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The shale revolution and the global economy

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The shale revolution is changing the global energy landscape

US production of shale gas has increased dramatically, and oil production is rising and will rise much further. Both shifts should be among the largest country production increases globally in the last 30 years. The micro effects are already visible. We discuss the global macro implications here.

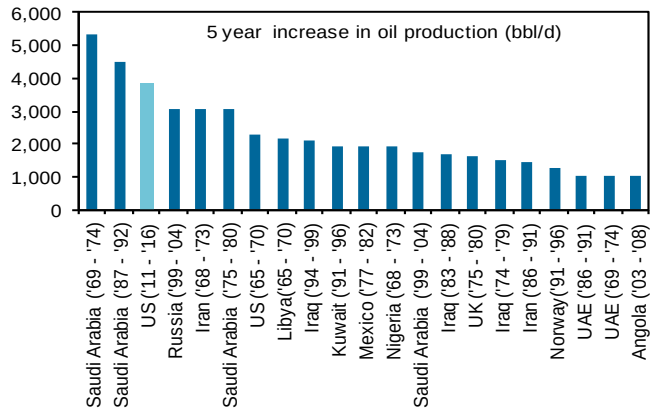
This is gradually loosening the global oil price constraint…

The most dramatic issue is that shifts in production are gradually loosening the oil price constraint that has been a persistent feature of the global economy. If global demand growth can recover, the risks that it will be choked off by rising oil prices are receding. The pressures on headline inflation from steadily climbing oil prices over the last decade are unlikely to be repeated in the next.

…and may provide limited help to the US current account and USD

These shifts in production are also likely to support an improving US current account position and a somewhat stronger US Dollar than we would otherwise have seen. But it is important not to exaggerate the size of these impacts and, in both cases, they may be offset by forces pushing in the opposite direction. The reason that the shale revolution can have a big impact on the global energy picture but smaller effects on the US is simple: the sheer size of the US economy.

US oil production increase set to be one of the largest in history



Source: GS Global ECS Research.

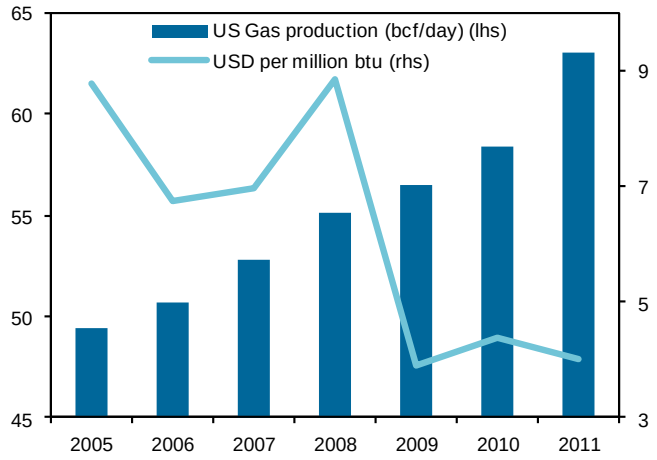
The shale revolution and the global economy

The shale revolution is changing the global energy landscape. That revolution has had two related dimensions: one in gas and one in oil. US production of shale gas has increased dramatically (Exhibit 1), with the increase since 2006 among the largest production increases ever seen globally. US production of shale oil (liquid-rich shales) has been more recent, but has been the main upside surprise to global oil production in the last 2-3 years. Our Energy research teams around the world have tracked this transformation by monitoring the largest shale projects on a bottom-up basis. Their projections point to an impressive increase in US oil production from less than 7mn bbl/d in 2008 to over 12mn bbl/d by 2017 (including Natural Gas Liquids).

The micro impact of the shale revolutions on the US economy is already visible, with booms in the regional economies around major fields and a fillip to gas-using US manufacturers. But the global macro implications, our focus here, are also becoming clearer. The most dramatic issue is that shifts in production are gradually loosening the oil price constraint that has been a persistent feature of the global economy. If global demand growth can recover, the risks that it will be choked off by rising oil prices are receding. The persistent pressures on headline inflation from steadily climbing oil prices over the last decade are unlikely to be repeated in the next.

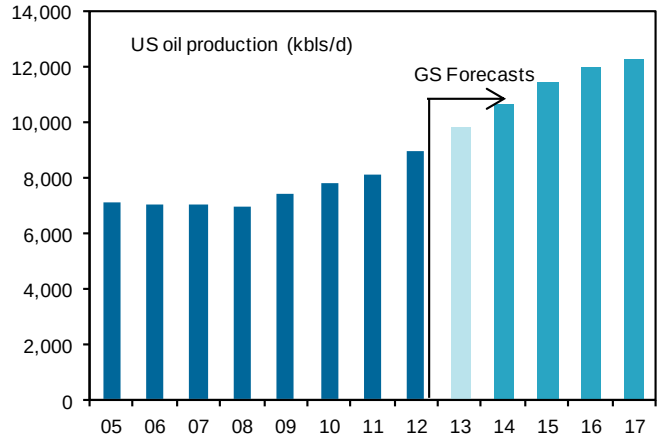
We show here that the shifts are also likely to contribute to some underlying improvement in the US current account position and support a somewhat stronger US Dollar than we would otherwise have seen. But it is important not to exaggerate the size of those impacts and, in both cases, they may be offset by other forces. The reason that shale can have big effects on the global energy picture, but smaller effects on the US is simple: the sheer size of the US economy. US production increases are very large relative to other major oil discoveries but much smaller as a proportion of the local economy than in other cases. This is much more of a 'first word' on the subject than the last. Our views on the energy production outlook are still evolving. The impact on the economic picture is also complex. Here we provide a simple framework for translating some key issues into an economic framework that we hope will be helpful as we dig deeper.

Exhibit 1: US shale gas - higher production, lower prices



Source: GS Oil and Gas Equity Research.

Exhibit 2: US oil production ramping up with shale



Source: GS Oil and Gas Equity Research.

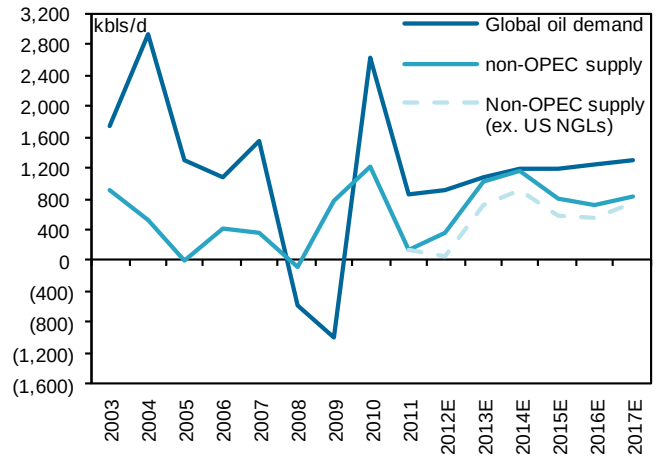
Two shale stories with different economic implications

It is helpful to think of the two dimensions of the shale revolution separately. This is because, to a large extent, oil is what economists call 'tradable' (priced on a global basis) and gas is 'non-tradable' (mostly limited to domestic usage and so priced on a domestic basis), given that transportation costs are higher and licensing for exports has so far been limited. This separation is a simplification, but a helpful one.[1] And it helps to explain why the gas and oil production increases have had very different effects.

The increase in US gas production has pushed prices down sharply in the US in recent years and gas prices are now much lower than in Europe and Asia. The benefits have generally accrued to gas consumers, including significant parts of the industrial sector (gas is a major driver of US power generation). Long-run prices are driven by the cost of extraction and, at a price of around $5/mmbtu, very large amounts of gas can be supplied. This means that the main impact from the gas discoveries has probably already been felt: a sustained one-off shift in absolute and relative US gas costs.

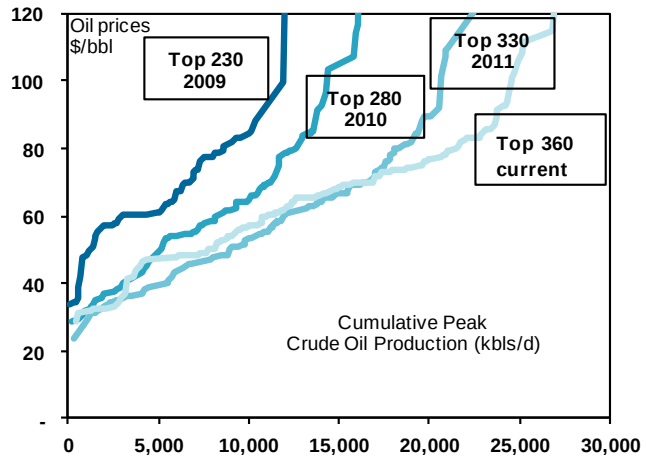
As oil is priced on a global basis, increased US production has to be seen in the context of a global market in which, to a degree, the US is a price-taker. As a result, higher US production has translated into lower US net imports of oil products and the impact has been on global not just local pricing (although there are meaningful local impacts on crude spreads such as WTI-Brent). There are two main shifts taking place. The first is that global supply growth has been larger than it would otherwise have been. Exhibit 3 shows that non-OPEC oil supply, which has risen at an annual rate of 450kbl/d over the past decade, is likely to rise at an annual rate of 900kbl/d in the next five years. The second is that the global supply curve is becoming more elastic. Exhibit 4 shows their estimates of the oil that can be supplied from those projects at different price points and the pace at which those estimates have increased since they started monitoring those projects. Over time, shale production is increasing the ability to bring on oil supply (and bring it on quickly) in the $80-$100/bbl area.[2]

Exhibit 3: Non-OPEC supply increases are picking up



Source: GS Oil and Gas Equity Research.

Exhibit 4: Rising estimates of what shale projects can generate at different prices



Source: GS Oil and Gas Equity Research.

[1] In practice, gas can be transported within North America and if export licensing expands, beyond. There are also limitations on the exports of crude oil, although refined products are routinely exported. In addition, pipeline constraints have led to spreads between US oil prices in some regions (WTI) and pricing elsewhere, although these are likely to be largely temporary.

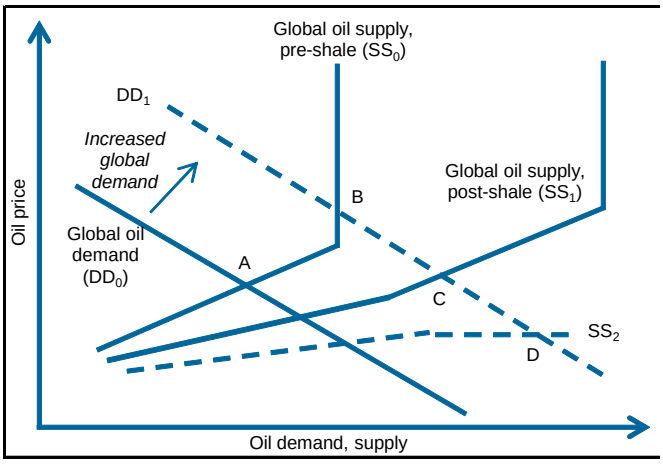
[2] Over the long term, more substitution may be possible between oil and gas. But given that transportation is the dominant use of oil in the US, the short-term possibilities here are quite limited.

Loosening the global oil constraint…

Because oil is tradable, the global implications of the shale revolution are more obvious here. The two shifts in the oil supply curve—more supply and a flatter supply curve—are changing the global oil price environment in important ways. For much of the past decade, oil markets have been dominated by rising long-dated prices, which have driven the rise in overall oil prices. The supply-demand balance has been fragile, given a structurally tight market, low growth in non-OPEC supply due to geopolitical constraints and the exhaustion of spare capacity in the OPEC markets. It has been hard to increase supply much beyond a certain point, so increases in global demand have in the limit been resolved through sharp price increases (as in 2008) and the market has been very vulnerable to supply disruptions. In Exhibit 5, the stylised representation shows a supply curve, SS_0, which slopes sharply upwards at the point where spare capacity is exhausted. Global demand increases (DD_0 to DD_1) then have the potential to push the market from a point like A to much higher oil prices at a point like *B*.

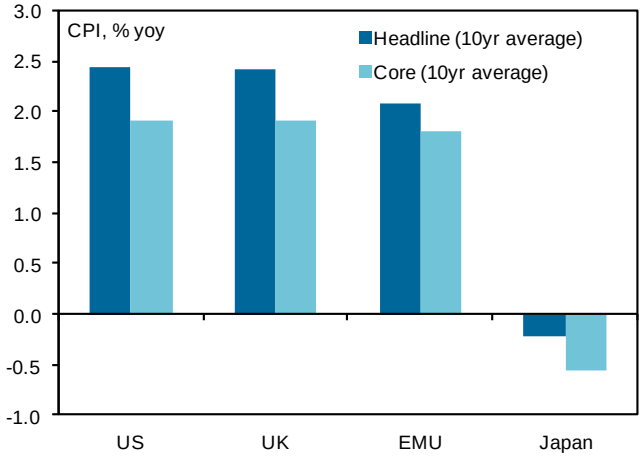
The changes in the supply curve brought on by increased shale production are leading to a structurally more stable market. In the first instance the supply curve is becoming flatter relative to the past (SS_1 in the exhibit). As a result, the structural oil price picture is more stable, although at prices below $90-100/bbl, shale investment currently falls significantly. This is more reminiscent of the pre-2003 oil environment (albeit at much higher long-term prices), with US shale rather than OPEC supply becoming the 'swing factor' that keeps the market balanced. The result is that global demand may be able to expand without the same risk of upward pressure on prices that we have seen in recent years (point *C* in the exhibit). Looking further out, increased production may be enough to push prices meaningfully lower (point *D*), although it may require non-US shale production (unlikely to be large in the next five years) for that shift to occur. Our global oil forecasts reflect these shifts. Cyclical pressure on oil prices may persist and geopolitical supply risks remain an issue. But over the next five years, we expect oil prices to move somewhat lower than they are currently, and are pencilling in larger declines in 2016 and beyond.

Exhibit 5: Shale production is set to flatten the global oil supply curve



Source: GS Global ECS Research.

Exhibit 6: Headline inflation has persistently exceeded core inflation in last decade



Source: GS Global ECS Research.

…means lower risks to global growth, inflation

Even if we see only the first of these changes—a flatter oil supply curve—the global economic landscape would look quite different to the last decade. Since 2003, rising real energy prices have been a steady and reliable feature of the backdrop for the global economy. As a result, headline inflation has been persistently higher than core inflation over that period across a broad range of economies (Exhibit 6), adding around 50bp on average to inflation in the major economies and subtracting roughly the same amount from real income growth for consumers in the US, UK and Europe. The shift to a structurally stable oil market implies that this process may be coming to an end. A flatter global supply curve means that the global economy should be able to grow without putting persistent upward pressure on long-term oil prices.

That should bring three significant macroeconomic benefits relative to the past:

- **One of the major constraints on sustained growth in the global economy is gradually loosening**. If a robust global demand recovery can be engineered, it is now a lot less likely that an oil price constraint will choke it off. This constraint has been a contributor to the 'stop-start' nature of recent expansions. A drop in oil prices further out in the horizon would represent an additional positive supply-side shift.
- **The drag on household incomes in the developed world from this source should end.** The flipside of the improving terms of trade for these consumers, of course, is a less friendly picture for producers and producing countries, where the sustainability of spending based on sustained high oil prices may come under more scrutiny.
- **Headline inflation should no longer be persistently higher than core inflation.** Many central banks—including the ECB and many of the EM economies—have implicitly or explicitly targeted headline inflation. Rising energy prices have affected core inflation measures to a degree, influencing the inflation outlook even for central banks, like the Federal Reserve, that have focused more on underlying inflation measures. As a result, lower ongoing energy inflation means that monetary policy may be easier on average than it otherwise would have been.[3]

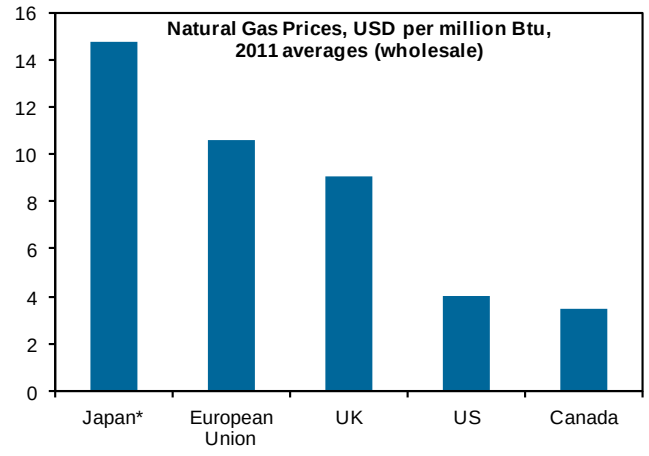
Macro is not just the sum of micro

Beyond these global effects, the fact that the US is the source of the production increase—and that gas is non-tradable—means that the impact on the US may go above and beyond these benefits. The excitement about the shale revolutions has led to predictions of resurgence in US manufacturing, an end to US current account deficits and a possible sharp strengthening in the US Dollar.

In order to think about the likely impact of these changes on the US trade accounts and currency in a systematic way, it is helpful to find a simple way of characterising the impacts of the US oil and gas production increases. One useful approach is to see each of them as different kinds of increases in productivity. The discovery of shale oil can be thought of as similar in effect to an increase in the productivity of the oil-producing sector. Although gas cannot be traded directly, the discovery of shale gas reduces the input costs of gas-using portions of the US manufacturing sector. Its broader impact can then be thought of primarily in terms of increasing the productivity of those industries.

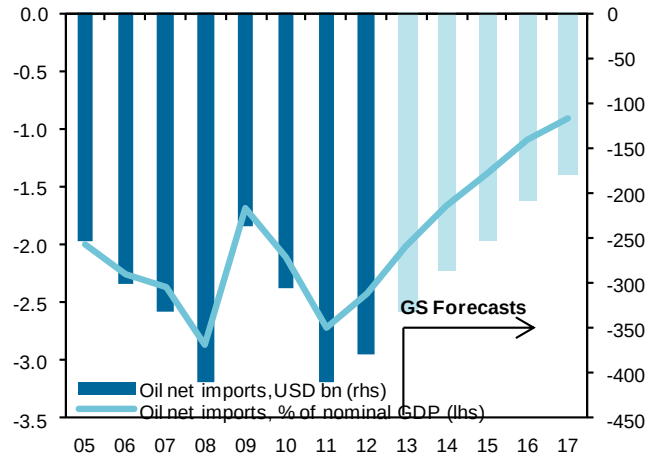
[3] A simple Phillips curve would imply that a central bank targeting headline inflation would be able to tolerate a higher rate of non-energy inflation (and so somewhat lower rates of unemployment or spare capacity) if the pace of energy inflation were persistently lower.

Exhibit 7: US gas prices lower than elsewhere



** Liquid natural gas. Source: GS Global ECS Research.*

Exhibit 8: Falling net oil imports for the US



Source: GS Oil and Gas Equity Research; GS Global ECS Research.

At the micro level, the principle of comparative advantage implies that both the energy sector and manufacturing sectors in the US that use gas intensively, such as chemicals (which benefit from lower relative gas costs), should expand relative to other areas. Those impacts are already visible. Employment in US oil production and related areas has picked up. The local economies in the regions where the major projects are located have been booming. And markets have rewarded both chemicals and oil exploration companies, whose return on capital should be boosted in different ways by the shale booms. Since it takes time to invest, the process of moving production facilities to the US in some of these areas is likely to continue, particularly if companies believe that gas costs will remain low.

But while these microeconomic effects are already visible, some care is needed in teasing out the macroeconomic impacts. It can be misleading to think of the impact of expansion in one area of the economy—oil and gas production—while assuming that everything else in the economy remains unchanged, since the economy as a whole has to respect 'adding up constraints' (what economists call general equilibrium effects). The so-called 'Dutch disease'—where a resource discovery appreciates the exchange rate and crowds out the manufacturing sector—is one example of these kinds of side-effects, named as it happens from the impact of a large natural gas discovery in the Netherlands in the 1960s and 1970s.

Estimating the impact on US current account and currency

Since our focus here is on the global macro impacts of the shale revolutions, the US current account and the currency are our key variables of interest. By thinking about the shale revolutions as increases to productivity in the US energy and manufacturing sectors, we can trace out their possible impact here too.

Before doing that, we need to benchmark the likely changes. Between now and 2017 our forecasts are for a 1% of GDP increase in oil production, which we characterise as an increase in energy sector productivity of roughly the same amount.[4] For shale gas, the main benefit has been felt by industrial gas users, who face significantly lower gas prices than their overseas counterparts (Exhibit 7). Compared with pre-2008 prices, the savings for industrial gas users are (on a generous basis) roughly $20-30bn or 0.2% of US GDP (the

[4] This is a simplification that is likely to be an overstatement. Increased production in oil involves real resource commitments and so not all of it is strictly a productivity increase. In practice, however, large natural resource discoveries involve increases in output that are large relative to the increase in inputs used.

other regions). We assume that these entire cost savings in the US industrial sector can be thought of as equivalent increase in productivity, of roughly 0.2% of GDP.[5] This means that the combined increase in the supply of 'tradable goods' from the two sources would be around 1.2% of GDP.

All else equal, this increase in supply would be expected to improve the trade balance by an equivalent amount of 1.2% of GDP. The lion's share of this would come directly from improving net energy exports, similar to the forecast increase of $136bn for net imports from our Energy team over this period (Exhibit 8), with a smaller increase coming from improved competitiveness of US manufacturers. But in practice all else will not be equal. First, increased production of oil and gas (or in the language used here, the productivity gains it represents) makes the US wealthier. Some of that extra wealth is likely to be spent and some of that spending will fall on imports. How the increase in import demand compares to the increase in export supply should depend on how long the increase in energy production is expected to last and its pattern over time.[6] Second, some of the increased demand from the increased income will push up wages and the prices of goods and services in the non-traded sector. This will tend to appreciate the exchange rate and erode profitability. These are the effects that the 'Dutch disease' literature worried about.

These shifts mean that while the trade balance in oil itself is likely to improve, the effects elsewhere are likely to offset some of those gains. Even with these considerations, the net result should work to improve the US trade balance. This has been the story so far and it fits with what we have seen in other countries. But the impact is also likely to be smaller—and perhaps much smaller—than the 1.2% of GDP that a naïve approach predicts.

A simple framework for gauging the FX effects of shale

Obstfeld and Rogoff's paper ('Perspectives on OECD Economic Integration', Kansas City Fed Conference Proceedings, 2000) used a simple model including a traded and non-traded sector. They used it to analyse the likely impact on the USD of an abrupt shock that closed the US current account deficit. The same structure can be used to provide rough estimates of the impact of the shale revolution on the USD, although we would caution that it makes a large number of simplifying assumptions.

Assume that US tradables production is 25% of GDP, while 75% of GDP is in non-tradables production. A productivity increase of 1.25% of GDP concentrated in the tradable portion of the US economy increases tradable capacity by 5%. The impact on the exchange rate would be largest if the entire gain in supply was spent not saved. In that case, assuming that the elasticitity of substitution between tradables and non-tradables is 1, relative prices for non-tradables would need to rise by 5% to prevent excess demand in that sector.

Given a 5% increase in the relative price of non-tradables, the effect on the nominal exchange rate would depend on monetary policy. To keep the CPI stable (given 75% of output in non-traded goods) would require a 1.25% rise in non-tradable prices and a 3.75% fall in traded goods prices.

With full pass-through from the exchange rate to traded prices, this would require a 3.75% increase in the exchange rate. With 50% pass-through (closer to the short-term estimates), the implied shift would be 7.5%. These impacts take into account only the changes in the US. Equivalent (but opposing) shifts would be needed in the relative price of tradables in the rest of the world. Assuming that the US is 25% of global output, these would increase the estimates to a 5% increase in the exchange rate with full pass-through and 10% with 50% pass-through. If less of the productivity gain was spent, as is likely, the estimates would be smaller.

[5] This too is a simplification. Proxying the gas savings as a productivity increase of similar size to the cost savings assumes that there is some substitution possible between gas and other inputs. The assumptions we make here hold with Cobb-Douglas production functions. As we discuss below, it also assumes that there are no significant 'external' benefits beyond the direct cost savings.

[6] A simplified view is that the US can now increase its spending immediately by the present discounted value of its additional energy production. The more temporary the increase in production is likely to be, the more likely it translates into an improvement in the trade balance. If the future expansion was expected to be very large, it is actually possible that the trade balance could deteriorate initially, though the current US path does not fit that pattern.

The same forces will tend to put upward pressure on the Dollar. We can use the same thought experiment of an increase in productivity to estimate a plausible range of magnitudes here too. In 2000, two academics—Maurice Obstfeld and Ken Rogoff—used a simple framework to describe the impacts that closing the US current account deficit could have on the US Dollar. That framework can be used to look at the impact of the shale discoveries. As the Box describes, this framework predicts that a 1.2% of GDP increase in the productive capacity of the traded goods sector could lead to a 5%-10% increase in the US Dollar, *relative* to the path it might otherwise have followed. Those estimates come even with strong assumptions about how much of the extra income is spent.

Why the impacts could be more or less

These calculations could overstate or understate the likely impacts.

First, these estimates rely on the notion that the US is in 'equilibrium'—with an appropriate current account and roughly full employment. In practice, neither is true. Some of the improvement in the US trade balance, probably including the net oil trade balance improvement, reflects unusually weak US demand. Our estimates suggest that the US current account deficit in cyclically-adjusted terms is around 4% of GDP, not the 3% of GDP that we have seen in 2012. Knowing what that number 'should' be on a sustained basis is hard, but our working assumption is that it is at least 1 percentage point smaller than this. There is also a large amount of spare capacity in the US economy. This combination suggests that the US continues to need a weaker currency and a narrower underlying current account position from here. Measured against that benchmark, the *observed* impact on the US Dollar could be lower and the impact on the current account deficit higher than the estimates above suggest.[7] Put another way, the shale story may mitigate the need for the degree of further US Dollar weakening that would otherwise be needed to improve the current account, without necessarily creating the basis for a significantly stronger dollar.

Second, the assumption that productivity increases is US manufacturing are limited to the imputed gas cost savings may prove too conservative. Many of the stories of resurgent US manufacturing implicitly assume that the gains to manufacturing will be many multiples of these estimated cost savings. It is possible that a tipping point is reached that makes it viable to shift the location from other parts of the world. Work on 'economic geography' suggests that these shifts can lead to ongoing increases in production and productivity. There is plenty of anecdotal evidence of these shifts at a micro level. And in combination with the weaker Dollar, lower real estate costs and the rising cost of labour in other places, those stories have some plausibility. But those effects are hard to pin down. And if indeed it was possible to make much larger productivity gains than the reduction in costs, this would have created a powerful case for direct intervention to reduce them before the recent discovery. So, we think it is sensible to be conservative on this front.

Third, if other economies can exploit their own shale and gas reserves, this too would alter the picture, reducing the currency and current account implications that we have described. Technological and political constraints mean that we do not expect that to happen quickly. But, ultimately, a wide range of countries—mostly in the emerging world (China, Russia, Poland, parts of Africa)—do have shale deposits to extract energy in this way.

[7] This also means that the improvement in the US trade balance in the last two years, including some of the observed improvement in the net oil trade balance, likely overstates the sustainable improvement.

Squaring the US and global story

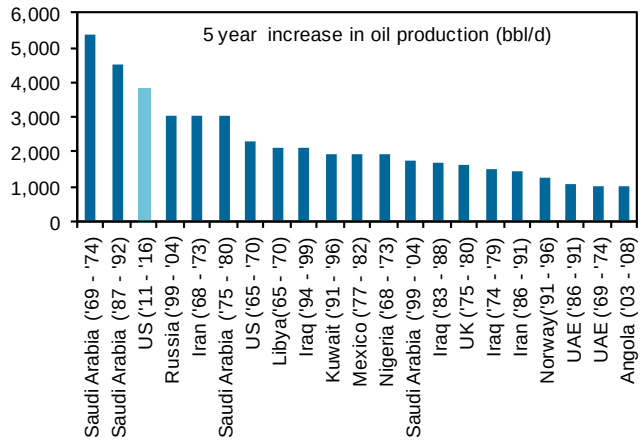
An upper bound estimate of less than a 1.2% of GDP improvement in the current account and a 5%-10% real appreciation in the US Dollar from shale relative to what might otherwise occur are significant. But they may seem small relative to the importance of the impact on global energy markets or to the transformations that we have seen in other economies with big oil discoveries in the past. Squaring the two reveals an obvious but important point: the sheer scale of the US economy. In absolute terms, increases in shale gas production in the US over the last five years are among the largest of any production gains in any country in the last 30 years (only Russia's increases in the late 1980s are larger). Exhibit 9 shows that the US shale oil production increase of 3.6mn bbl/d that we project between 2011 and 2016 (the peak 5-year gain on our estimates) are also bigger than almost all other past country production increases. But scaled relative to a $15trn US economy (as in Exhibit 10), the impacts look a lot smaller. The US oil increase in the next five years is worth around 1% of today's US GDP at current oil prices, well below comparable figures for oil discoveries in smaller economies. And the rise in energy-related capex that we predict—a hefty $30bn—is still only 3% of US equipment investment. These are still large impacts from a single development. But they may not be enough to support the most dramatic predictions of the impact on the US economy as a whole.

It is important to highlight the uncertainties in all of these exercises. Not only are production trends themselves unclear (and our own estimates could conceivably prove too conservative). The energy policy environment could also shift, either in ways that make it more difficult to exploit shale deposits or that change the export constraints on US gas. And the impact on industry location of joint shifts in energy prices and other cost shifts on global industry location is hard to predict. So it is hard to be definitive at this early stage. What is certain, however, is that the shifting energy landscape is highly likely to change the global economy in important ways, as it has already begun to do. For macro investors, thinking more deeply about these impacts is likely to be worthwhile.

Dominic Wilson

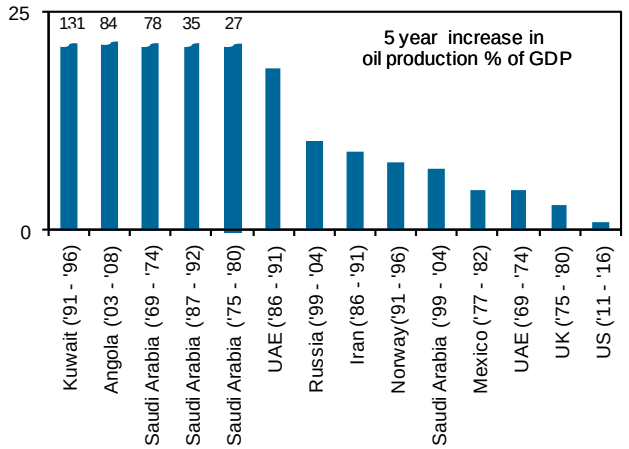
Special thanks to our Oil and Gas Equity and Global Commodities teams, on whose research this piece is based.

Exhibit 9: US production increases in oil are historically large in absolute terms….



Source: GS Global ECS Research.

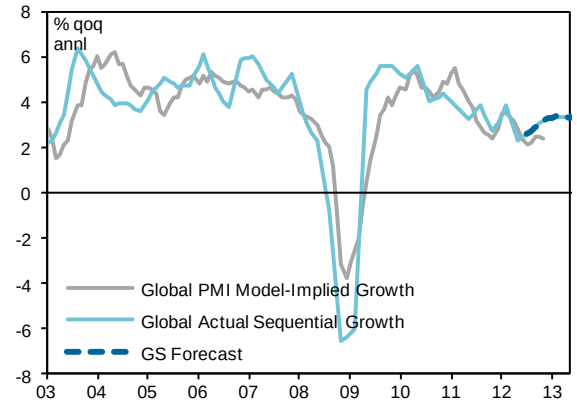
Exhibit 10: …but historically small compared with US GDP



Source: GS Global ECS Research.

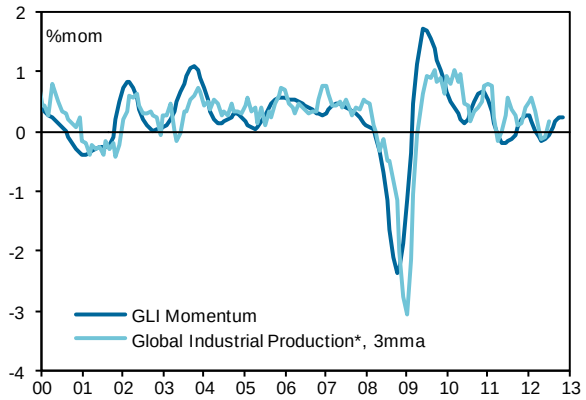
Global macro and markets charts

PMI-implied global growth



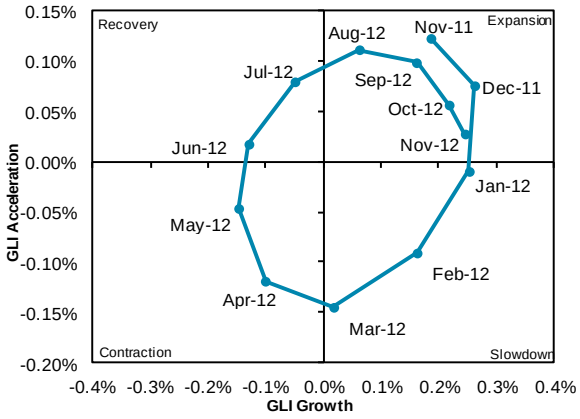
See *Global Economics Weekly 12/18* for methodology
Source: OECD, Goldman Sachs Global ECS Research.

GLI momentum vs. global industrial production*



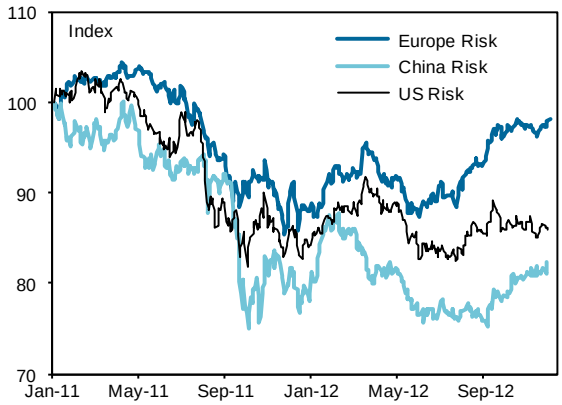
* Includes OECD countries plus BRICs, Indonesia and South Africa
See *Global Economics Paper 199* for methodology
Source: OECD, Goldman Sachs Global ECS Research.

GLI swirlogram



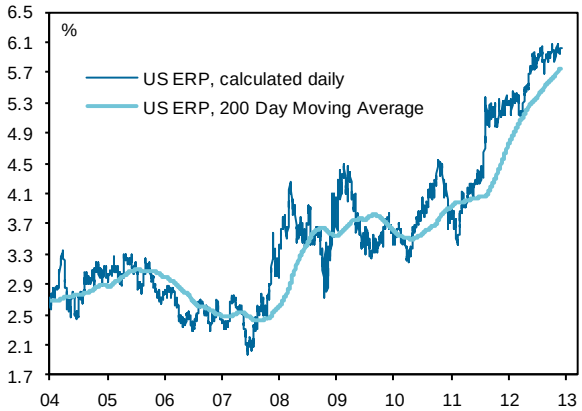
See *Global Economics Paper 214* for methodology
Source: OECD, Goldman Sachs Global ECS Research.

China, Europe and US risk factors



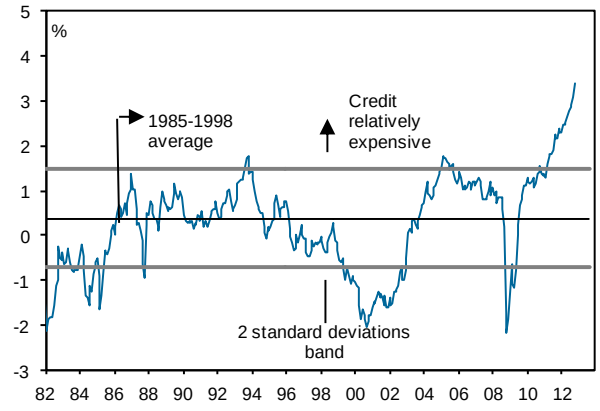
See *Global Economics Weekly 12/15* for methodology
Source: Goldman Sachs Global ECS Research.

US equity risk premium



See *Global Economics Weekly 02/35* for methodology
Source: Goldman Sachs Global ECS Research.

US equity credit premium



See *Global Economics Weekly 03/25* for methodology
Source: Goldman Sachs Global ECS Research.

The world in a nutshell

THE GLOBAL ECONOMY		
	OUTLOOK	**KEY ISSUES**
UNITED STATES	We expect below-trend annual growth of 1.9% in 2013, and an acceleration to 2.9% in 2014. Growth should then remain slightly above that rate in 2015 and 2016. On an annualised sequential basis, we expect a growth slowdown to 1.5% in 2013Q1 and 2% in 2013Q2, before a pick-up to 2.5% in the second half of the year. Looking into 2014 and beyond, we expect above-trend growth at around 3% on average.	Our forecast for near-term weakness but long-term strength is based on competing impulses from the private and the public sector. While we expect the 'fiscal cliff' to be averted, we nevertheless forecast a step-up in the pace of fiscal retrenchment to outweigh the ongoing healing in the private sector. In the intermediate and long term, we see further strength in the private sector, led by the ongoing housing recovery, rising business investment and financial rebalancing in the household sector.
JAPAN	We expect slow real GDP growth of 0.3% in 2013, an intermediate pick-up to 1.1% in 2014, and a return to below trend growth in 2015. On a sequential basis, our forecasts show quite wide swings. We expect continued contraction in the first half of the year, followed by strong recovery in the following three quarters ahead of the introduction of the first consumption tax hike in April 2014.	While we expect some significant swings in the growth rate in the quarters ahead, Japan is poised to reach above-trend growth rates in step with an improvement in the global economy towards the end of our forecast horizon in 2016. In the near term, major political changes are at the forefront, which will also have an influence on the direction of future BoJ policy.
EUROPE	For the Euro area as a whole, we expect continued contraction by -0.2% in 2013, before returning to positive growth at 0.9. Our baseline is still that the Euro area will 'muddle through' but remain intact. Cross-country divergence remains a key theme in this baseline scenario, however, with economic weakness especially pronounced in Spain and Italy. Meanwhile, we see growth decelerating only marginally in Germany in 2013, and forecast some overheating in the subsequent years.	The 'long grind' we forecast for 2013 is the result of the damaging but necessary combination of continued public sector austerity and private-sector deleveraging. Still, with financial conditions having eased quite substantially through enacted and prospective ECB policy, a sharper contraction has been avoided. ECB policy will aim to reduce the segmentation of financial markets further with targeted measures such as the Outright Monetary Transaction (OMT) programme.
NON-JAPAN ASIA	For Asia ex-Japan, we expect growth of 6.9% and 7.3% in 2013 and 2014, respectively. We expect 2013 to be a transition year for the region, with external risks in the US and Europe to be navigated in the first half of the year. Subsequently, after the slowdown in 2012, we see the regional economies with 'room to grow' at around trend in the coming years.	In China, we expect 8.1% and 8.4% growth in 2013 and 2014 respectively. With growth at around trend, we see China entering a phase of gradual internal rebalancing, with consumption growing slightly faster than overall GDP. This will likely put slight upward pressure on inflation in China, as it benefits less from currency appreciation and falling oil prices than the region at large.
LATIN AMERICA	We forecast that real GDP growth in Latin America will experience an uptick to 3.9% in 2013, and to then move slightly higher to 4.1% in 2014. Against a more favourable global backdrop, the divergence between those economies with more challenging (Argentina, Venezuela) and more stable (Brazil, Chile, Mexico) policy outlooks is likely to increase.	In Brazil, we expect real GDP growth of 3.8% and 4.3% in 2013 and 2014, respectively. Despite two consecutive years of sub-par growth, inflation has been notoriously sticky above the inflation target of 4.5%. With the expected uptick in growth, the central bank will have to find other means to anchor inflation dynamics in the near term, having just ended a prolonged easing cycle.
CENTRAL & EASTERN EUROPE, MIDDLE EAST AND AFRICA	With growth across the region at 3.1% in 2013 and 4.1% in 2014, we expect CEEMEA to recover visibly. Helped by improvements in external demand conditions, easy financial conditions and large output gaps provide fertile grounds for recovery from the 2012 soft patch. Inflation trends look to remain relatively benign, allowing for central banks to push out rate hikes to 2014.	The EM differentiation theme is again visible across the region. While we forecast strong and steady growth in Israel and Russia, we see a similar recovery in Turkey as less sustainable. South Africa and Ukraine will likely be dragged down by idiosyncratic political and economic risks.

CENTRAL BANK WATCH			
	CURRENT SITUATION	**NEXT MEETING**	**EXPECTATION**
UNITED STATES: FOMC	The Fed funds rate is at 0%-0.25%. The Fed initiated a new round of MBS asset purchases and extended its rate guidance on September 13, 2012.	Dec. 12 Jan. 26	We expect the Fed to keep the funds rate near 0% through mid-2016, and to continue asset purchases through mid-2015.
JAPAN: BoJ Monetary Policy Board	The overnight call rate is at 0%-0.1%. The BoJ expanded the asset purchase programme to a total size of JPY91trn on October 30, 2012.	Dec.20 Jan. 22	We expect the BoJ to keep the policy rate near 0% through 2016, and to continue with APP until core inflation reaches 1%.
EURO AREA: ECB Governing Council	The refi/deposit rates are at 0.75%/0.00%.The ECB announced the OMT programme for conditional purchases of Euro-area sovereign bonds in September 2012.	Dec. 6 Jan 10	We expect the ECB to keep policy rates on hold at least through mid-2015. Future policy depends on the OMT programme's success in repairing the monetary policy transmission mechanism.
UK: BoE Monetary Policy Committee	The BoE policy rate is currently at 0.5%. An extra £50bn of asset purchases was announced in July 2012, bringing the current total to £375bn.	Dec. 6 Jan. 10	We expect the BoE to keep the policy rate unchanged at least through mid-2015.

Disclosure Appendix

Reg AC

We, Kamakshya Trivedi, Jose Ursua, George Cole, Julian Richers and Dominic Wilson, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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