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Economic Research Note

US: Low energy prices still make America great, again

- **Declining oil prices were traditionally thought to be a good thing for the US economy**
- **But early this year, some doubted whether that was still the case**
- **With the benefit of hindsight, the evidence is strong that lower oil prices are still a net positive for the US**
- **The most recent move down in energy prices should provide some modest lift to 2H15 economic activity**

Conventional wisdom had long held that a decline in oil prices was a good thing for the US economy. That wisdom had to be modified somewhat with the rise of fracking, but the same qualitative conclusion was thought to hold: lower oil prices were a net positive for US growth. That conclusion was questioned earlier this year, when consumers were disappointing and the cutbacks in energy capex were fierce. Now, with the benefit of more complete data in hand it appears the collapse in oil prices was indeed a net positive for US economic performance, though the magnitude is somewhat attenuated relative to a pre-2010 economy when domestic oil production was lower.

The decline in investment spending by the oil industry was severe early in the year, but consumer spending does seem to have responded to the purchasing power lift provided by the decline in gas prices. In fact, the boost to consumer spending thus far looks to be about twice as large as the drag on capital spending. Overall the decline in oil prices from mid-summer last year to the early part of this year may have added about $55 billion to the level of GDP in 2Q15. The more recent decline in energy prices since mid-summer this year should similarly support GDP growth—albeit with a smaller boost given the smaller decline in prices—over coming months.

Adding and subtracting

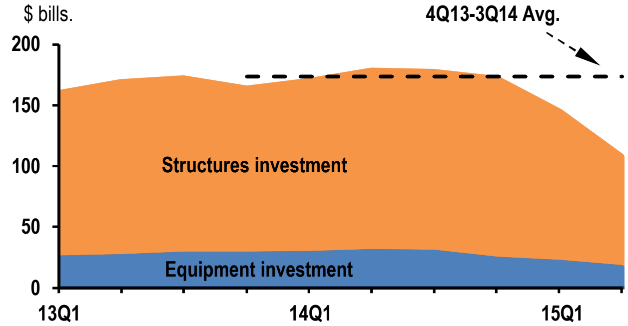
Movements in oil prices can affect a number of economic variables, such as retail spending, the output of the energy industry, employment in that industry, and so forth. As we discussed in a prior note, without a coherent framework there is a risk of double-counting the effect of oil prices on the economy. A more disciplined approach is to look at one measurement concept and work through the impact of a decline in energy prices. We chose the aggregate expenditure concept.

In that framework there are primarily two effects to track: the positive boost to consumer spending, and the negative drag from reduced capital spending in the oil industry. (In the longer-run as production levels adjust there will also be impact on other categories such as imports, however our concern in this note is on the short- and intermediate-run growth outcomes).

Capital weakening

Of these two effects, it is easier to measure the hit to capital spending. Investment spending by the oil and gas industry is relatively well-identified in the GDP accounts, and there is likely to be no other major influence on this category of spending that would conflate the oil price effects with some other cause of weakness. Figure 1 shows that investment in mining and oilfield machinery and in mining exploration, shafts, and wells totaled $163 billion (saar) in 4Q14, but had fallen to $101 billion by 2Q15.

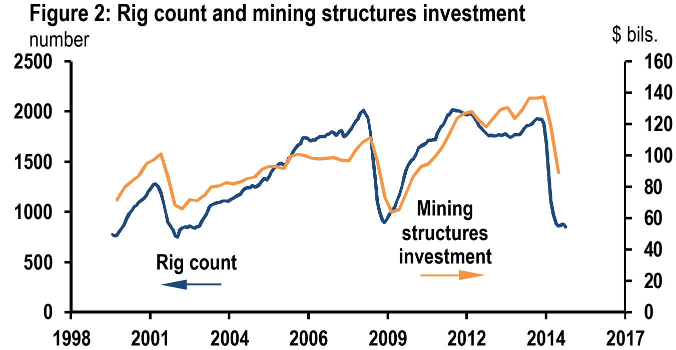
Figure 1: Mining capital expenditures in the national accounts



Source: BEA, J.P. Morgan

If we attribute this decline to the fall in energy prices, which seems like a reasonable assumption, then the level of nominal GDP in 2Q15 was $62 billion lower due to the drag from lower energy capex, or about 0.3% of GDP.

Figure 2: Rig count and mining structures investment



Source: Baker-Hughes, BEA, J.P. Morgan

The weekly Baker-Hughes rig count is an important input into the calculation of capital spending in the GDP accounts, and it

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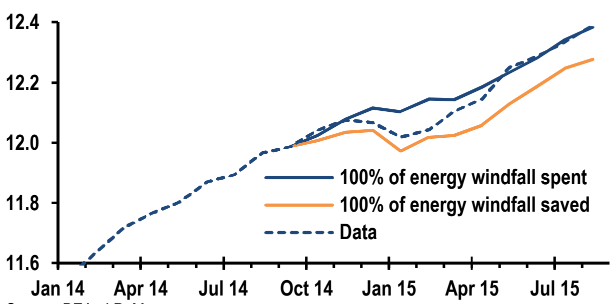
has now leveled out around its level at the end of 2Q. But the 3Q average is still somewhat below the 2Q average, pointing toward some further decline ahead.

Consumer encouragement

Calculating the boost to consumer spending induced by low energy prices involves forming an estimate of what consumers would have spent with energy prices unchanged. In prior work, we developed a simple framework for estimating this boost. Essentially, we compare actual spending to a baseline where non-energy expenditures remain at their 3Q14 share of disposable income while the energy expenditure share changes proportionally to energy prices. We consider the extent to which actual spending exceeded this baseline to be the boost to spending induced by lower energy prices.

Figure 3: Nominal consumption spending under alternative scenarios



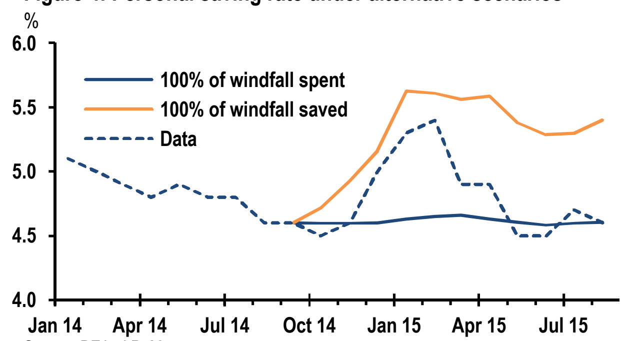
Source: BEA, J.P. Morgan

Figure 3 shows the spending data against this baseline, which is labeled the "100% of energy windfall saved" scenario. As we've noted before, consumer spending was quite strong in October and November of last year, before disappointing in the first quarter of 2015. With PCE revisions through August now in hand, the data now show a strong run of consumption since April of this year. Our simple framework would interpret the data as showing that consumers have spent nearly 100% of the extra disposable income created by low energy prices in each month since April. And cumulatively, we would now say consumers have spent 73% of the windfall from low energy prices since last October.

Another way of looking at this exercise is through the prism of the saving rate. Had consumers saved their entire gas price bonus, one would have expected the saving rate to have risen. While it did rise in 1Q—the same period when consumers' propensity to spend that bonus was called into question—it quickly reversed that rise, which now looks more like a temporary blip, perhaps due to the weather. This makes an implicit assumption that there were no other factors shifting the desired saving rate. The most important such factor, changes in household wealth, should not have induced a large change in desired saving over the past year, according to models estimated in the post-recession period.

In dollar terms, the framework suggests that low energy prices have induced about an extra $46 billion cumulative spending through the end of 2Q. In the more familiar annualized terms, this means that consumer spending in 2Q was running about $106 billion stronger than it would have without the lift from lower energy prices, or about 0.6%-pt of the level of GDP.

Figure 4: Personal saving rate under alternative scenarios



Source: BEA, J.P. Morgan

GDP benefits

Comparing the $62 billion drag on capital expenditures to the $106 billion boost to consumer spending (both measured through 2Q) indicates an overall $54 billion boost to GDP. Of course, one can always find reasons to quibble with estimates like these. For example, we might be missing some components of mining-related investment that are counted in other categories, like construction. But, on the other hand, we could also be undercounting any extra household spending out of the energy price windfall, for example on housing or business investment. We also have yet to see how much additional decline in mining expenditures will appear in the 3Q GDP data as well as how long consumer spending remains brisk.

The decline in energy prices that began in the middle of last year and extended through January of this year appears to have given a net boost to 2Q15 GDP of 0.3%-pt, with stronger consumption adding 0.6%-pt and weaker capital spending subtracting 0.3%-pt. These estimates are broadly in line with a report we published in mid-January (linked here). The realized boost to consumption was somewhat less than we expected at that time, likely because crude prices rose over 30% between mid-January and the 2Q average. With energy prices having retreated since then and headline inflation very soft in 3Q, consumer spending is likely now experiencing the benefit of this recent move lower in energy prices.

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