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SPECIAL REPORT

April 24, 2020

Oil Death Spiral: Three Takeaways

- Plunging oil prices will bring supply and demand into balance in the second half of this year. The profitable "contango storage game" is at a late stage. That brings forward an oil price bottom as the economic restart draws nearer.

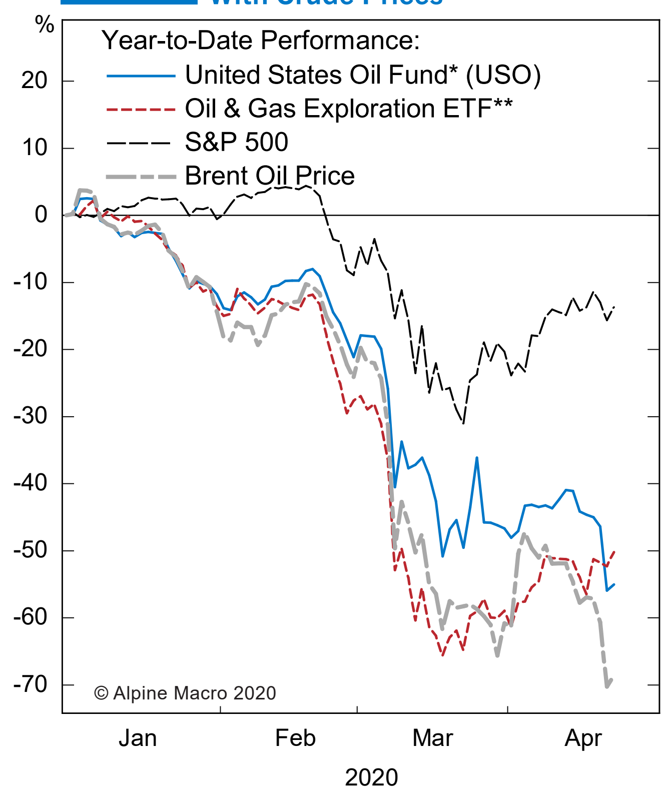
- It makes sense that energy equities have positively diverged from crude prices since the death spiral began. They should outperform on an 18-24 month horizon, although the culling of "weak hands" will be ugly and disruptive without large-scale government intervention.

- Headline, and perhaps even core, inflation will drop. Timing the bottom in Treasury yields will be difficult.

Monday's *U.S. Themes and Strategy* report[1] argued that the OPEC+ supply agreement was a necessary, but not sufficient, condition for a sustainable oil price bottom. The agreed production cuts were unprecedented, but much smaller than the oil demand destruction resulting from the pandemic. For example, 40% of oil demand comes from transportation. A sustainable bottom also requires an imminent trough in demand, which in turn depends on the success of risky economic restarts in various regions of the developed world. In addition, there needs to be an end to the "contango storage game", in which producers profitably take oil out of the ground and put it in storage, locking in a profit through higher prices further out the oil futures curve.

1 Alpine Macro *U.S. Themes & Strategy* "V-Shape Revisited" (April 20, 2020).

Chart 1 Oil Equities: Positive Divergence With Crude Prices



*USO tracks changes in WTI oil price; as of April 21, USO shifted its portfolio from front-month WTI oil futures to later-dated contracts and other kinds of energy derivatives.
**iShares U.S. Oil & Gas Exploration ETF

There is uncertainty around both these conditions, but oil prices are most likely to bottom in the second half of this year, albeit with bumps along the way. This *Special Report* follows up with three takeaways arising from Monday's analysis. First, oil company survivors are attractive investments. The extent to which high-cost and/or leveraged "weak hands" go bankrupt will depend on how much the Trump Administration comes to the rescue. Second, the oil price death spiral will force short-term balance in the face of inelastic demand. If anything, the death spiral will boost crude oil prices beyond this year. Finally, oil-induced deflation will moderate the inevitable rebound in Treasury yields as policymakers around the world attempt to restart their economies.

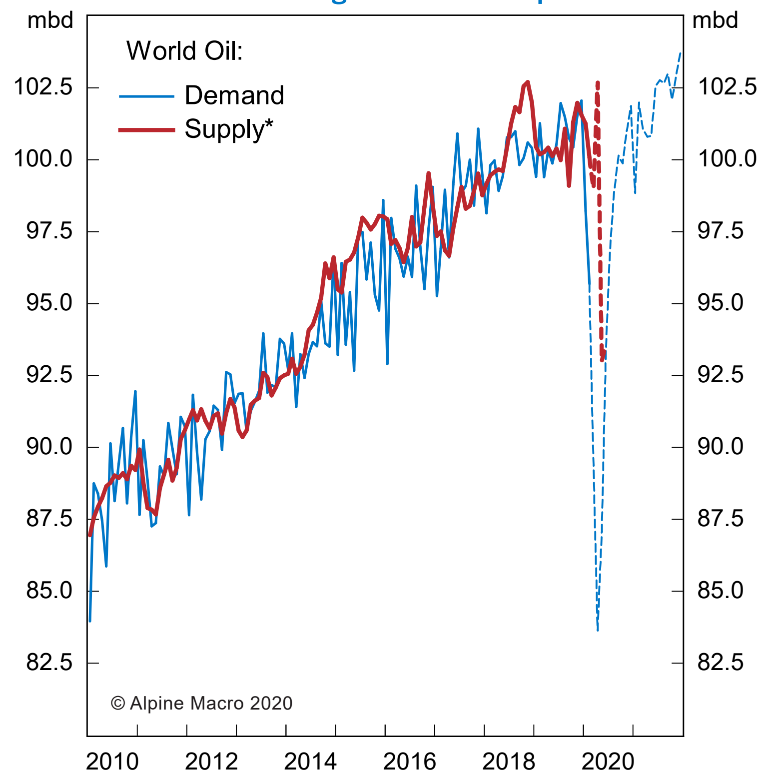
Takeaway #1: Survivors Win

Chart 1 shows that U.S. large cap energy stocks have followed a completely different path than spot crude oil prices since the death spiral began. In fact, they have outperformed the S&P 500 since March 18th. This reflects two opposing "forces of gravity" impacting the energy space. Oil prices must stay low over the short term. Agreed supply cuts of 9.7 mb/d are unprecedented. But they are much smaller than the 25-30 mb/d demand destruction resulting from the pandemic (**Chart 2**). Plunging gasoline and jet fuel prices do not make much difference while no one is driving or flying (**Chart 3**).

Regardless of when the world returns to normal, however, oil prices of at least $50/barrel will be necessary to satisfy demand over the long term. Global oil production outside OPEC, Russia and the U.S. has been flat between 27 and 28 mb/d for the past two decades and, if anything, will head lower in the coming years. At the same time, oil demand will become more elastic as time passes, not least because lower fuel prices will undermine the demand (and the cost of capital) for alternative energy.

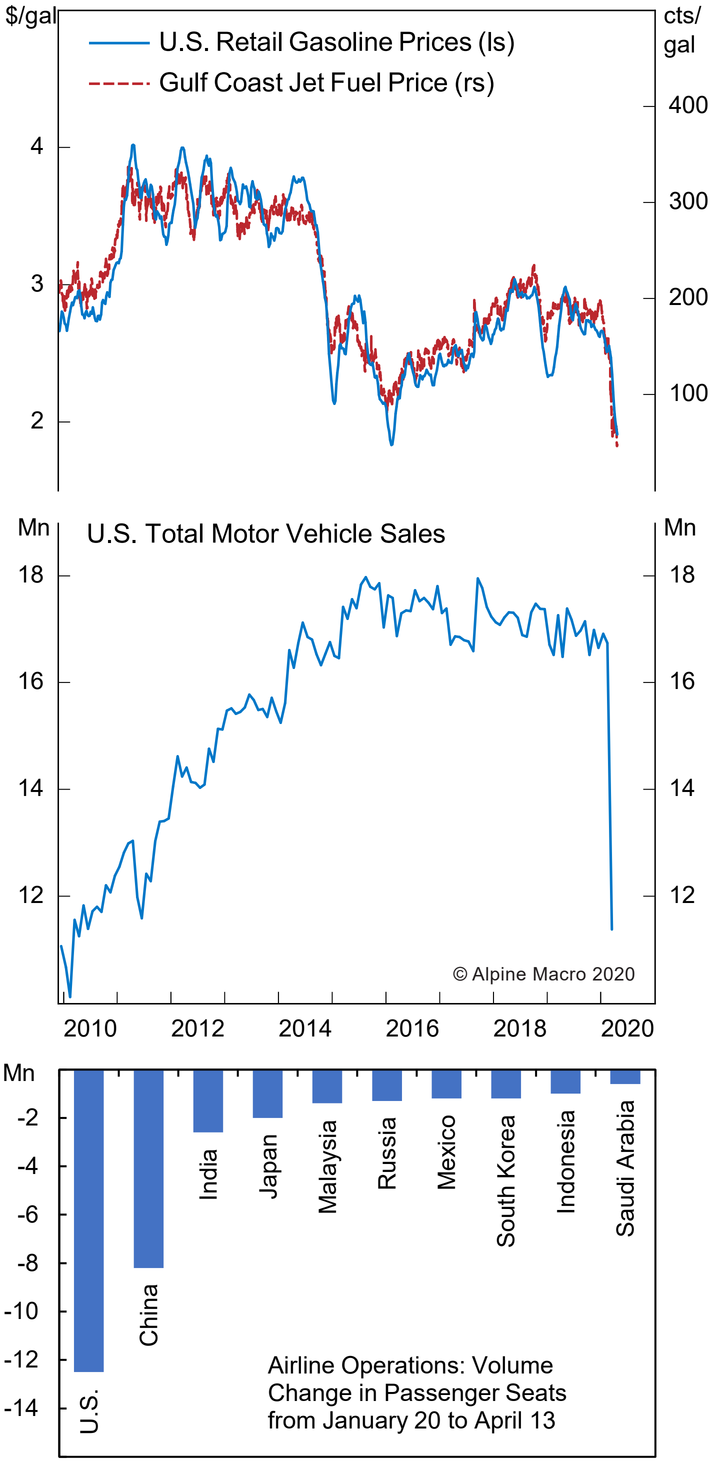
Meanwhile, energy stocks are cheap, at least the ones that do not go bankrupt. Our compositive valuation indicator is at a historical low for the S&P energy sector (**Chart 4**). These ratios employ the normalized, full-cycle measures that are

Chart 2 Unprecedented Supply Cuts Still Lag Demand Collapse



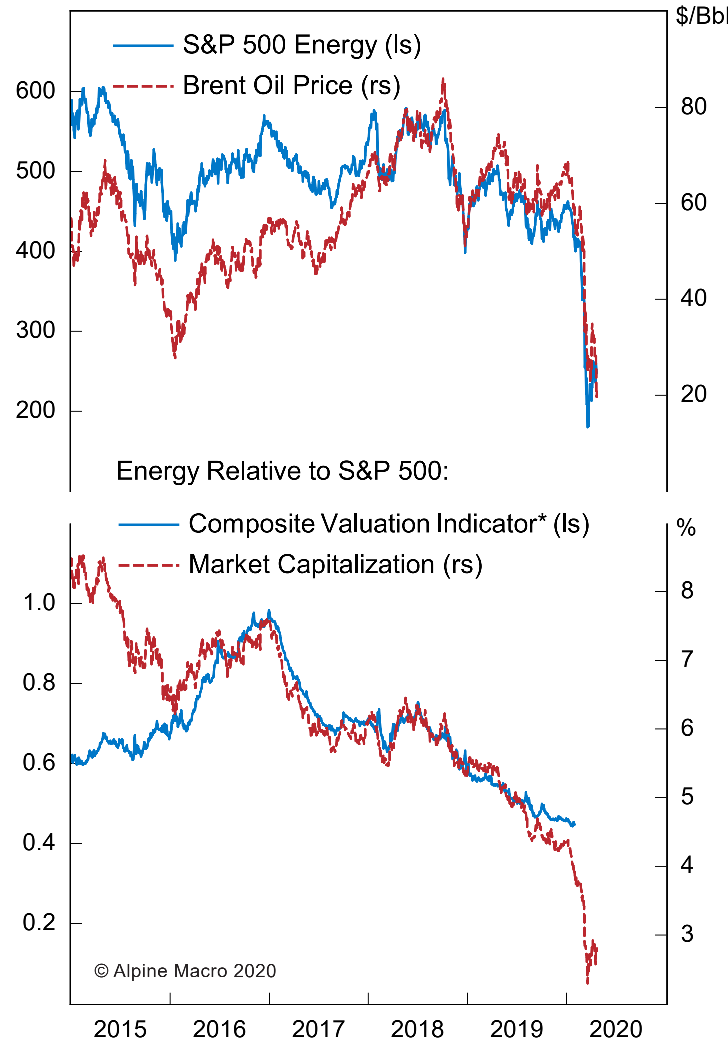
*Estimates and forecast based on latest OPEC+ agreement
Source: EIA Short Term Outlook

Chart 3 Pandemic Causes Both Lower Demand And Lower Fuel Prices



Source: Wallstreet Journal/OAG, Bloomberg

Chart 4 Energy Stocks Trading At Cheap Valuation

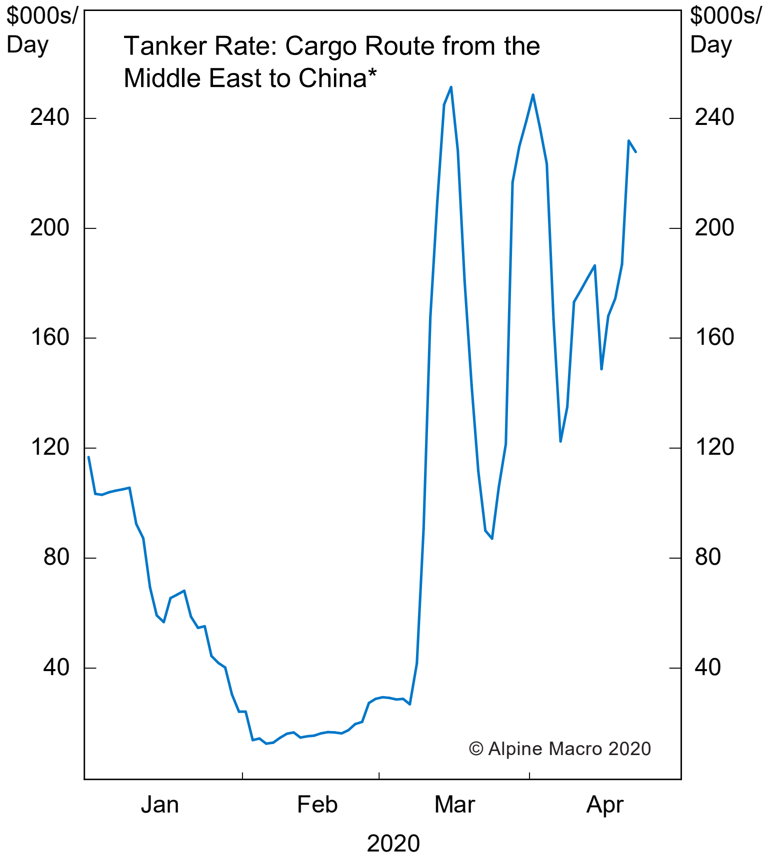


*Equally-weighted average of relative price-to-book, price-to-sales and price-to-cashflow ratios; source: Bloomberg

appropriate if, as we expect, the current level of oil prices is much too low to be sustained.

Bottom line: Oil companies that survive the current meltdown are cheaply priced and should outperform on an 18-24 month horizon. Government support will determine the extent of bankruptcies in the shale patch necessary to restore supply/demand balance, as discussed in the next section.

Chart 5 Surging Cost Of Floating Storage

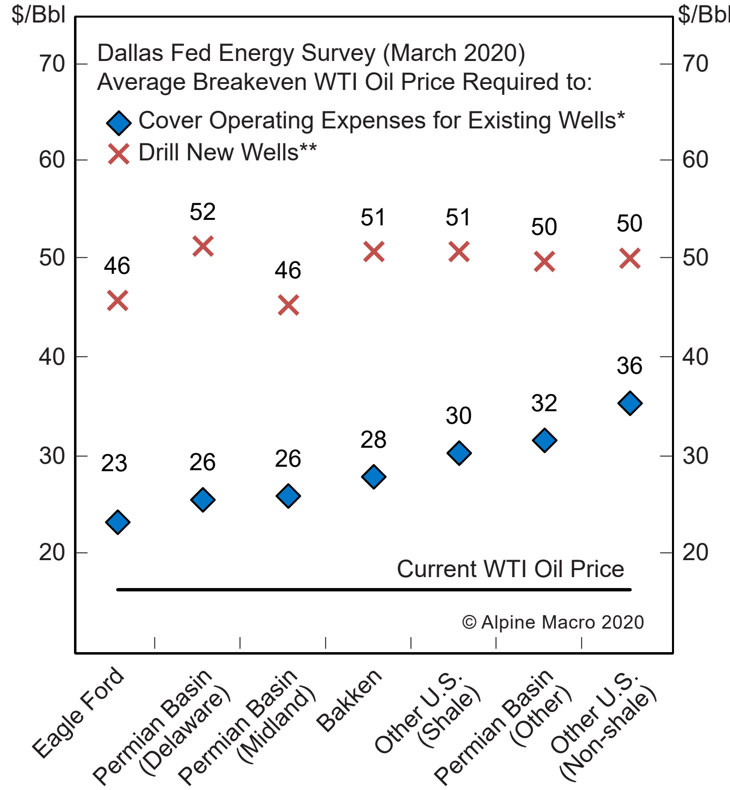


*Dirty VLCC Arab Gulf to China; source: Bloomberg

Takeaway #2: Oil Markets Will Soon Balance

Demand will not rebound much in response to low, or even negative, oil prices. Rather, the causation is in the opposite direction. Oil prices reflect the short-term inelasticity of oil demand, with many modes of transportation paralyzed by lockdowns and social distancing. Once inventories are full and the cost of storage surges, supply will drop sharply. The degree to which this process disrupts the energy sector will depend critically on the extent of government intervention. In any case, these shifts virtually guarantee a crude oil price bottom in 2020H2.

Chart 6 Permian Is Critical For U.S. Oil Production

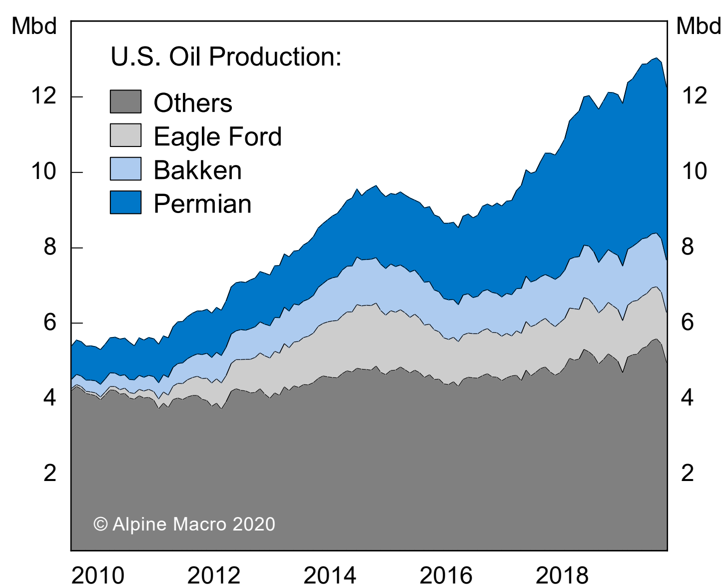


*Range across regions vary from $26 to $57; for example the Permian (Midland) range is $42

**Range across regions vary from $15 to $55; for example the Permian (Midland) range is $30

Note: The range is the difference between the maximum and minimum price surveyed for each region.

Source: Federal Reserve Bank of Dallas



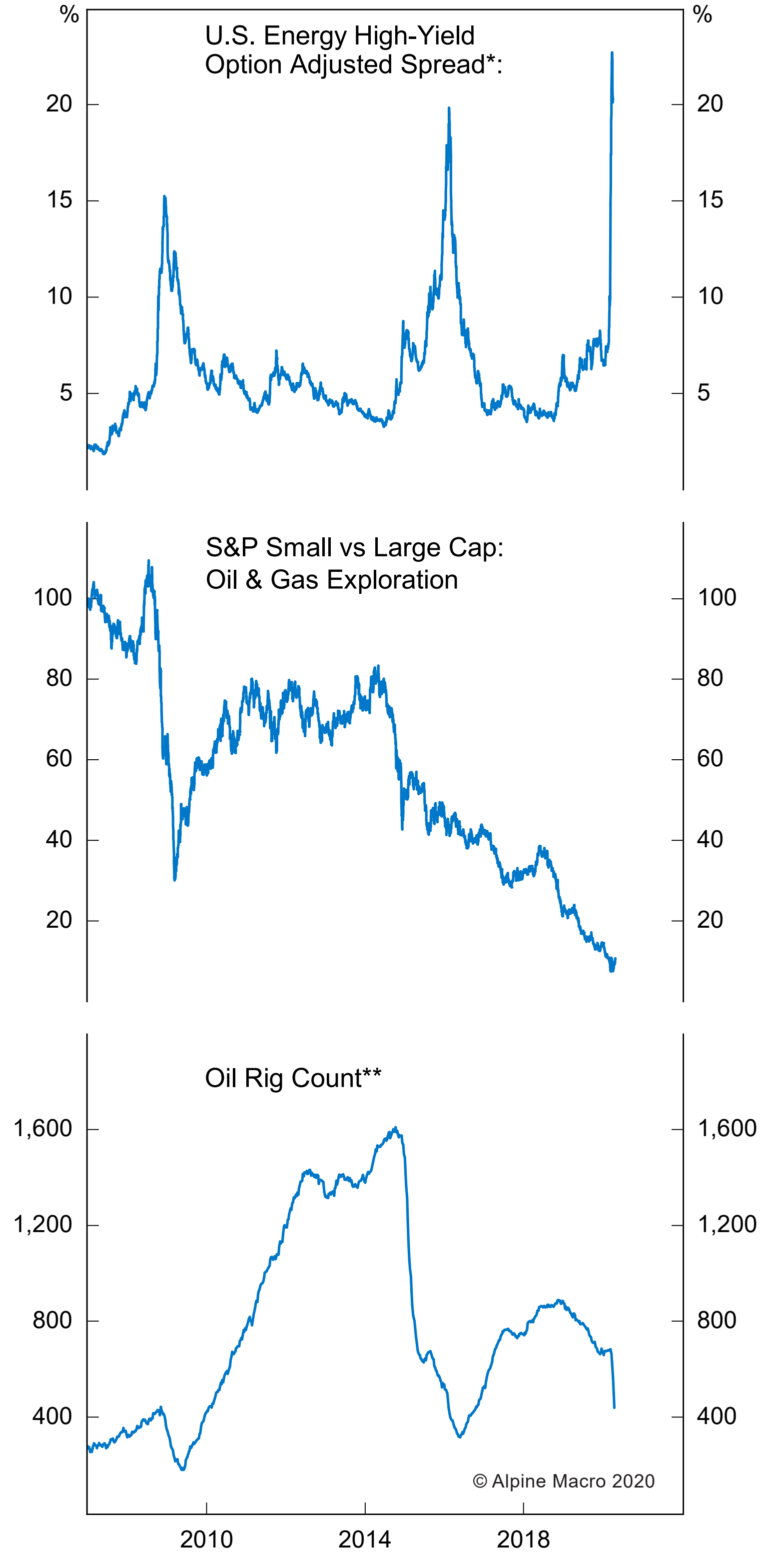
Source: EIA

The profitable "contango storage game" is at a late stage. This game involves producing oil, then storing it at locked-in, higher futures prices to guarantee returns in excess of the cost of storage. For example, the 6-month WTI futures price is currently 10 dollars above the spot price. Nevertheless, storage facilities will soon fill up and the cost of storage will surge as producers bid for it, including tanker rates for "floating storage" (**Chart 5**). World oil storage is estimated to be at 82% capacity and rising rapidly, with the U.S. not much different.

Once the cost of storage goes vertical, the economics of maintaining existing wells, drilling new wells and investing in longer-term projects will make no sense. Supply will plunge, with or without a producers agreement. The Dallas Fed survey puts the midpoint for breakeven prices at $23-$32 and $46-$52 per barrel to incentivize existing production and new well drilling, respectively, in the Permian Basin (**Chart 6**). These fields have accounted for all of the increase in net U.S. oil production over the past five years.

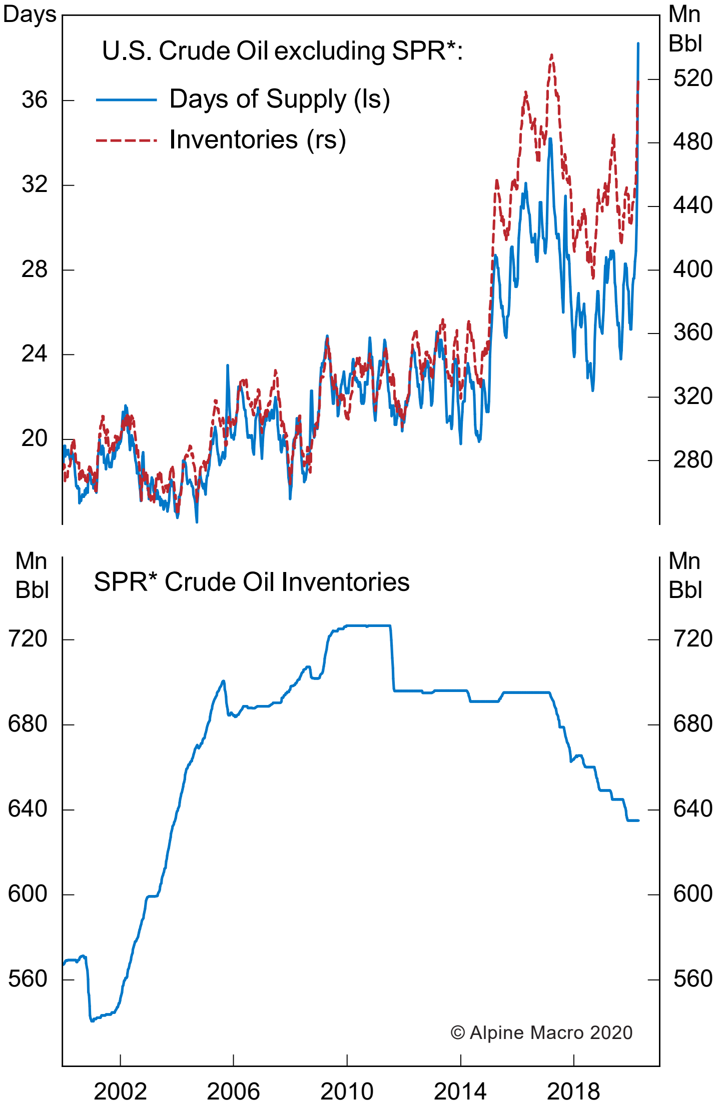
Part of the process will involve culling "weak hands" with high production costs and/or inability to service debt. Consistent with this, energy junk bond spreads have blown out, oil juniors have underperformed their large cap counterparts and the rig count collapse will accelerate once storage is full (**Chart 7**). Nevertheless, surprises could be on the positive, not just negative, side. The Trump Administration is looking for ways to stabilize the ailing energy sector now that the production agreement has not stopped the oil price death

Chart 7 **Leveraged And High-Cost Oil Firms Need Government Help To Survive**



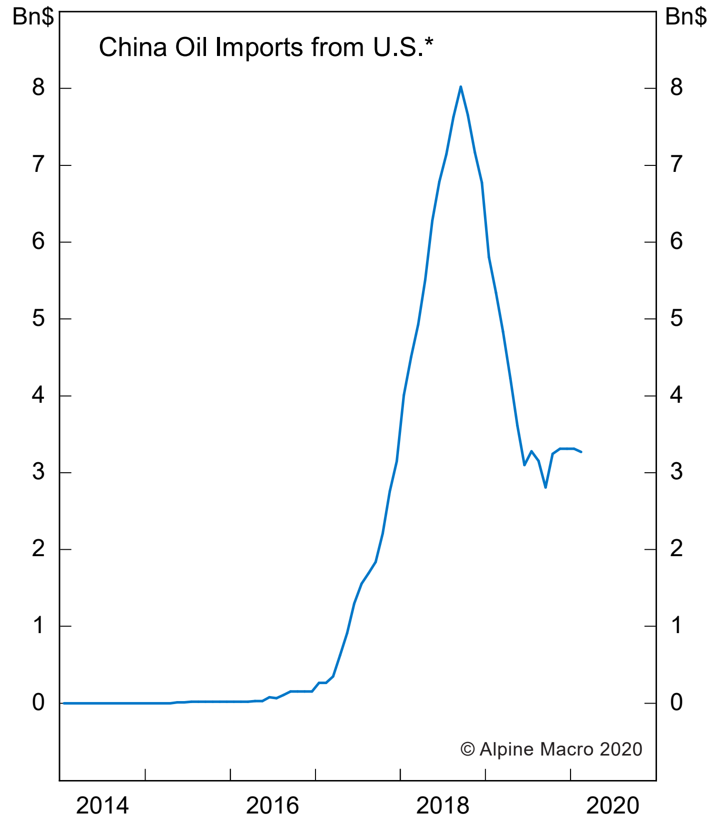
*Source: BofA Merrill Lynch
**Latest data point is April 13, 2020. Source: Baker Hughes

Chart 8 Trump Could Increase The SPR



*Strategic Petroleum Reserve
Source: EIA

Chart 9 Trump Could Arm-Twist China To Buy More U.S. Oil



*Shown as 12-month moving sum; source: China General Administration of Customs

spiral. Government support is inevitable but, like the production agreement, could continue to lag the collapse in demand until economic restarts are underway and shown to be successful. What to watch? Support will include some or all of the following: direct subsidies to energy firms, enlarging and filling the strategic petroleum reserve (**Chart 8**), sizeable credit market guarantees/bridge financing for energy firms, targets for Chinese imports of U.S. oil and/or tariffs on imported oil (**Chart 9**).[2] It is difficult to gauge how extensive the support will be. What we do know is that President Trump is desperate to stop the rot in the energy sector with elections less than seven months away.

Bottom line: Supply will quickly decline towards demand. Economic restarts, even if they spur second waves of infections along the way, virtually guarantee a trough in crude prices in the second half of this year.

2 Derek Browser, "How Donald Trump could help the US oil sector back on its feet", *Financial Times* (April 21, 2020)

Takeaway #3: More Deflation

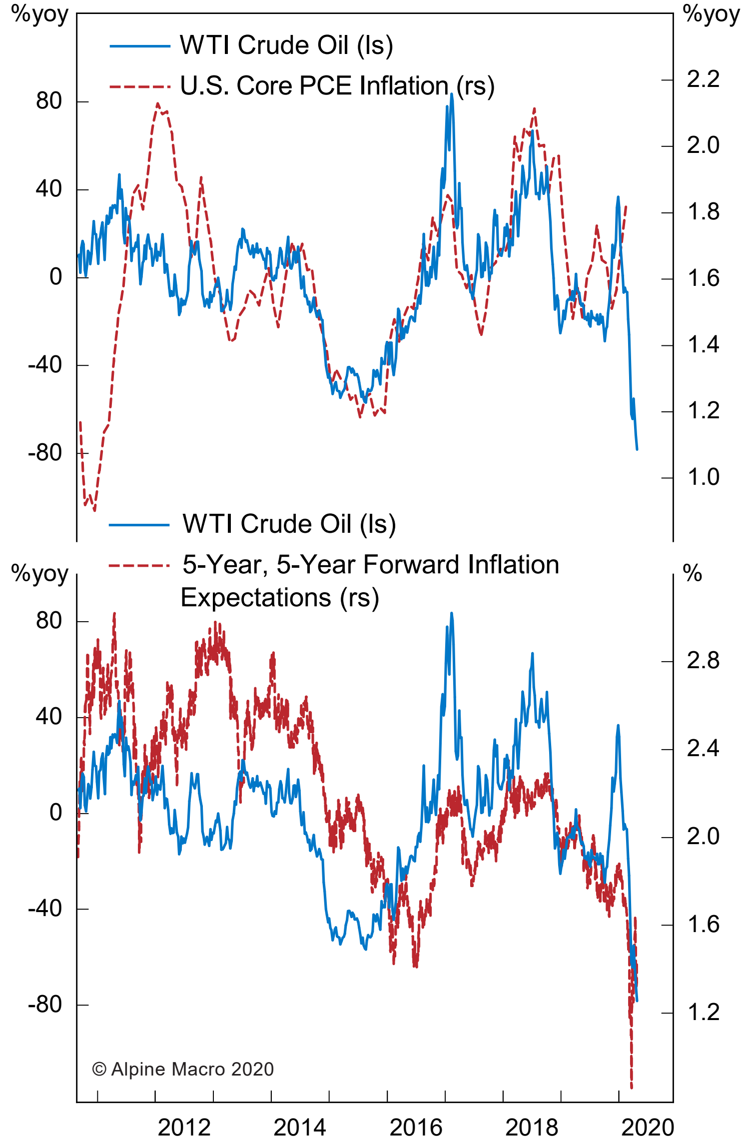
Core consumer price inflation could fall sharply because of the indirect impact of plunging crude oil prices, even though energy is excluded from this measure, with implications for the Fed and Treasury bond markets. **Chart 10** shows that both core inflation and longer-term inflation expectations are highly correlated with oil prices. The consumer and business dividend from lower fuel prices has become less important for the economy in aggregate over the past decade. The U.S. is no longer a net energy importer and capex in this sector will plunge in the coming months. Moreover, the rising importance of new economy technologies also has reduced the share of gasoline in the consumption basket.

The underlying backdrop already was disinflationary before the pandemic. The household savings rate has been pressured upwards since the GFC, despite rising financial wealth and rebounding house prices. The corporate sector passed on Trump tax cuts to shareholders, suggesting they did not have a wealth of capital spending opportunities, even at the new, lower after-tax hurdle rate provided by cuts.

Prospects for oil-induced deflation have implications for monetary policy and fixed income strategy:

- **Open-ended Fed easing for longer:** The U.S. central bank does not want consumer price inflation to drop, regardless of whether it is on a headline or core basis. They may get both, which would encourage them to extend their open-ended backstop for credit markets.

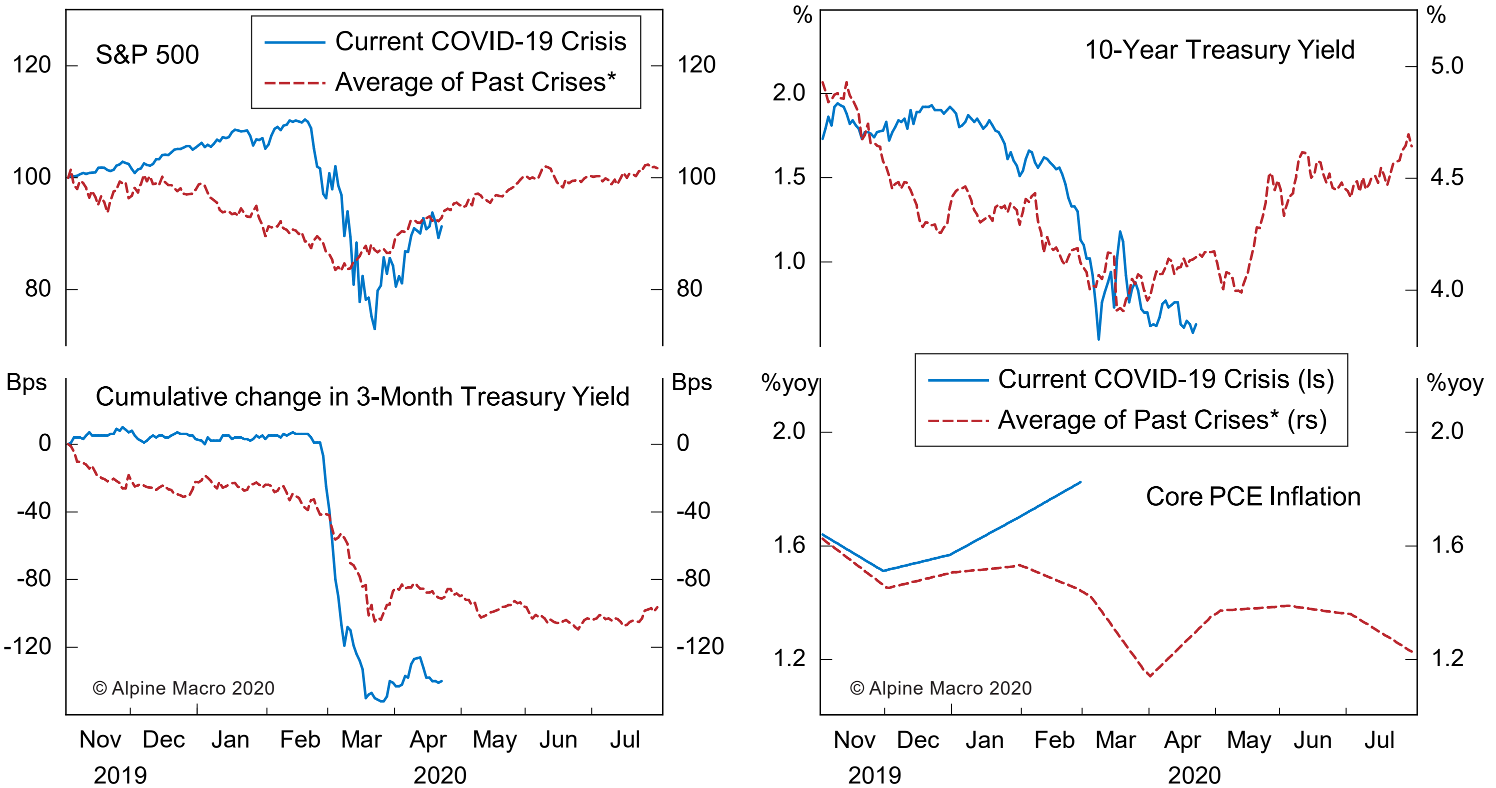
Chart 10 Core Inflation And Expectations Will Drop



- **Too soon to sell Treasuries:** Our baseline scenario remains a V-shape for risk assets, including equities, even though they are no longer oversold and economic restarts are fraught with uncertainty because of their potential to trigger second waves of infections.[3]

3 Alpine Macro *U.S. Themes & Strategy* "The Case For A V-Shape" (March 23, 2020).

Chart 11 Bond Yields Bounced In Previous V-Shapes



*Average of 1998 Russia/Brazil crisis, 2001 terrorist attacks, and 2008 housing crisis
Note: All series shown 4 months prior to fall in S&P 500 during crisis

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We have argued that the current crisis is similar to 1998, 2002 and 2008, although it has been driven by a completely different force. If "this time is the same", then bond yields will soon rebound (**Chart 11**). However, prospects for deflation should moderate the inevitable bounce in yields and make it difficult to time.

Bottom line: Expect more deflation as a result of falling oil prices. Too soon to sell Treasuries.

David Abramson

Chief U.S. Strategist & Director of Research

Alpine Macro, founded in 2017, is an independent global investment research firm based in Montreal, Canada. We focus on the analysis of major macro economic forces and specialize in forecasting the direction of global financial markets, while providing actionable recommendations on investment strategy and asset allocation.

Our Leadership

Chen Zhao, Founding Partner and Chief Global Strategist From 2015 to 2016, Chen was Co-Director of Macro Research at Brandywine Global Investment Management. Prior to Brandywine Global, Chen spent 23 years at BCA Research. As a Partner, Managing Editor and Chief Strategist, Chen developed and wrote BCA's China and Emerging Markets publications in the 1990s. Chen became the firm's Chief Global Strategist in the 2000s and was the author of BCA's flagship publication, Global Investment Strategy from 2005 to 2015. He holds an MA in economics from the Central University of Finance and Economics, was a visiting scholar at the University of Illinois at Urbana-Champaign and pursued post graduate studies with a PhD candidacy at McGill University.

J. Anthony Boeckh, PhD, Founding Partner, CEO & Editor-In-Chief Tony was previously Founder, Chairman, Chief Executive and Editor-In-Chief of Montreal-based BCA Research for 34 years. He authored The Great Reflation (Wiley) in 2010 and was publisher of, among others, the Bank Credit Analyst, a monthly big-picture analysis of the U.S. and global economies and financial markets. He is a founding trustee of the Fraser Institute in Vancouver, British Columbia – an economic "think tank" dedicated to free market principles. Tony has a PhD in Finance and Economics from the Wharton School, University of Pennsylvania, and a B.Com. from the University of Toronto.

David Abramson, Partner, Chief U.S. Strategist & Director of Research David was a Macro Strategist holding a variety of senior roles at BCA Research. Most recently, he was Chief U.S. Strategist and also Director of Research for the firm. During his tenure at BCA Research, David launched and managed the European Strategy and Commodity & Energy Strategy services. In addition, he was the Managing Editor for the Foreign Exchange Strategy and the China Investment Strategy services. He has taught international finance to MBAs at McGill University for 20 years, and is on the Client Committee of the Kenneth Woods Portfolio Management Program at Concordia University.

Yan Wang, Partner, Chief Emerging Markets & China (EMC) Strategist Prior to Alpine Macro, Yan spent 15 years at BCA Research, as Managing Editor and Chief Strategist for BCA's China Investment Strategy service, and played a major role in formulating BCA's view on the Greater China region and emerging Asia. Prior to joining BCA, he spent six years as an equity analyst in China and Hong Kong. Yan holds an MBA in Finance from McGill University, an M.A. in Economics from Tianjin Institute of Finance and a B.A. in Finance from Nankai University. He also holds the CFA designation.

Harvinder Kalirai, Partner, Chief Fixed Income & Currency Strategist Before joining Alpine Macro, Harvinder spent a decade with BCA Research, where he headed the firm's Foreign Exchange Strategy service from 2008 to 2016 and Daily Insights from 2016 to 2018. Prior to BCA, Harvinder was Head of Currency Management at CIBC Global Asset Management. Previously, he held various positions at State Street Global Markets, including Senior Macro Strategist (London), Head of Currency Research, Asia-Pacific (Sydney), and Senior FX Strategist (Boston). Harvinder began his career at the Bank of Canada in 1995 with an MA (Economics) and a BCom (Finance) from McGill University. He also holds the CFA designation.