All Emp	APR	--	--	2.10%	--
05/04/2012	05/04/2012 18:00	US Avg Weekly Hours All Employees	APR	--	--	34.5	--
05/04/2012	05/04/2012 18:00	US Change in Household Employment	APR	--	--	-31	--
05/04/2012	05/04/2012 18:00	US Underemployment Rate (U6)	APR	--	--	14.50%	--
05/04/2012	05/04/2012 13:25	GE PMI Services	APR F	--	--	--	--
05/04/2012	05/04/2012 13:30	EC PMI Composite	APR F	--	--	--	--
05/04/2012	05/04/2012 13:30	EC PMI Services	APR F	--	--	--	--
05/04/2012	05/04/2012 14:30	EC Euro-Zone Retail Sales (MoM)	MAR	--	--	-0.10%	--
05/04/2012	05/04/2012 14:30	EC Euro-Zone Retail Sales (YoY)	MAR	--	--	-2.10%	--
05/05/2012	05/05/2012 08:00	CH China HSBC Services PMI	APR	--	--	53.3	--
05/07/2012	05/07/2012 15:30	GE Factory Orders MoM (sa)	MAR	--	--	0.30%	--
05/07/2012	05/07/2012 15:30	GE Factory Orders YoY (nsa)	MAR	--	--	-6.10%	--
05/07/2012	05/07/2012 14:00	EC Sentix Investor Confidence	MAY	--	--	-14.7	-14.7
07-12 MAY	07-12 MAY	GE Wholesale Price Index	APR	--	--	0.90%	--

07-12 MAY	07-12 MAY	GE	Wholesale price Index (MoM)	APR	--	--	2.20%	--
05/08/2012	05/08/2012 00:30	US	Consumer Credit (YoY)	MAR	--	--	\$8.735B	--
05/08/2012	05/08/2012 17:00	US	NFIB Small Business Optimism	APR	--	--	92.5	--
05/08/2012	05/08/2012 19:30	US	IBD/TIPP Economic Optimism	MAY	--	--	49.3	--
05/08/2012	05/08/2012 19:30	US	JOLTs Job Openings	MAR	--	--	3498	--
05/08/2012	05/08/2012 15:30	GE	Industrial Production MoM (sa)	MAR	--	--	-1.30%	--
05/08/2012	05/08/2012 15:30	GE	Industrial Prod. YoY (nsa wda)	MAR	--	--	-1.00%	--
05/09/2012	05/09/2012 16:30	US	MBA Mortgage Applications	4-May	--	--	--	--
05/09/2012	05/09/2012 19:30	US	Wholesale Inventories	MAR	--	--	0.90%	--
05/09/2012	05/09/2012 11:30	GE	Exports SA (MoM)	MAR	--	--	1.60%	--
05/09/2012	05/09/2012 11:30	GE	Imports SA (MoM)	MAR	--	--	3.90%	--
05/09/2012	05/09/2012 11:30	GE	Current Account (EURO)	MAR	--	--	11.1B	--
05/09/2012	05/09/2012 11:30	GE	Trade Balance	MAR	--	--	14.7B	--
05/09/2012	05/09/2012 10:30	JN	Coincident Index CI	MAR P	--	--	--	--
05/09/2012	05/09/2012 10:30	JN	Leading Index CI	MAR P	--	--	--	--
05/10/2012	05/10/2012 13:30	EC	ECB Publishes May Monthly Report					
05/10/2012	05/10/2012 18:00	US	Import Price Index (MoM)	APR	--	--	1.30%	--
05/10/2012	05/10/2012 18:00	US	Import Price Index (YoY)	APR	--	--	3.40%	--
05/10/2012	05/10/2012 18:00	US	Trade Balance	MAR	--	--	--	--
05/10/2012	05/10/2012 18:00	US	Initial Jobless Claims	5-May	--	--	--	--
05/10/2012	05/10/2012 18:00	US	Continuing Claims	28-Apr	--	--	--	--
05/10/2012	05/10/2012 19:15	US	Bloomberg Consumer Comfort	6-May	--	--	--	--
05/10/2012	05/10/2012 23:30	US	Monthly Budget Statement	APR	--	--	--	--
05/10/2012	05/10/2012 05:20	JN	Bank Lending Ex-Trusts YoY	APR	--	--	0.90%	--
05/10/2012	05/10/2012 05:20	JN	Bank Lending incl Trusts (YoY)	APR	--	--	--	--
05/10/2012	05/10/2012 05:20	JN	Current Account Total	MAR	--	--	¥1177.8B	--
05/10/2012	05/10/2012 05:20	JN	Adjusted Current Account Total	MAR	--	--	¥854.1B	--
05/10/2012	05/10/2012 05:20	JN	Current Account Balance YOY%	MAR	--	--	-30.70%	--
05/10/2012	05/10/2012 05:20	JN	Trade Balance - BOP Basis	MAR	--	--	¥102.1B	--
05/10/2012	05/10/2012 07:30	JN	Tokyo Avg Office Vacancies (%)	APR	--	--	9.04	--
05/10/2012	05/10/2012 10:00	JN	Bankruptcies (YoY)	APR	--	--	-1.90%	--

05/10/2012	05/10/2012	JN	Eco Watchers Survey: Current	APR	--	--	51.8	--
05/10/2012	05/10/2012	JN	Eco Watchers Survey: Outlook	APR	--	--	49.7	--
05/10/2012	05/10/2012	CH	Trade Balance (USD)	APR	--	--	\$5.35B	--
05/10/2012	05/10/2012	CH	Exports YoY%	APR	--	--	8.90%	--
05/10/2012	05/10/2012	CH	Imports YoY%	APR	--	--	5.30%	--
05/11/2012	05/11/2012 18:00	US	Producer Price Index (MoM)	APR	--	--	--	--
05/11/2012	05/11/2012 18:00	US	PPI Ex Food & Energy (MoM)	APR	--	--	--	--
05/11/2012	05/11/2012 18:00	US	Producer Price Index (YoY)	APR	--	--	--	--
05/11/2012	05/11/2012 18:00	US	PPI Ex Food & Energy (YoY)	APR	--	--	3.00%	--
05/11/2012	05/11/2012 19:25	US	U. of Michigan Confidence	MAY P	--	--	--	--
05/11/2012	05/11/2012 11:30	GE	Consumer Price Index (MoM)	APR F	--	--	--	--
05/11/2012	05/11/2012 11:30	GE	Consumer Price Index (YoY)	APR F	--	--	--	--
05/11/2012	05/11/2012 11:30	GE	CPI - EU Harmonised (MoM)	APR F	--	--	--	--
05/11/2012	05/11/2012 11:30	GE	CPI - EU Harmonised (YoY)	APR F	--	--	--	--
05/11/2012	05/11/2012 14:30	EC	European Commission Releases Economic Growth Forecasts (Table)					
05/11/2012	05/11/2012 05:20	JN	Japan Money Stock M2 YoY	APR	--	--	3.00%	--
05/11/2012	05/11/2012 05:20	JN	Japan Money Stock M3 YoY	APR	--	--	2.60%	--
05/11/2012	05/11/2012 07:00	CH	Producer Price Index (YoY)	APR	--	--	-0.30%	--
05/11/2012	05/11/2012 07:00	CH	Consumer Price Index (YoY)	APR	--	--	3.60%	--
05/11/2012	05/11/2012 11:00	CH	Industrial Production YTD YoY	APR	--	--	--	--
05/11/2012	05/11/2012 11:00	CH	Industrial Production (YoY)	APR	--	--	--	--
05/11/2012	05/11/2012 11:00	CH	Fixed Assets Inv Excl. Rural YTD YoY	APR	--	--	--	--
05/11/2012	05/11/2012 11:00	CH	Retail Sales YTD YoY	APR	--	--	--	--
05/11/2012	05/11/2012 11:00	CH	Retail Sales (YoY)	APR	--	--	--	--
11-15 MAY	11-15 MAY	CH	New Yuan Loans	APR	--	--	--	--
11-15 MAY	11-15 MAY	CH	Money Supply - M0 (YoY)	APR	--	--	--	--
11-15 MAY	11-15 MAY	CH	Money Supply - M1 (YoY)	APR	--	--	--	--
11-15 MAY	11-15 MAY	CH	Money Supply - M2	APR	--	--	--	--

14-19 MAY	14-19 MAY	US	(YoY) Mortgage Delinquencies	1Q	--	--	7.58%	--
14-19 MAY	14-19 MAY	US	MBA Mortgage Foreclosures	1Q	--	--	4.38%	--
14-18 MAY	14-18 MAY	CH	Actual FDI (YoY)	APR	--	--	--	--
05/14/2012	05/14/2012 14:30	EC	Euro-Zone Ind. Prod. wda (YoY)	MAR	--	--	--	--
05/14/2012	05/14/2012 14:30	EC	Euro-Zone Ind. Prod. sa (MoM)	MAR	--	--	--	--
05/14/2012	05/14/2012 05:20	JN	Domestic CGPI (MoM)	APR	--	--	0.60%	--
05/14/2012	05/14/2012 05:20	JN	Domestic CGPI (YoY)	APR	--	--	0.60%	--
05/14/2012	05/14/2012 05:20	JN	Loans & Discounts Corp YoY	MAR	--	--	0.15%	--
05/15/2012	05/15/2012 18:00	US	Consumer Price Index (MoM)	APR	--	--	--	--
05/15/2012	05/15/2012 18:00	US	Empire Manufacturing	MAY	--	--	--	--
05/15/2012	05/15/2012 18:00	US	CPI Ex Food & Energy (MoM)	APR	--	--	--	--
05/15/2012	05/15/2012 18:00	US	Consumer Price Index (YoY)	APR	--	--	--	--
05/15/2012	05/15/2012 18:00	US	CPI Ex Food & Energy (YoY)	APR	--	--	--	--
05/15/2012	05/15/2012 18:00	US	Consumer Price Index NSA	APR	--	--	--	--
05/15/2012	05/15/2012 18:00	US	CPI Core Index SA	APR	--	--	--	--
05/15/2012	05/15/2012 18:00	US	Advance Retail Sales	APR	--	--	--	--
05/15/2012	05/15/2012 18:00	US	Retail Sales Less Autos	APR	--	--	--	--
05/15/2012	05/15/2012 18:00	US	Retail Sales Ex Auto & Gas	APR	--	--	--	--
05/15/2012	05/15/2012 18:00	US	Retail Sales "Control Group"	APR	--	--	--	--
05/15/2012	05/15/2012 18:30	US	Total Net TIC Flows	MAR	--	--	--	--
05/15/2012	05/15/2012 18:30	US	Net Long-term TIC Flows	MAR	--	--	--	--
05/15/2012	05/15/2012 19:30	US	Business Inventories	MAR	--	--	--	--
05/15/2012	05/15/2012 19:30	US	NAHB Housing Market Index	MAY	--	--	--	--
05/15/2012	05/15/2012 11:30	GE	GDP nsa (YoY)	1Q P	--	--	--	--
05/15/2012	05/15/2012 11:30	GE	GDP s.a. (QoQ)	1Q P	--	--	-0.20%	--
05/15/2012	05/15/2012 11:30	GE	GDP wda (YoY)	1Q P	--	--	--	--
05/15/2012	05/15/2012 14:30	GE	Zew Survey (Current Situation)	MAY	--	--	--	--
05/15/2012	05/15/2012 14:30	GE	ZEW Survey (Econ. Sentiment)	MAY	--	--	--	--
05/15/2012	05/15/2012 14:30	EC	Euro-Zone GDP s.a. (QoQ)	1Q A	--	--	-0.30%	--
05/15/2012	05/15/2012 14:30	EC	Euro-Zone GDP s.a. (YoY)	1Q A	--	--	0.70%	--
05/15/2012	05/15/2012 14:30	EC	ZEW Survey (Econ. Sentiment)	MAY	--	--	--	--

05/15/2012	05/15/2012 10:00	JN	Industrial Production YOY%	MAR F	--	--	--	--
05/15/2012	05/15/2012 10:30	JN	Consumer Confidence	APR	--	--	--	--
05/16/2012	05/16/2012 16:30	US	MBA Mortgage Applications	11-May	--	--	--	--
05/16/2012	05/16/2012 18:00	US	Housing Starts	APR	--	--	--	--
05/16/2012	05/16/2012 18:00	US	Housing Starts MOM%	APR	--	--	--	--
05/16/2012	05/16/2012 18:00	US	Building Permits	APR	--	--	--	--
05/16/2012	05/16/2012 18:00	US	Building Permits MOM%	APR	--	--	--	--
05/16/2012	05/16/2012 18:45	US	Manufacturing (SIC) Production	APR	--	--	--	--
05/16/2012	05/16/2012 18:45	US	Industrial Production	APR	--	--	--	--
05/16/2012	05/16/2012 18:45	US	Capacity Utilization	APR	--	--	--	--
05/16/2012	05/16/2012 23:30	US	Minutes of FOMC Meeting					
05/16/2012	05/16/2012 11:30	EC	EU 25 New Car Registrations	APR	--	--	--	--
05/16/2012	05/16/2012 14:30	EC	Euro-Zone CPI - Core (YoY)	APR	--	--	--	--
05/16/2012	05/16/2012 14:30	EC	Euro-Zone CPI (MoM)	APR	--	--	--	--
05/16/2012	05/16/2012 14:30	EC	Euro-Zone CPI (YoY)	APR	--	--	--	--
05/16/2012	05/16/2012 14:30	EC	Euro-Zone Trade Balance sa	MAR	--	--	--	--
05/16/2012	05/16/2012 14:30	EC	Euro-Zone Trade Balance	MAR	--	--	--	--
05/16/2012	05/16/2012 05:20	JN	Machine Orders (MoM)	MAR	--	--	4.80%	--
05/16/2012	05/16/2012 05:20	JN	Machine Orders YOY%	MAR	--	--	8.90%	--
05/16/2012	05/16/2012 05:20	JN	Tertiary Industry Index (MoM)	MAR	--	--	--	--
05/17/2012	05/17/2012 18:00	US	Initial Jobless Claims	12-May	--	--	--	--
05/17/2012	05/17/2012 18:00	US	Continuing Claims	5-May	--	--	--	--
05/17/2012	05/17/2012 19:15	US	Bloomberg Consumer Comfort	13-May	--	--	--	--
05/17/2012	05/17/2012 19:15	US	Bloomberg Economic Expectations	MAY	--	--	--	--
05/17/2012	05/17/2012 19:30	US	Philadelphia Fed.	MAY	--	--	--	--
05/17/2012	05/17/2012 19:30	US	Leading Indicators	APR	--	--	--	--
05/17/2012	05/17/2012 05:20	JN	Housing Loans YoY	1Q	--	--	2.20%	--
05/17/2012	05/17/2012 05:20	JN	GDP Deflator YoY	1Q P	--	--	-1.80%	--
05/17/2012	05/17/2012 05:20	JN	Nominal GDP (QoQ)	1Q P	--	--	-0.50%	--
05/17/2012	05/17/2012 05:20	JN	GDP Annualized	1Q P	--	--	-0.70%	--
05/17/2012	05/17/2012 05:20	JN	Gross Domestic Product (QoQ)	1Q P	--	--	-0.20%	--
05/17/2012	05/17/2012 09:30	JN	Tokyo Condominium Sales (YoY)	APR	--	--	--	--
05/17/2012	05/17/2012 10:00	JN	Industrial Production (MoM)	MAR F	--	--	--	--
17-22 MAY	17-22 MAY	JN	Nationwide Dept. Sales (YoY)	APR	--	--	--	--

17-22 MAY	17-22 MAY	JN	Tokyo Dept. Store Sales (YoY)	APR	--	--	--	--
05/18/2012	05/18/2012 18:00	US	Revisions: Factory Orders					
05/18/2012	05/18/2012 11:30	GE	Producer Prices (MoM)	APR	--	--	--	--
05/18/2012	05/18/2012 11:30	GE	Producer Prices (YoY)	APR	--	--	--	--
05/18/2012	05/18/2012 07:00	CH	China April Property Prices					
05/18/2012	05/18/2012 07:05	CH	MNI May Flash Business Sentiment Survey					
18-19 MAY	18-19 MAY	US	Revisions: Durable Goods Benchmarks					
05/21/2012	05/21/2012 18:00	US	Chicago Fed Nat Activity Index	APR	--	--	--	--
21-24 MAY	21-24 MAY	GE	PMI Manufacturing	MAY A	--	--	--	--
21-25 MAY	21-25 MAY	JN	Supermarket Sales (YoY)	APR	--	--	--	--
21-24 MAY	21-24 MAY	EC	PMI Manufacturing	MAY A	--	--	--	--
22-25 MAY	22-25 MAY	JN	Small Business Confidence	MAY	--	--	--	--
05/21/2012	05/21/2012 14:30	EC	Construction Output SA MoM	MAR	--	--	--	--
05/21/2012	05/21/2012 14:30	EC	Construction Output WDA YoY	MAR	--	--	--	--
05/21/2012	05/21/2012 10:00	JN	All Industry Activity Index (MoM)	MAR	--	--	--	--
05/21/2012	05/21/2012 10:30	JN	Coincident Index CI	MAR F	--	--	--	--
05/21/2012	05/21/2012 10:30	JN	Leading Index CI	MAR F	--	--	--	--
05/22/2012	05/22/2012 19:30	US	Richmond Fed Manufact. Index	MAY	--	--	--	--
05/22/2012	05/22/2012 19:30	US	Existing Home Sales	APR	--	--	--	--
05/22/2012	05/22/2012 19:30	US	Existing Home Sales MoM	APR	--	--	--	--
05/22/2012	05/22/2012 19:30	EC	Euro-Zone Consumer Confidence	MAY A	--	--	--	--
05/22/2012	05/22/2012 07:30	CH	Conference Board China April Leading Economic Index					
22-25 MAY	22-25 MAY	CH	HSBC Flash China Manufacturing PMI	MAY	--	--	--	--
05/23/2012	05/23/2012 19:30	US	House Price Index MoM	MAR	--	--	--	--
05/23/2012	05/23/2012 19:30	US	House Price Purchase Index QoQ	1Q	--	--	-0.10%	--
05/23/2012	05/23/2012 19:30	US	New Home Sales	APR	--	--	--	--
05/23/2012	05/23/2012 19:30	US	New Home Sales MoM	APR	--	--	--	--
05/23/2012	05/23/2012 13:30	EC	Euro-Zone Current Account nsa	MAR	--	--	--	--
05/23/2012	05/23/2012 13:30	EC	ECB Euro-Zone Current Account SA	MAR	--	--	--	--
05/23/2012	05/23/2012 05:20	JN	Merchnds Trade	APR	--	--	--	--

05/23/2012	05/23/2012 05:20	JN	Balance Total						
05/23/2012	05/23/2012 05:20	JN	Adjusted Merchnds Trade Bal.	APR	--	--	--	--	--
05/23/2012	05/23/2012 05:20	JN	Merchnds Trade Exports YoY	APR	--	--	--	--	--
05/23/2012	05/23/2012 05:20	JN	Merchnds Trade Imports YoY	APR	--	--	--	--	--
05/23/2012	05/23/2012	JN	BOJ Target Rate	23-May	--	--	--	--	--
23-28 MAY	23-28 MAY	GE	PMI Services	MAY A	--	--	--	--	--
23-28 MAY	23-28 MAY	EC	PMI Composite	MAY A	--	--	--	--	--
23-28 MAY	23-28 MAY	EC	PMI Services	MAY A	--	--	--	--	--
05/24/2012	05/24/2012 18:00	US	Durable Goods Orders	APR	--	--	--	--	--
05/24/2012	05/24/2012 18:00	US	Durables Ex Transportation	APR	--	--	--	--	--
05/24/2012	05/24/2012 18:00	US	Cap Goods Orders Nondef Ex Air	APR	--	--	--	--	--
05/24/2012	05/24/2012 18:00	US	Cap Goods Ship Nondef Ex Air	APR	--	--	--	--	--
05/24/2012	05/24/2012 18:00	US	Initial Jobless Claims	19-May	--	--	--	--	--
05/24/2012	05/24/2012 18:00	US	Continuing Claims	12-May	--	--	--	--	--
05/24/2012	05/24/2012 19:15	US	Bloomberg Consumer Comfort	20-May	--	--	--	--	--
05/24/2012	05/24/2012 20:30	US	Kansas City Fed Manf. Activity	MAY	--	--	--	--	--
05/24/2012	05/24/2012 11:30	GE	GDP nsa (YoY)	1Q F	--	--	--	--	--
05/24/2012	05/24/2012 11:30	GE	Domestic Demand	1Q	--	--	0.10%	--	--
05/24/2012	05/24/2012 11:30	GE	Exports	1Q	--	--	-0.80%	--	--
05/24/2012	05/24/2012 11:30	GE	Capital Investment	1Q	--	--	1.10%	--	--
05/24/2012	05/24/2012 11:30	GE	Government Spending	1Q	--	--	0.10%	--	--
05/24/2012	05/24/2012 11:30	GE	Construction Investment	1Q	--	--	1.90%	--	--
05/24/2012	05/24/2012 11:30	GE	Imports	1Q	--	--	-0.30%	--	--
05/24/2012	05/24/2012 11:30	GE	Private Consumption	1Q	--	--	-0.20%	--	--
05/24/2012	05/24/2012 11:30	GE	GDP s.a. (QOQ)	1Q F	--	--	--	--	--
05/24/2012	05/24/2012 11:30	GE	GDP wda (YoY)	1Q F	--	--	--	--	--
05/24/2012	05/24/2012 13:30	GE	IFO - Business Climate	MAY	--	--	--	--	--
05/24/2012	05/24/2012 13:30	GE	IFO - Current Assessment	MAY	--	--	--	--	--
05/24/2012	05/24/2012 13:30	GE	IFO - Expectations	MAY	--	--	--	--	--
24-30 MAY	24-30 MAY	GE	Import Price Index (MoM)	APR	--	--	--	--	--
24-30 MAY	24-30 MAY	GE	Import Price Index (YoY)	APR	--	--	--	--	--
05/25/2012	05/25/2012 19:25	US	U. of Michigan Confidence	MAY F	--	--	--	--	--
05/25/2012	05/25/2012 11:30	GE	GfK Consumer Confidence Survey	JUN	--	--	--	--	--
05/25/2012	05/25/2012 05:00	JN	Natl CPI YoY	APR	--	--	--	--	--
05/25/2012	05/25/2012 05:00	JN	Natl CPI Ex-Fresh Food YoY	APR	--	--	--	--	--

05/25/2012	05/25/2012 05:00	JN	Natl CPI Ex Food, Energy YoY	APR	--	--	--	--
05/25/2012	05/25/2012 05:00	JN	Tokyo CPI YoY	MAY	--	--	--	--
05/25/2012	05/25/2012 05:00	JN	Tokyo CPI Ex-Fresh Food YoY	MAY	--	--	--	--
05/25/2012	05/25/2012 05:00	JN	Tokyo CPI Ex Food, Energy YoY	MAY	--	--	--	--
27-31 MAY	27-31 MAY	CH	Leading Index	APR	--	--	--	--
05/28/2012	05/28/2012 05:20	JN	Corp Service Price Index (YoY)	APR	--	--	--	--
05/29/2012	05/29/2012 18:30	US	S&P/CS 20 City MoM% SA	MAR	--	--	--	--
05/29/2012	05/29/2012 18:30	US	S&P/CS Composite-20 YoY	MAR	--	--	--	--
05/29/2012	05/29/2012 18:30	US	S&P/Case-Shiller US HPI YOY%	1Q	--	--	-4.03%	--
05/29/2012	05/29/2012 18:30	US	S&P/CaseShiller Home Price Ind	MAR	--	--	--	--
05/29/2012	05/29/2012 18:30	US	S&P/Case-Shiller US HPI	1Q	--	--	125.67	--
05/29/2012	05/29/2012 19:30	US	Consumer Confidence	MAY	--	--	--	--
05/29/2012	05/29/2012 20:00	US	Dallas Fed Manf. Activity	MAY	--	--	--	--
05/29/2012	05/29/2012 12:30	GE	CPI - Saxony (MoM)	MAY	--	--	--	--
05/29/2012	05/29/2012 12:30	GE	CPI - Saxony (YoY)	MAY	--	--	--	--
05/29/2012	05/29/2012 13:30	GE	CPI - Brandenburg (MoM)	MAY	--	--	--	--
05/29/2012	05/29/2012 13:30	GE	CPI - Brandenburg (YoY)	MAY	--	--	--	--
05/29/2012	05/29/2012 13:30	GE	CPI - Hesse (MoM)	MAY	--	--	--	--
05/29/2012	05/29/2012 13:30	GE	CPI - Hesse (YoY)	MAY	--	--	--	--
05/29/2012	05/29/2012 15:30	GE	CPI - Bavaria (MoM)	MAY	--	--	--	--
05/29/2012	05/29/2012 15:30	GE	CPI - Bavaria (YoY)	MAY	--	--	--	--
05/29/2012	05/29/2012 17:30	GE	Consumer Price Index (MoM)	MAY P	--	--	--	--
05/29/2012	05/29/2012 17:30	GE	Consumer Price Index (YoY)	MAY P	--	--	--	--
05/29/2012	05/29/2012 17:30	GE	CPI - EU Harmonised (MoM)	MAY P	--	--	--	--
05/29/2012	05/29/2012 17:30	GE	CPI - EU Harmonised (YoY)	MAY P	--	--	--	--
05/29/2012	05/29/2012	GE	CPI - Baden Wuerttemberg (MoM)	MAY	--	--	--	--
05/29/2012	05/29/2012	GE	CPI - Baden Wuerttemberg (YoY)	MAY	--	--	--	--
05/29/2012	05/29/2012	GE	CPI - North Rhine-West. (MoM)	MAY	--	--	--	--
05/29/2012	05/29/2012	GE	CPI - North Rhine-West. (YoY)	MAY	--	--	--	--
05/29/2012	05/29/2012 05:00	JN	Jobless Rate	APR	--	--	--	--
05/29/2012	05/29/2012 05:00	JN	Job-To-Applicant Ratio	APR	--	--	--	--

05/29/2012	05/29/2012 05:00	JN Overall Hhold Spending (YoY)	APR	--	--	--	--
05/29/2012	05/29/2012 05:20	JN Retail Trade YoY	APR	--	--	--	--
05/29/2012	05/29/2012 05:20	JN Retail Trade MoM SA	APR	--	--	--	--
05/29/2012	05/29/2012 05:20	JN Large Retailers' Sales	APR	--	--	--	--
05/30/2012	05/30/2012 16:30	US MBA Mortgage Applications	25-May	--	--	--	--
05/30/2012	05/30/2012 19:30	US Pending Home Sales MoM	APR	--	--	--	--
05/30/2012	05/30/2012 19:30	US Pending Home Sales YoY	APR	--	--	--	--
05/30/2012	05/30/2012 06/05	GE Retail Sales (MoM)	APR	--	--	--	--
05/30/2012	05/30/2012 06/05	GE Retail Sales (YoY)	APR	--	--	--	--
05/30/2012	05/30/2012 13:30	EC Euro-Zone M3 s.a. 3 mth ave.	APR	--	--	--	--
05/30/2012	05/30/2012 13:30	EC Euro-Zone M3 s.a. (YoY)	APR	--	--	--	--
05/30/2012	05/30/2012 14:30	EC Business Climate Indicator	MAY	--	--	--	--
05/30/2012	05/30/2012 14:30	EC Euro-Zone Consumer Confidence	MAY F	--	--	--	--
05/30/2012	05/30/2012 14:30	EC Euro-Zone Economic Confidence	MAY	--	--	--	--
05/30/2012	05/30/2012 14:30	EC Euro-Zone Indust. Confidence	MAY	--	--	--	--
05/30/2012	05/30/2012 14:30	EC Euro-zone Services Confidence	MAY	--	--	--	--
05/31/2012	05/31/2012 17:00	US Challenger Job Cuts YoY	MAY	--	--	--	--
05/31/2012	05/31/2012 17:30	US RBC Consumer Outlook Index	JUN	--	--	--	--
05/31/2012	05/31/2012 17:45	US ADP Employment Change	MAY	--	--	--	--
05/31/2012	05/31/2012 18:00	US GDP QoQ (Annualized)	1Q S	--	--	--	--
05/31/2012	05/31/2012 18:00	US Personal Consumption	1Q S	--	--	--	--
05/31/2012	05/31/2012 18:00	US GDP Price Index	1Q S	--	--	--	--
05/31/2012	05/31/2012 18:00	US Core PCE QoQ	1Q S	--	--	--	--
05/31/2012	05/31/2012 18:00	US Initial Jobless Claims	26-May	--	--	--	--
05/31/2012	05/31/2012 18:00	US Continuing Claims	19-May	--	--	--	--
05/31/2012	05/31/2012 19:15	US Chicago Purchasing Manager	MAY	--	--	--	--
05/31/2012	05/31/2012 19:15	US Bloomberg Consumer Comfort	27-May	--	--	--	--
05/31/2012	05/31/2012 19:30	US NAPM-Milwaukee	MAY	--	--	--	--
05/31/2012	05/31/2012 06/01	US ICSC Chain Store Sales YoY	MAY	--	--	--	--
05/31/2012	05/31/2012 13:25	GE May Unemployment Data Released by Federal Labor Agency					
05/31/2012	05/31/2012 13:25	GE Unemployment Change (000's)	MAY	--	--	--	--

05/31/2012	05/31/2012 13:25	GE	Unemployment Rate (s.a)	MAY	--	--	--	--
05/31/2012	05/31/2012 14:30	EC	Euro-Zone CPI Estimate (YoY)	MAY	--	--	--	--
05/31/2012	05/31/2012 05:20	JN	Industrial Production (MoM)	APR P	--	--	--	--
05/31/2012	05/31/2012 05:20	JN	Industrial Production YOY%	APR P	--	--	--	--
05/31/2012	05/31/2012 07:00	JN	Labor Cash Earnings YoY	APR	--	--	--	--
05/31/2012	05/31/2012 10:30	JN	Construction Orders (YoY)	APR	--	--	--	--
05/31/2012	05/31/2012 10:30	JN	Annualized Housing Starts	APR	--	--	--	--
05/31/2012	05/31/2012 10:30	JN	Housing Starts (YoY)	APR	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Personal Income	APR	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Change in Nonfarm Payrolls	MAY	--	--	120K	--
06/01/2012	06/01/2012 18:00	US	Personal Spending	APR	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Change in Private Payrolls	MAY	--	--	--	--
06/01/2012	06/01/2012 18:00	US	PCE Deflator (MoM)	APR	--	--	--	--
06/01/2012	06/01/2012 18:00	US	PCE Deflator (YoY)	APR	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Change in Manufact. Payrolls	MAY	--	--	--	--
06/01/2012	06/01/2012 18:00	US	PCE Core (MoM)	APR	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Unemployment Rate	MAY	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Avg Hourly Earning MOM All Emp	MAY	--	--	--	--
06/01/2012	06/01/2012 18:00	US	PCE Core (YoY)	APR	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Avg Hourly Earning YOY All Emp	MAY	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Avg Weekly Hours All Employees	MAY	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Change in Household Employment	MAY	--	--	--	--
06/01/2012	06/01/2012 18:00	US	Underemployment Rate (U6)	MAY	--	--	--	--
06/01/2012	06/01/2012 19:30	US	Construction Spending MoM	APR	--	--	-1.10%	--
06/01/2012	06/01/2012 19:30	US	ISM Manufacturing	MAY	--	--	--	--
06/01/2012	06/01/2012 19:30	US	ISM Prices Paid	MAY	--	--	--	--
06/01/2012	06/01/2012 13:25	GE	PMI Manufacturing	MAY F	--	--	--	--
06/01/2012	06/01/2012 13:30	EC	PMI Manufacturing	MAY F	--	--	--	--
06/01/2012	06/01/2012 14:30	EC	Euro-Zone Unemployment Rate	APR	--	--	--	--
06/01/2012	06/01/2012 05:20	JN	Capital Spending	1Q	--	--	7.60%	--
06/01/2012	06/01/2012 05:20	JN	Capital Spending excl Sftwre	1Q	--	--	4.90%	--
06/01/2012	06/01/2012 10:30	JN	Vehicle Sales (YoY)	MAY	--	--	--	--

01-07 JUN	01-07 JUN	JN	Official Reserve Assets	MAY	--	--	--	--
01-07 JUN	01-07 JUN	JN	Official Reserve Assets	MAY	--	--	--	--
06/01/2012	06/01/2012 08:00	CH	HSBC Manufacturing PMI	MAY	--	--	--	--
06/02/2012	06/02/2012 02:30	US	Total Vehicle Sales	MAY	--	--	--	--
06/02/2012	06/02/2012 02:30	US	Domestic Vehicle Sales	MAY	--	--	--	--
06/03/2012	06/03/2012 06:30	CH	China Non-manufacturing PMI	MAY	--	--	--	--
06/04/2012	06/04/2012 19:30	US	Factory Orders	APR	--	--	--	--
06/04/2012	06/04/2012 14:00	EC	Sentix Investor Confidence	JUN	--	--	--	--
06/04/2012	06/04/2012 14:30	EC	Euro-Zone PPI (MoM)	APR	--	--	--	--
06/04/2012	06/04/2012 14:30	EC	Euro-Zone PPI (YoY)	APR	--	--	--	--
06/04/2012	06/04/2012 05:20	JN	Monetary Base (YoY)	MAY	--	--	--	--
06/04/2012	06/04/2012 05:20	JN	Monetary Base (YoY)	MAY	--	--	--	--
06/05/2012	06/05/2012 19:30	US	ISM Non-Manf. Composite	MAY	--	--	--	--
06/05/2012	06/05/2012 13:25	GE	PMI Services	MAY F	--	--	--	--
06/05/2012	06/05/2012 15:30	GE	Factory Orders MoM (sa)	APR	--	--	--	--
06/05/2012	06/05/2012 15:30	GE	Factory Orders YoY (nsa)	APR	--	--	--	--
06/05/2012	06/05/2012 13:30	EC	PMI Composite	MAY F	--	--	--	--
06/05/2012	06/05/2012 13:30	EC	PMI Services	MAY F	--	--	--	--
06/05/2012	06/05/2012 14:30	EC	Euro-Zone Retail Sales (MoM)	APR	--	--	--	--
06/05/2012	06/05/2012 14:30	EC	Euro-Zone Retail Sales (YoY)	APR	--	--	--	--
06/05/2012	06/05/2012 08:00	CH	China HSBC Services PMI	MAY	--	--	--	--
06/06/2012	06/06/2012 16:30	US	MBA Mortgage Applications	1-Jun	--	--	--	--
06/06/2012	06/06/2012 18:00	US	Nonfarm Productivity	1Q F	--	--	--	--
06/06/2012	06/06/2012 18:00	US	Unit Labor Costs	1Q F	--	--	--	--
06/06/2012	06/06/2012 23:30	US	Fed's Beige Book					
06/06/2012	06/06/2012 15:30	GE	Industrial Production MoM (sa)	APR	--	--	--	--
06/06/2012	06/06/2012 15:30	GE	Industrial Prod. YoY (nsa wda)	APR	--	--	--	--
06/06/2012	06/06/2012 14:30	EC	Euro-Zone GDP s.a. (QoQ)	1Q P	--	--	--	--
06/06/2012	06/06/2012 14:30	EC	Euro-Zone GDP s.a. (YoY)	1Q P	--	--	--	--
06/06/2012	06/06/2012 14:30	EC	Euro-Zone Gross Fix Cap (QoQ)	1Q P	--	--	-0.70%	-0.50%
06/06/2012	06/06/2012 14:30	EC	Euro-Zone Govt Expend (QoQ)	1Q P	--	--	-0.20%	-0.30%
06/06/2012	06/06/2012 17:15	EC	ECB Announces Interest Rates	6-Jun	--	--	--	--
06/06/2012	06/06/2012	EC	Euro-Zone Household	1Q P	--	--	-0.40%	-0.50%

		Cons (QoQ)							
06-11 JUN	06-11 JUN	JN	Bankruptcies (YoY)	MAY	--	--	--	--	--
06/07/2012	06/07/2012 18:00	US	Initial Jobless Claims	2-Jun	--	--	--	--	--
06/07/2012	06/07/2012 18:00	US	Continuing Claims	26-May	--	--	--	--	--
06/07/2012	06/07/2012 19:15	US	Bloomberg Consumer Comfort	3-Jun	--	--	--	--	--
07-12 JUN	07-12 JUN	GE	Wholesale Price Index (MoM)	MAY	--	--	--	--	--
07-12 JUN	07-12 JUN	GE	Wholesale price Index (YoY)	MAY	--	--	--	--	--
06/08/2012	06/08/2012 00:30	US	Consumer Credit	APR	--	--	--	--	--
06/08/2012	06/08/2012 18:00	US	Trade Balance	APR	--	--	--	--	--
06/08/2012	06/08/2012 19:30	US	Wholesale Inventories	APR	--	--	0.90%	--	--
06/07/2012	06/07/2012 07:30	JN	Tokyo Avg Office Vacancies (%)	MAY	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	GDP Deflator YoY	1Q F	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	Nominal GDP (QoQ)	1Q F	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	GDP Annualized	1Q F	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	Gross Domestic Product (QoQ)	1Q F	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	Bank Lending Ex-Trusts YoY	MAY	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	Bank Lending incl Trusts (YoY)	MAY	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	Current Account Total	APR	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	Adjusted Current Account Total	APR	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	Current Account Balance YOY%	APR	--	--	--	--	--
06/08/2012	06/08/2012 05:20	JN	Trade Balance - BOP Basis	APR	--	--	--	--	--
06/08/2012	06/08/2012	JN	Eco Watchers Survey: Current	MAY	--	--	--	--	--
06/08/2012	06/08/2012	JN	Eco Watchers Survey: Outlook	MAY	--	--	--	--	--
06/08/2012	06/08/2012 11:30	GE	Exports SA (MoM)	APR	--	--	--	--	--
06/08/2012	06/08/2012 11:30	GE	Imports SA (MoM)	APR	--	--	--	--	--
06/08/2012	06/08/2012 11:30	GE	Current Account (EURO)	APR	--	--	--	--	--
06/08/2012	06/08/2012 11:30	GE	Labor Costs Workday Adj (YoY)	1Q	--	--	3.30%	--	--
06/08/2012	06/08/2012 11:30	GE	Labor Costs Seas. Adj. (QoQ)	1Q	--	--	1.10%	--	--
06/08/2012	06/08/2012 11:30	GE	Trade Balance	APR	--	--	--	--	--
06/09/2012	06/09/2012 07:00	CH	Producer Price Index (YoY)	MAY	--	--	--	--	--
06/09/2012	06/09/2012 07:00	CH	Consumer Price Index (YoY)	MAY	--	--	--	--	--
06/09/2012	06/09/2012 11:00	CH	Industrial Production YTD YoY	MAY	--	--	--	--	--

06/09/2012	06/09/2012 11:00	CH	Industrial Production (YoY)	MAY	--	--	--	--
06/09/2012	06/09/2012 11:00	CH	Fixed Assets Inv Excl. Rural YTD YoY	MAY	--	--	--	--
06/09/2012	06/09/2012 11:00	CH	Retail Sales YTD YoY	MAY	--	--	--	--
06/09/2012	06/09/2012 11:00	CH	Retail Sales (YoY)	MAY	--	--	--	--
06/10/2012	06/10/2012	CH	Trade Balance (USD)	MAY	--	--	--	--
06/10/2012	06/10/2012	CH	Exports YoY%	MAY	--	--	--	--
06/10/2012	06/10/2012	CH	Imports YoY%	MAY	--	--	--	--
11-15 JUN	11-15 JUN	CH	New Yuan Loans	MAY	--	--	--	--
11-15 JUN	11-15 JUN	CH	Money Supply - M0 (YoY)	MAY	--	--	--	--
11-15 JUN	11-15 JUN	CH	Money Supply - M1 (YoY)	MAY	--	--	--	--
11-15 JUN	11-15 JUN	CH	Money Supply - M2 (YoY)	MAY	--	--	--	--
06/12/2012	06/12/2012 17:00	US	NFIB Small Business Optimism	MAY	--	--	--	--
06/12/2012	06/12/2012 18:00	US	Import Price Index (MoM)	MAY	--	--	1.30%	--
06/12/2012	06/12/2012 18:00	US	Import Price Index (YoY)	MAY	--	--	--	--
06/12/2012	06/12/2012 19:30	US	IBD/TIPP Economic Optimism	JUN	--	--	--	--
06/12/2012	06/12/2012 23:30	US	Monthly Budget Statement	MAY	--	--	--	--
06/12/2012	06/12/2012 05:20	JN	Tertiary Industry Index (MoM)	APR	--	--	--	--
06/12/2012	06/12/2012 05:20	JN	Domestic CGPI (MoM)	MAY	--	--	--	--
06/12/2012	06/12/2012 05:20	JN	Domestic CGPI (YoY)	MAY	--	--	--	--
06/12/2012	06/12/2012 05:20	JN	Loans & Discounts Corp YoY	APR	--	--	--	--
06/12/2012	06/12/2012	JN	Japan Manpower Survey	3Q	--	--	11	--
06/12/2012	06/12/2012	CH	China Manpower Survey	3Q	--	--	19%	--
06/13/2012	06/13/2012 16:30	US	MBA Mortgage Applications	8-Jun	--	--	--	--
06/13/2012	06/13/2012 18:00	US	Producer Price Index (MoM)	MAY	--	--	--	--
06/13/2012	06/13/2012 18:00	US	PPI Ex Food & Energy (MoM)	MAY	--	--	--	--
06/13/2012	06/13/2012 18:00	US	Producer Price Index (YoY)	MAY	--	--	--	--
06/13/2012	06/13/2012 18:00	US	PPI Ex Food & Energy (YoY)	MAY	--	--	--	--
06/13/2012	06/13/2012 18:00	US	Advance Retail Sales	MAY	--	--	--	--
06/13/2012	06/13/2012 18:00	US	Retail Sales Less Autos	MAY	--	--	--	--
06/13/2012	06/13/2012 18:00	US	Retail Sales Ex Auto & Gas	MAY	--	--	--	--
06/13/2012	06/13/2012 18:00	US	Retail Sales "Control	MAY	--	--	--	--

		Group"							
06/13/2012	06/13/2012 19:30	US	Business Inventories	APR	--	--	--	--	--
06/13/2012	06/13/2012 11:30	GE	Consumer Price Index (MoM)	MAY F	--	--	--	--	--
06/13/2012	06/13/2012 11:30	GE	Consumer Price Index (YoY)	MAY F	--	--	--	--	--
06/13/2012	06/13/2012 11:30	GE	CPI - EU Harmonised (MoM)	MAY F	--	--	--	--	--
06/13/2012	06/13/2012 11:30	GE	CPI - EU Harmonised (YoY)	MAY F	--	--	--	--	--
13-15 JUN	13-15 JUN	GE	Germany Third Quarter Manpower Employment Outlook (Table)						
06/13/2012	06/13/2012 14:30	EC	Euro-Zone Ind. Prod. wda (YoY)	APR	--	--	--	--	--
06/13/2012	06/13/2012 14:30	EC	Euro-Zone Ind. Prod. sa (MoM)	APR	--	--	--	--	--
06/14/2012	06/14/2012 18:00	US	Current Account Balance	1Q	--	--	-\$124.1B	--	--
06/14/2012	06/14/2012 18:00	US	Consumer Price Index (MoM)	MAY	--	--	--	--	--
06/14/2012	06/14/2012 18:00	US	CPI Ex Food & Energy (MoM)	MAY	--	--	--	--	--
06/14/2012	06/14/2012 18:00	US	Consumer Price Index (YoY)	MAY	--	--	--	--	--
06/14/2012	06/14/2012 18:00	US	CPI Ex Food & Energy (YoY)	MAY	--	--	--	--	--
06/14/2012	06/14/2012 18:00	US	Consumer Price Index NSA	MAY	--	--	--	--	--
06/14/2012	06/14/2012 18:00	US	CPI Core Index SA	MAY	--	--	--	--	--
06/14/2012	06/14/2012 18:00	US	Initial Jobless Claims	9-Jun	--	--	--	--	--
06/14/2012	06/14/2012 18:00	US	Continuing Claims	2-Jun	--	--	--	--	--
06/14/2012	06/14/2012 19:15	US	Bloomberg Consumer Comfort	10-Jun	--	--	--	--	--
06/14/2012	06/14/2012 13:30	EC	ECB Publishes June Monthly Report						
06/14/2012	06/14/2012 14:30	EC	Euro-Zone CPI - Core (YoY)	MAY	--	--	--	--	--
06/14/2012	06/14/2012 14:30	EC	Euro-Zone CPI (MoM)	MAY	--	--	--	--	--
06/14/2012	06/14/2012 14:30	EC	Euro-Zone CPI (YoY)	MAY	--	--	--	--	--
06/14/2012	06/14/2012 14:30	EC	Euro-Zone Labour Costs (YoY)	1Q	--	--	2.80%	--	--
06/14/2012	06/14/2012 10:00	JN	Industrial Production (MoM)	APR F	--	--	--	--	--
06/14/2012	06/14/2012 10:00	JN	Industrial Production YOY%	APR F	--	--	--	--	--
14-18 JUN	14-18 JUN	CH	Actual FDI (YoY)	MAY	--	--	--	--	--
06/15/2012	06/15/2012 18:00	US	Empire Manufacturing	JUN	--	--	--	--	--
06/15/2012	06/15/2012 18:30	US	Total Net TIC Flows	APR	--	--	--	--	--
06/15/2012	06/15/2012 18:30	US	Net Long-term TIC Flows	APR	--	--	--	--	--

06/15/2012	06/15/2012 18:45	US	Manufacturing (SIC) Production	MAY	--	--	--	--
06/15/2012	06/15/2012 18:45	US	Industrial Production	MAY	--	--	--	--
06/15/2012	06/15/2012 18:45	US	Capacity Utilization	MAY	--	--	--	--
06/15/2012	06/15/2012 19:25	US	U. of Michigan Confidence	JUN P	--	--	--	--
06/15/2012	06/15/2012 11:30	EC	EU 25 New Car Registrations	MAY	--	--	--	--
06/15/2012	06/15/2012 14:30	EC	Eurozone Employment (QoQ)	1Q	--	--	-0.20%	--
06/15/2012	06/15/2012 14:30	EC	Eurozone Employment (YoY)	1Q	--	--	-0.20%	--
06/15/2012	06/15/2012 14:30	EC	Euro-Zone Trade Balance sa	APR	--	--	--	--
06/15/2012	06/15/2012 14:30	EC	Euro-Zone Trade Balance	APR	--	--	--	--
06/15/2012	06/15/2012	JN	BOJ Target Rate	15-Jun	--	--	--	--
06/18/2012	06/18/2012 19:30	US	NAHB Housing Market Index	JUN	--	--	--	--
06/18/2012	06/18/2012 09:30	JN	Tokyo Condominium Sales (YoY)	MAY	--	--	--	--
06/18/2012	06/18/2012 10:30	JN	Bank of Japan Monthly Economic Report					
06/18/2012	06/18/2012 07:00	CH	China May Property Prices					
06/19/2012	06/19/2012 18:00	US	Housing Starts	MAY	--	--	--	--
06/19/2012	06/19/2012 18:00	US	Housing Starts MOM%	MAY	--	--	--	--
06/19/2012	06/19/2012 18:00	US	Building Permits	MAY	--	--	--	--
06/19/2012	06/19/2012 18:00	US	Building Permits MOM%	MAY	--	--	--	--
06/19/2012	06/19/2012 19:30	US	JOLTs Job Openings	APR	--	--	--	--
06/19/2012	06/19/2012 14:30	GE	Zew Survey (Current Situation)	JUN	--	--	--	--
06/19/2012	06/19/2012 14:30	GE	ZEW Survey (Econ. Sentiment)	JUN	--	--	--	--
06/19/2012	06/19/2012 14:30	EC	Construction Output SA MoM	APR	--	--	--	--
06/19/2012	06/19/2012 14:30	EC	Construction Output WDA YoY	APR	--	--	--	--
06/19/2012	06/19/2012 14:30	EC	ZEW Survey (Econ. Sentiment)	JUN	--	--	--	--
06/20/2012	06/20/2012 16:30	US	MBA Mortgage Applications	15-Jun	--	--	--	--
06/20/2012	06/20/2012 22:00	US	FOMC Rate Decision	20-Jun	--	--	--	--
06/20/2012	06/20/2012 11:30	GE	Producer Prices (MoM)	MAY	--	--	--	--
06/20/2012	06/20/2012 11:30	GE	Producer Prices (YoY)	MAY	--	--	--	--
20-23 JUN	20-23 JUN	EC	Euro-Zone Consumer Confidence	JUN A	--	--	--	--
06/20/2012	06/20/2012 05:20	JN	Merchnds Trade Balance Total	MAY	--	--	--	--
06/20/2012	06/20/2012 05:20	JN	Adjusted Merchnds	MAY	--	--	--	--

06/20/2012	06/20/2012 05:20	JN	Trade Bal.						
06/20/2012	06/20/2012 05:20	JN	Merchnds Trade Exports YoY	MAY	--	--	--	--	--
06/20/2012	06/20/2012 05:20	JN	Merchnds Trade Imports YoY	MAY	--	--	--	--	--
06/20/2012	06/20/2012 10:00	JN	All Industry Activity Index (MoM)	APR	--	--	--	--	--
06/21/2012	06/21/2012 18:00	US	Initial Jobless Claims	16-Jun	--	--	--	--	--
06/21/2012	06/21/2012 18:00	US	Continuing Claims	9-Jun	--	--	--	--	--
06/21/2012	06/21/2012 19:15	US	Bloomberg Consumer Comfort	17-Jun	--	--	--	--	--
06/21/2012	06/21/2012 19:15	US	Bloomberg Economic Expectations	JUN	--	--	--	--	--
06/21/2012	06/21/2012 19:30	US	Philadelphia Fed.	JUN	--	--	--	--	--
06/21/2012	06/21/2012 19:30	US	Existing Home Sales	MAY	--	--	--	--	--
06/21/2012	06/21/2012 19:30	US	House Price Index MoM	APR	--	--	--	--	--
06/21/2012	06/21/2012 19:30	US	Existing Home Sales MoM	MAY	--	--	--	--	--
06/21/2012	06/21/2012 19:30	US	Leading Indicators	MAY	--	--	--	--	--
21-24 JUN	21-24 JUN	GE	PMI Manufacturing	JUN A	--	--	--	--	--
06/21/2012	06/21/2012 13:30	EC	Euro-Zone Current Account nsa	APR	--	--	--	--	--
06/21/2012	06/21/2012 13:30	EC	ECB Euro-Zone Current Account SA	APR	--	--	--	--	--
21-24 JUN	21-24 JUN	EC	PMI Manufacturing	JUN A	--	--	--	--	--
06/22/2012	06/22/2012 13:30	GE	IFO - Business Climate	JUN	--	--	--	--	--
06/22/2012	06/22/2012 13:30	GE	IFO - Current Assessment	JUN	--	--	--	--	--
06/22/2012	06/22/2012 13:30	GE	IFO - Expectations	JUN	--	--	--	--	--
06/22/2012	06/22/2012 07:05	CH	MNI June Flash Business Sentiment Survey						
06/22/2012	06/22/2012 07:30	CH	Conference Board China May Leading Economic Index						
22-25 JUN	22-25 JUN	CH	HSBC Flash China Manufacturing PMI	JUN	--	--	--	--	--
23-28 JUN	23-28 JUN	EC	PMI Composite	JUN A	--	--	--	--	--
23-28 JUN	23-28 JUN	EC	PMI Services	JUN A	--	--	--	--	--
24-30 JUN	24-30 JUN	GE	Import Price Index (MoM)	MAY	--	--	--	--	--
24-30 JUN	24-30 JUN	GE	Import Price Index (YoY)	MAY	--	--	--	--	--
06/25/2012	06/25/2012 18:00	US	Chicago Fed Nat Activity Index	MAY	--	--	--	--	--
06/25/2012	06/25/2012 19:30	US	New Home Sales	MAY	--	--	--	--	--
06/25/2012	06/25/2012 19:30	US	New Home Sales MoM	MAY	--	--	--	--	--
06/25/2012	06/25/2012 20:00	US	Dallas Fed Manf. Activity	JUN	--	--	--	--	--
06/25/2012	06/25/2012 11:30	GE	GfK Consumer Confidence Survey	JUL	--	--	--	--	--



06/26/2012	06/26/2012 05:20	JN	Corp Service Price Index (YoY)	MAY	--	--	--	--
06/26/2012	06/26/2012 18:30	US	S&P/CS 20 City MoM% SA	APR	--	--	--	--
06/26/2012	06/26/2012 18:30	US	S&P/CS Composite-20 YoY	APR	--	--	--	--
06/26/2012	06/26/2012 18:30	US	S&P/CaseShiller Home Price Ind	APR	--	--	--	--
06/26/2012	06/26/2012 19:30	US	Consumer Confidence	JUN	--	--	--	--
06/26/2012	06/26/2012 19:30	US	Richmond Fed Manufact. Index	JUN	--	--	--	--
06/27/2012	06/27/2012 16:30	US	MBA Mortgage Applications	22-Jun	--	--	--	--
06/27/2012	06/27/2012 18:00	US	Durable Goods Orders	MAY	--	--	--	--
06/27/2012	06/27/2012 18:00	US	Durables Ex Transportation	MAY	--	--	--	--
06/27/2012	06/27/2012 18:00	US	Cap Goods Orders Nondef Ex Air	MAY	--	--	--	--
06/27/2012	06/27/2012 18:00	US	Cap Goods Ship Nondef Ex Air	MAY	--	--	--	--
06/27/2012	06/27/2012 19:30	US	Pending Home Sales MoM	MAY	--	--	--	--
06/27/2012	06/27/2012 19:30	US	Pending Home Sales YoY	MAY	--	--	--	--

Source: Bloomberg, Citi Investment Research and Analysis



Appendix A-1

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