

Trump Policy and the Oil Market

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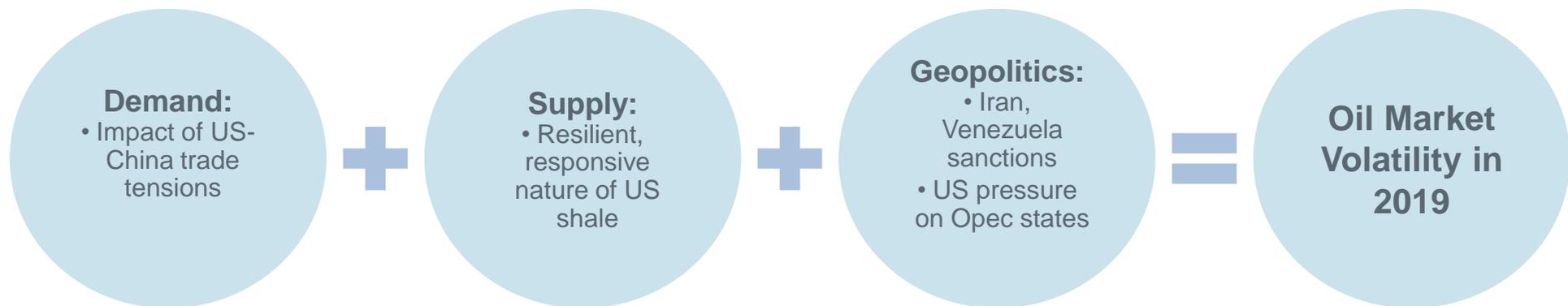
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Oil Market Volatility Ahead in 2019

US is the key source of risk and uncertainty this year

- **This year is shaping up to be a volatile period for the oil market. On both the demand and supply side, there are many factors that could push prices in one direction or another.**
 - **Oil demand** looks weaker this year, as warning signs over slowing growth are appearing in the US, China, Japan and other markets.
 - **On the supply side**, we believe US production growth will slow this year, but the short-cycle nature of shale makes it hard to predict. Supply outages are possible in several major oil producing states.
 - With so many uncertainties on both the demand and supply side, it is a difficult challenge for Opec to manage the market.
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- **Much of the volatility in the oil market centers on US policy.**



Trump and the Oil Market: Pressure Points

Pressure tactics, trade and economic policy and sanctions

- **President Donald Trump's leverage over the oil market is one of the main factors driving oil price volatility since mid-2018.**
- US presidents have sought to shape the oil market in the past. At times, presidents have leaned on Opec states to produce more.
- But Trump has intervened much more directly—and through different channels that reflect his unique communication style.
 - Trump is more willing to use blunt **pressure tactics** on Opec states.
 - Trump's **trade and economic policy** have important indirect effects on the energy sector, raising concerns over the global economic outlook and oil demand.
 - The **sanctions imposed on Iran and Venezuela** have added greatly to oil market uncertainty.

Trump's Oil Market Interventions

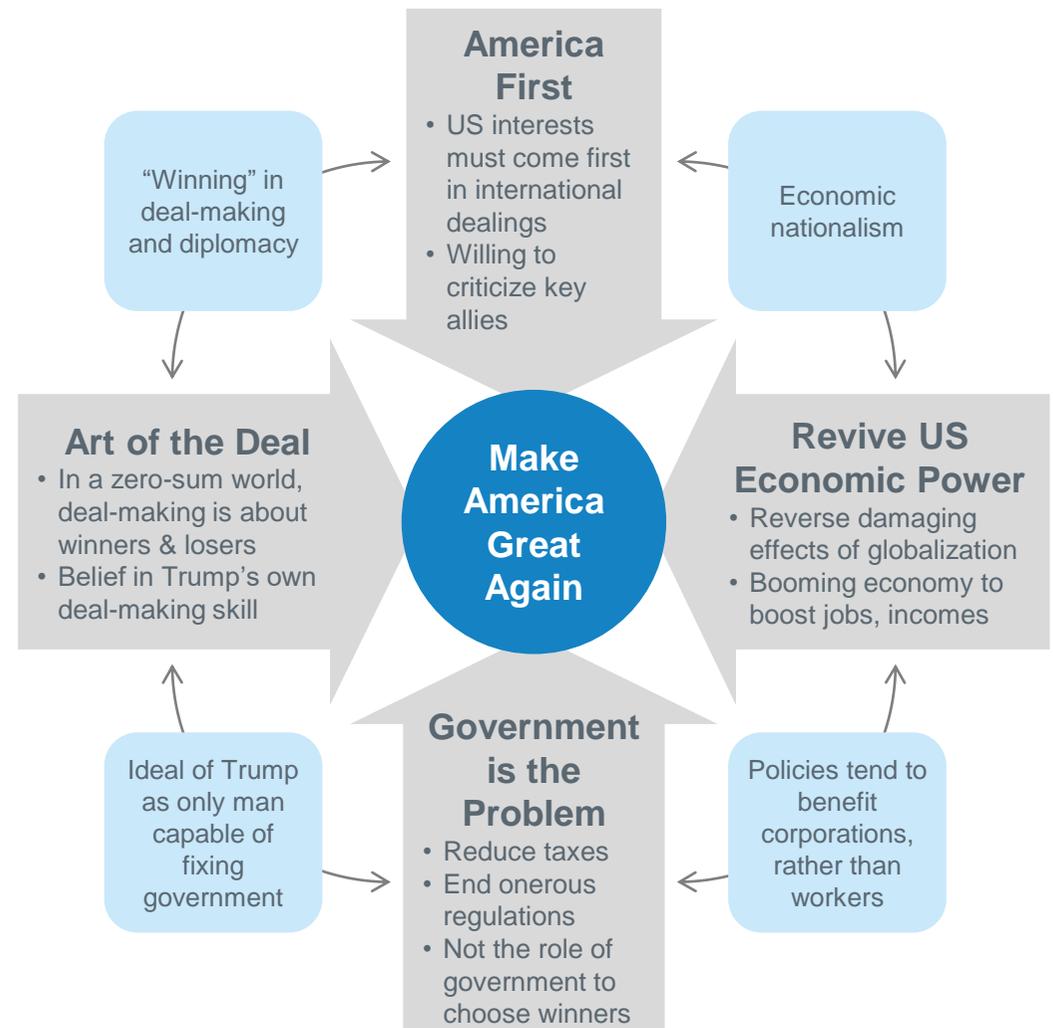


Trump's Worldview: Energy Dominance

Economic nationalism emboldened by booming US oil and gas production

- **Economic nationalism is a key part of Trump's populist platform—and energy is an important part of his message.**
- Trump's America First platform is about prioritizing US economic interests and ensuring that the US "wins."
- Economic damage to other countries as a result of US policy is not necessarily a problem—indeed Trump is inclined to view this as progress.
- Energy is an important element of this quest to bolster the US economy. Booming US oil and gas production as well as exports leave the White House feeling it has much more leverage.
- Opec has borne the brunt of this—with Trump emboldened to pile pressure on the organization, even as he imposes sanctions on major producers.

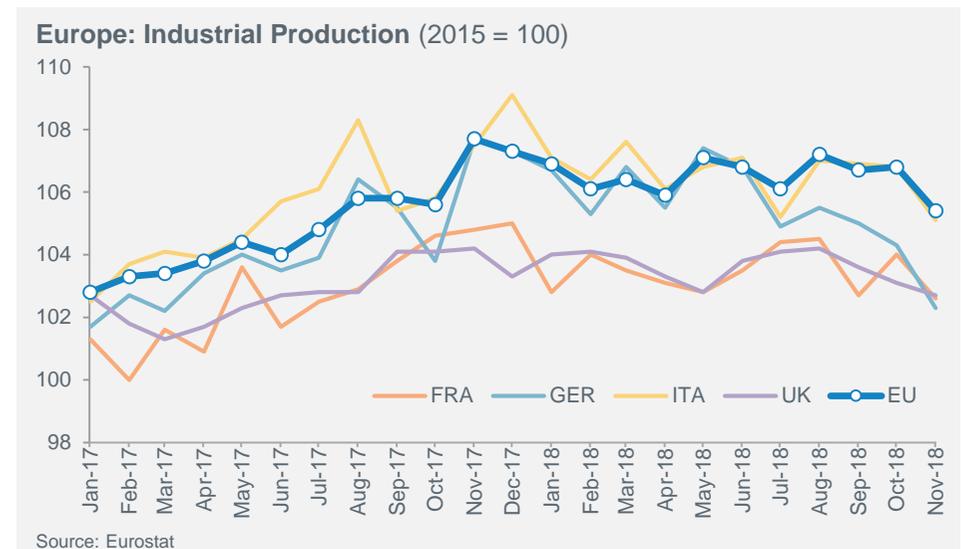
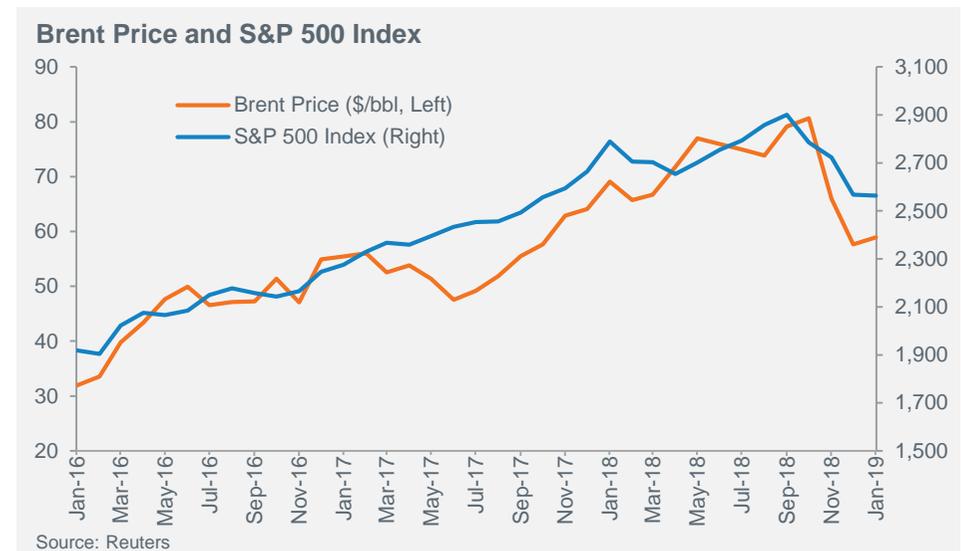
Trump Worldview: Guiding Ideas



Oil Demand in 2019: Decelerating Growth, With Downside Risks

Growing signs of weakness across key economies, with US and Chinese policy central to the outlook

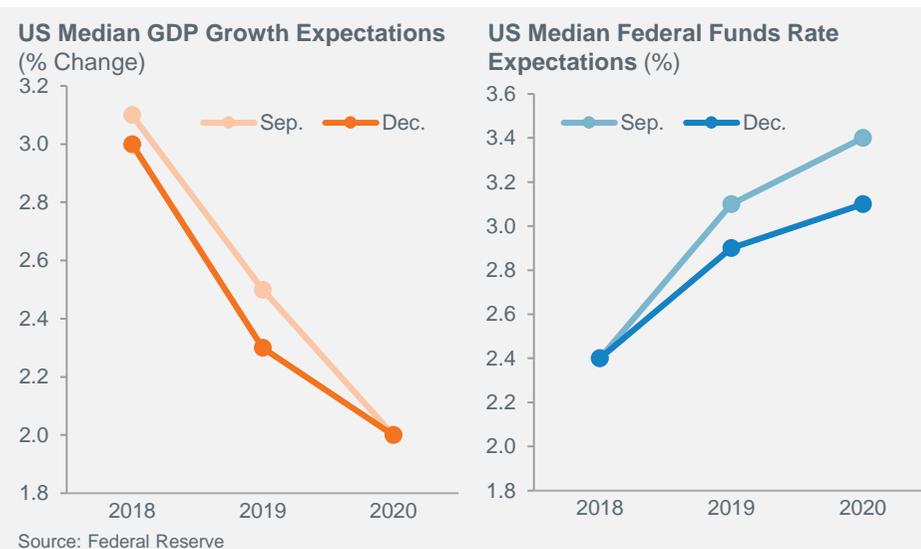
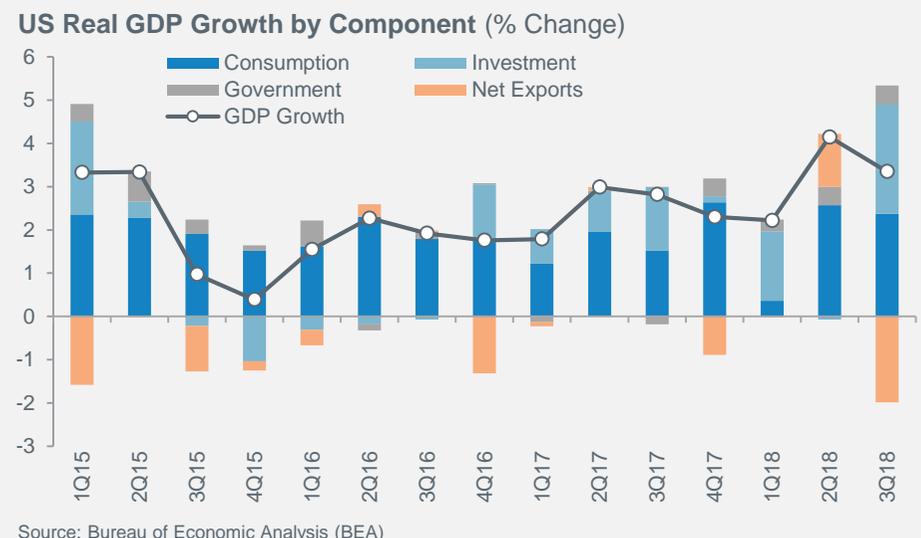
- **The weaker economic outlook and softer demand are key factors for the oil market this year.**
- **China, Europe and Japan provide mounting evidence of a global economic slowdown.** Japan and Germany reported third-quarter 2018 economic contractions. In China, both exports and imports contracted in December, while retail sales and industrial production are also slowing. Lower imports signal weaker domestic demand, despite Beijing's successive efforts to ease reserve requirements in 2018.
- **We forecast already-weak oil demand growth of 1.2 million b/d. Policy decisions in the US and China will be key to the outlook.**
 - Anything below 6% economic growth in China this year will generate widespread concern.
 - US economic policy is likely the single most important factor for the 2019 global economy.



US Economy: Robust 2018 Growth Overshadowed by Growing Policy Risks

US policy uncertainty is the single-biggest downside risk for the global economy in 2019

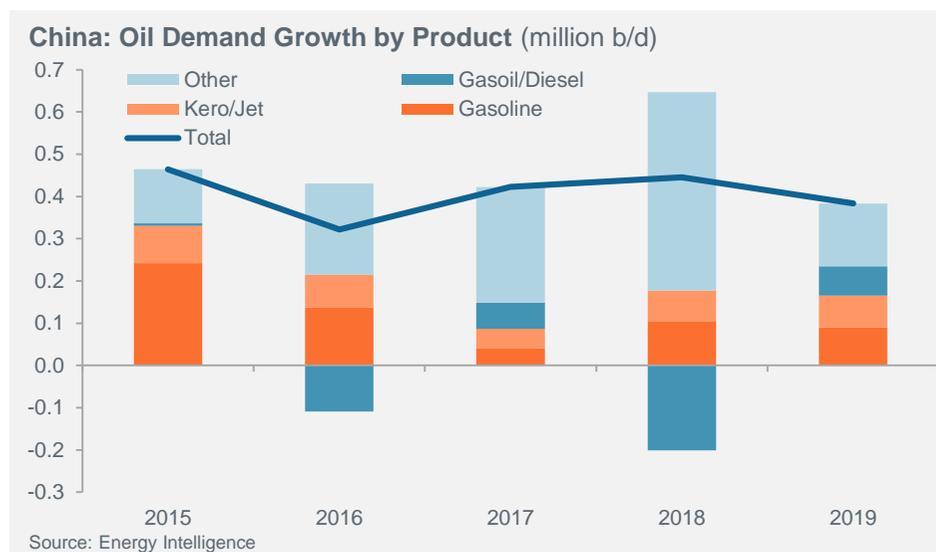
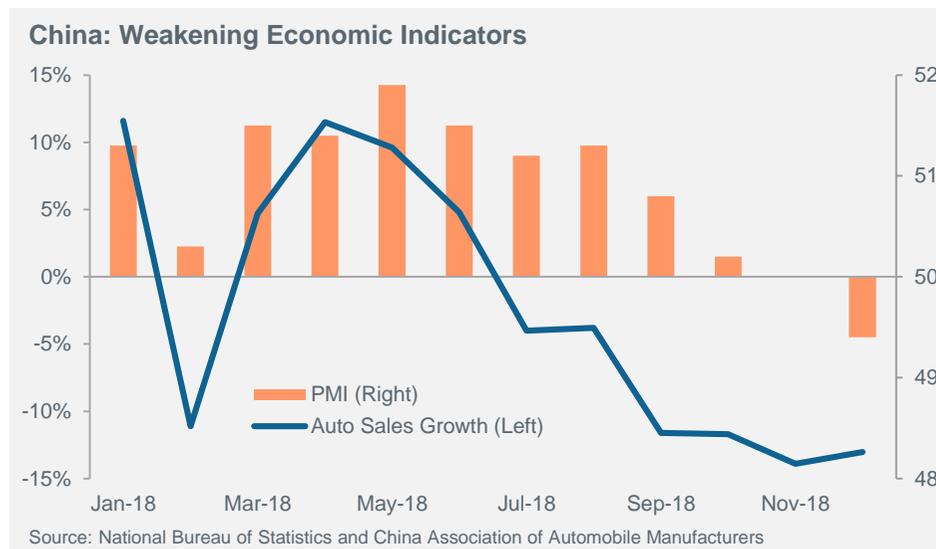
- Fiscal stimulus (via tax cuts and spending) and supportive monetary policy led to 3.0% growth in 2018. But last year's stock market volatility has led to increased concerns about the US economy.
- **GDP growth was long expected to slow in 2019, but US policy uncertainty poses downside risks for both the US and the world economy.**
- US GDP growth will slow toward potential output growth of about 2% by 2020, as economic stimulus recedes. Yet US policy could lead to a more rapid slowdown or a recession.
 - **Trade policy:** US-China trade tensions are already having a negative global impact. A deal will likely be struck before the 2020 elections, but may only amount to a de-escalation of existing tensions.
 - **Fiscal policy:** The impact of tax cuts is fading, and highly polarized politics is having an impact. The month-long government shutdown could shave 1 percentage point off first-quarter GDP growth.
 - **Monetary policy:** Expectations for 2019 tightening have fallen. Yet, there are risks that tightening will be too aggressive and further dampen growth. Tightening credit conditions globally will continue to create challenges for emerging markets.



China: Slowing Economic Growth, Flat Incremental Oil Demand

But oil import requirements and refining capacity are rising, and will continue to drive the gasoline glut

- The Chinese economy grew at 6.6% in 2018, its slowest rate since 1990, but not unexpected.
- Beijing has growth expectations of 6%-6.5% in 2019—in line with its medium-term goals. While China is known for hitting its targets, this year brings unprecedented uncertainty.
- Industrial output growth fell to 5.7% year-on-year in November, down from 7% in April. The Purchasing Managers' Index (PMI), a leading indicator of industrial activity, has also decelerated monthly since May and in November dipped below 50, signifying a contraction. Automobile sales also declined in 2018.
- China is still projected to account for nearly 40% of the non-OECD's 1 million b/d demand growth in 2019 and it will meet most of this with increased imports.
 - Auto sales fell in 2018, but rising car ownership rates will continue to support gasoline demand growth. Diesel demand will remain volatile and heavily dependent on industrial production growth.
- China is expected to add 640,000 b/d of new refining capacity in 2019. The domestic market is already arguably oversaturated, and new capacity will lead to higher product export volumes from Chinese refiners.

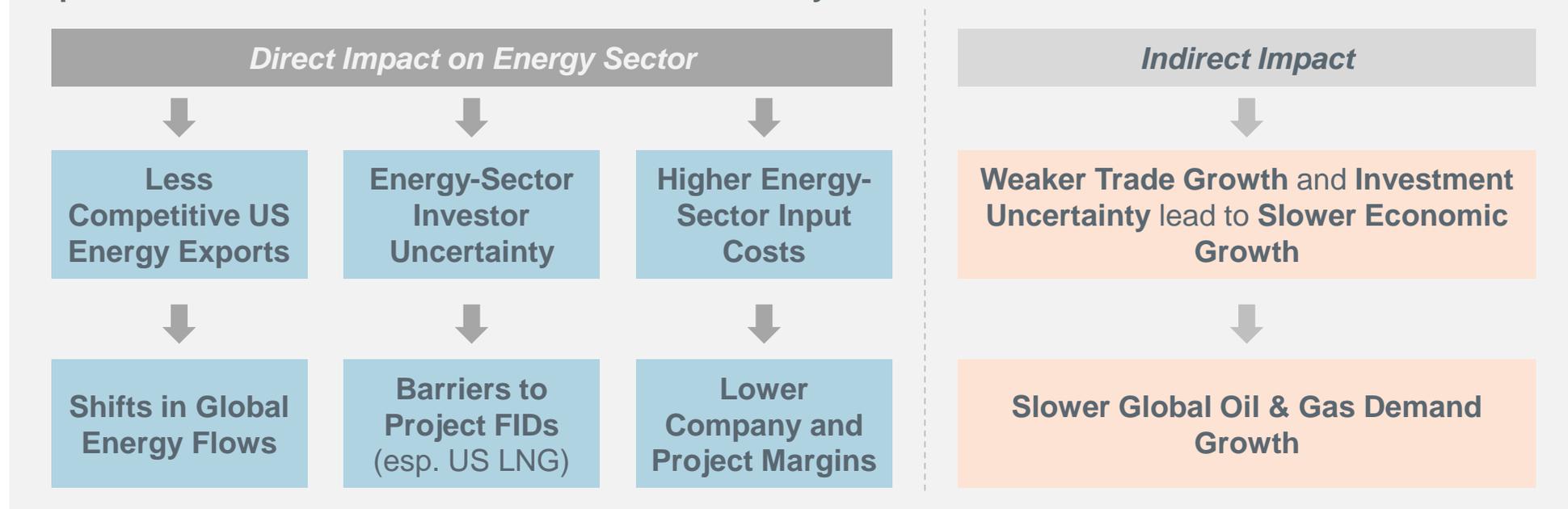


Global Trade: Protectionism Harms the Energy Sector

Direct and indirect impacts, but the most important is the threat to global growth

- **The direct impact of protectionism is rising for the energy industry.** Global energy flows have been drawn into trade disputes—particularly with US-China trade tensions.
- **Another direct impact is on investor uncertainty**—especially for second-wave US LNG projects.
- **However, the largest impact of protectionism will be indirect, with slower economic growth hurting energy demand.**
- A slowdown in global trade growth and increased economic uncertainty will dampen global economic growth prospects.

Impacts of US Protectionist Measures and Retaliation by Trade Partners



Venezuela Sanctions: Severe Impact

Output likely to fall by 500,000 b/d in the next few months

- **After new US sanctions, Venezuela will struggle to find buyers, access diluent and sustain upstream investments.**
- **Venezuelan output is likely to fall by about 500,000 barrels per day in the next several months.**
- As sanctions take full effect, the Venezuelan production trajectory will depend increasingly on the political outlook.
- President Nicolas Maduro will likely continue to forcefully resist growing international pressure to step down in the coming months.
- Venezuela is likely to descend deeper into chaos, with substantial risks that production falls even further.

US imports of Venezuelan crude are frozen

- 500,000 b/d in search of a new home
- India is a top cash-paying alternative (Reliance's Jamnagar and Nayara's Vadinar refineries), but potential buyers are wary
- China is unlikely to step up as major buyer

Lack of diluents will have a major impact

- Diluent is used to transport Orinoco crude and to blend it to create diluted crude oil (DCO)
- 200,000 to 400,000 b/d of output is at risk

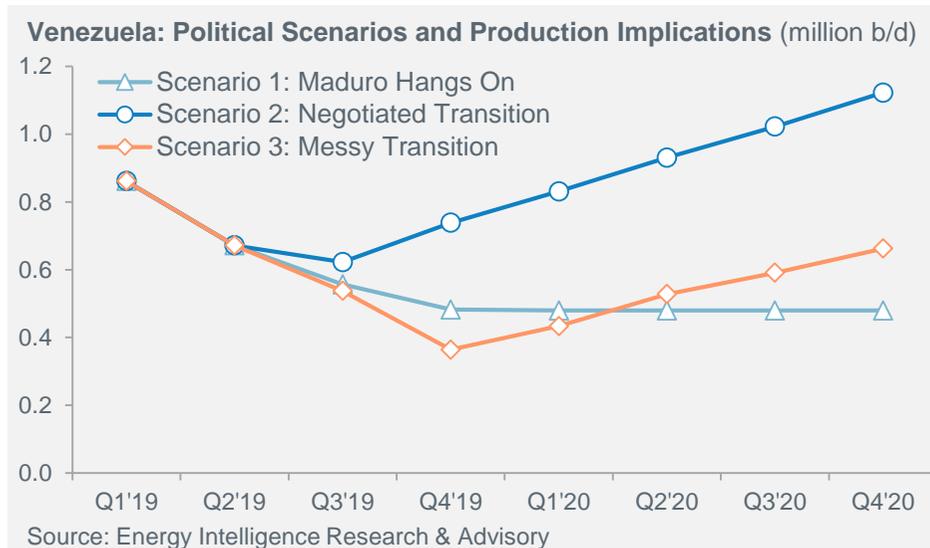
Sanctions will undercut investment

- At least 200,000 b/d at risk with sanctions requiring Chevron and the top four service companies to halt operations by July 27
- The threat of US sanctions is too risky for many firms, especially in non-Orinoco joint ventures, given concerns about payment

Venezuela Sanctions: Three Production Scenarios

Output of 1.5 million b/d by 2020 is a stretch even in a high case

- **Scenario 1: The regime hangs onto power:** The country is able to find access to cash-paying buyers for oil exports. Russia would be central in this scenario. We see this scenario as unlikely beyond 2019.
- **Scenario 2: Maduro regime pursues a negotiated transition:** The timing would most likely come after US sanctions reach their full impact by mid-2019. This is the best case scenario for production, but in light of the far-reaching challenges facing the sector, output would likely only reach about 1.2 million b/d by late 2020.
- **Scenario 3: A messy transition after prolonged period of conflict and chaos:** We see this most disruptive scenario as also the most likely. The critical difference with the first scenario is that ultimately the regime cannot hang on. A messy transition would likely materialize only over the next year, with production bottoming out in late 2019 or later.



Barriers to a Production Rebound in Venezuela

- Human capacity: exodus of workers
- Scale of investment required to fix infrastructure: upgraders, ports, pipelines, fields
- Time required to pass new regulations and investment terms
- Lack of investor interest in Orinoco (extra-heavy) crude

Iran Sanctions: Significant Blow to Iranian Exports

Exports above 1 million b/d in January, but little clarity on waiver renewals in May

- Last November, the Trump administration gave exemptions from sanctions to eight top buyers of Iranian crude: China, India, Japan, Turkey, Italy, Greece, Taiwan and South Korea.
- The waivers require countries to show “significant reductions” of Iranian crude. White House officials still insist that these waivers will not be extended past May.
- China, India, Japan and South Korea boosted crude imports from Iran to an estimated 932,000 b/d in January, with overall Iranian exports above 1 million b/d.
- March will provide important signals about continued buyer appetite for Iranian crude.
- Last November showed that Trump is wary of taking actions that would raise oil prices.
- The waivers could end for some countries in May. But barring a major decline in oil prices, it seems unlikely that Trump will be aggressive as his threats suggest.



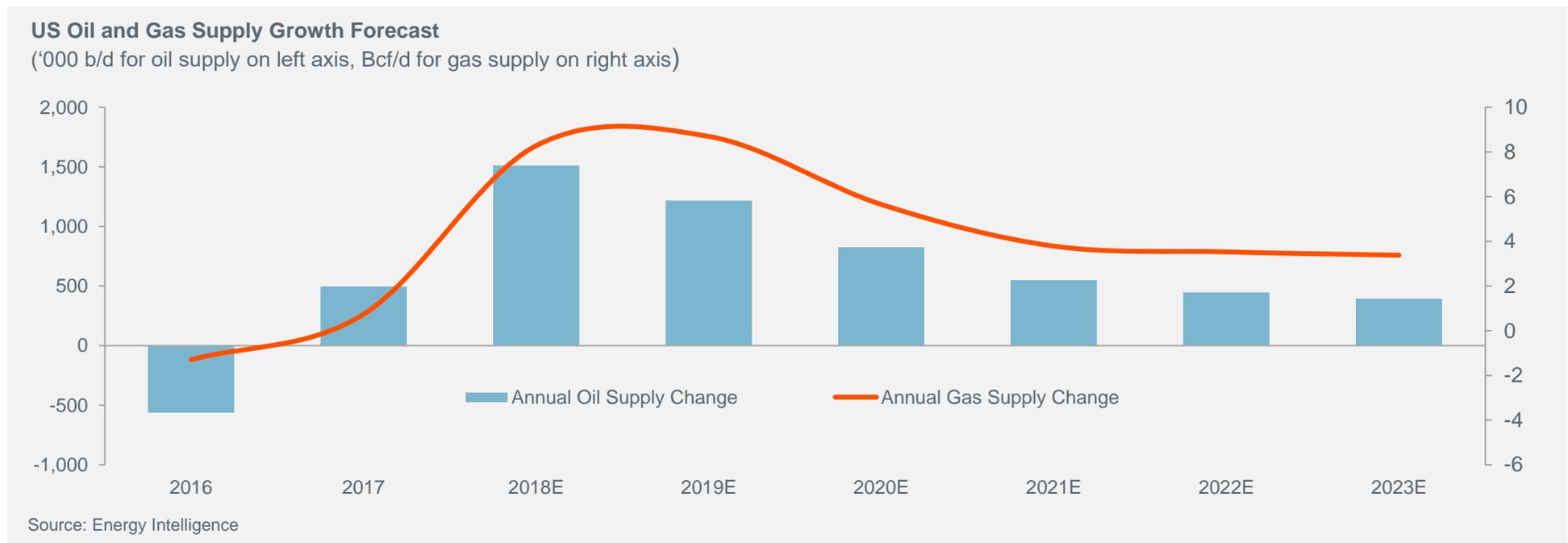
Alternatives to Iranian Crude

- Refiners have turned to Iraqi, Saudi, Russian and US crude as alternatives to Iranian oil.
- As of mid-February, Greece and Italy had not imported crude from Iran since November, although they have waivers to do so.
- Turkey and India have showed steady imports over the past few months.

Supply Volatility: US Growth Moderating This Year and Next

Demand deceleration, tight capital control, crude quality and lower productivity to rein in growth

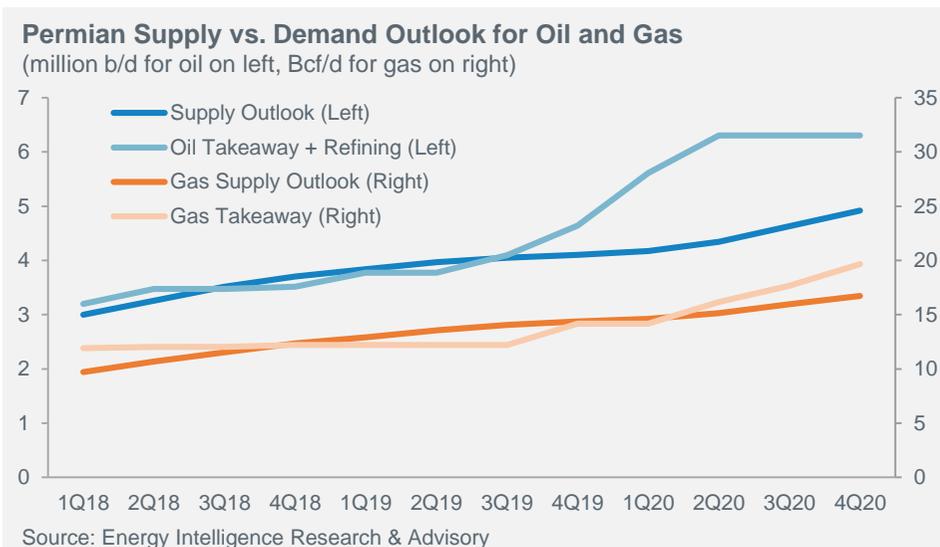
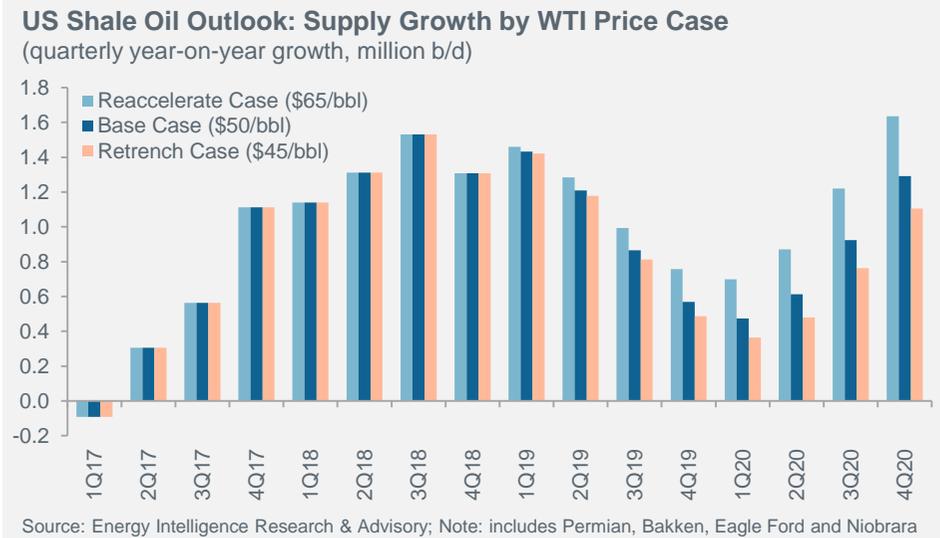
- **The US beat expectations last year, delivering 1.5 million b/d in growth. But we expect US supply growth to slow this year, averaging 1.2 million b/d over 2019 but with a year-end exit rate of only 800,000 b/d.**
- Shale producers are being forced to further tighten capital discipline, with business models adjusting to a \$50/bbl (or lower) WTI price. The average shale producer currently has a ~\$60/bbl cash-flow break-even.
- Steep declines, a lack of incremental productivity and other bottlenecks will also limit growth.



Supply Volatility: US Shale Growth to Continue, But Slowdown Under Way

Sustained low WTI prices can have a material impact on growth rates

- **Shale oil production growth is expected to decelerate this year, with projected growth in our Base Case of 1 million b/d for the top four basins.**
- WTI prices and price expectations will be a key factor. Downward adjustments to production guidance are ongoing and will continue in the coming months.
- Midstream bottlenecks in the Permian Basin will remain a top growth constraint for much of 2019.
 - Existing takeaway options are running at very high utilization rates. In late Q3'19, large-scale oil takeaway options will become available.
 - But gas midstream constraints will continue into 2020, restricting oil supply growth given the Permian's associated gas and regulatory constraints on gas flaring.
- US crude production growth will continue, but this year could be the last that exceeds the rate of 1 million b/d.



Supply Volatility: Other Non-Opec Growth Concentrated in Brazil

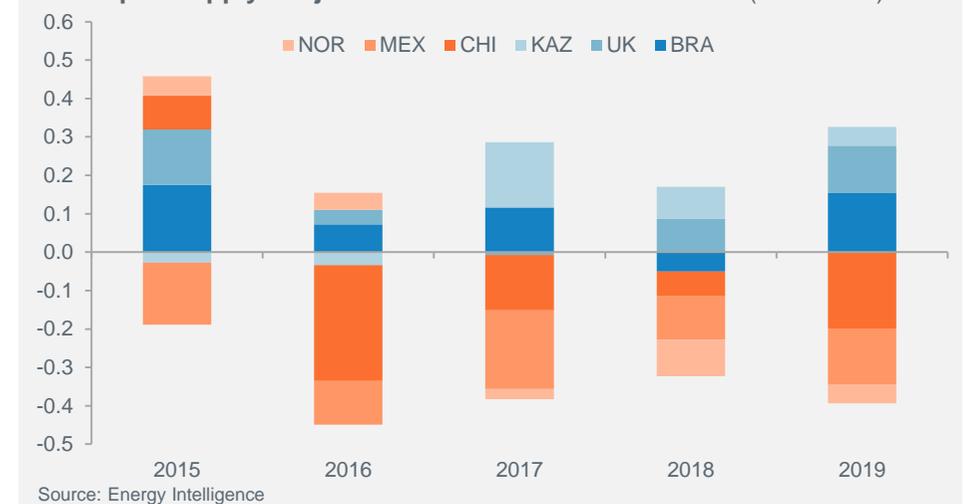
UK will also add volumes, while China and Mexico will see further declines

- Even outside of the US, non-Opec output growth is highly concentrated, mainly in Brazil. Surprise disruptions or slower growth can materially tighten global balances.
- Brazil will be the largest source of non-Opec growth outside the US. Together Brazilian additions will drive steady growth in 2019 of over 150,000 b/d.
- The UK will see also output rise, as new fields come on line and independent E&Ps delay decommissioning and extend the life of many mature fields.
- While production in Norway will continue to fall this year, the massive Johan Sverdrup field is expected to start in November, providing a 2020 surge in output.
- China is not likely to stop declining production, despite pronouncements by President Xi.
- Likewise, in Mexico, initiatives by new President Andres Manuel Lopez Obrador—such as an increase in PEMEX drilling at mature fields—will fail to halt the country's production slide.
- Kazakhstan will also add volumes as production ramps up at Kashagan, but maintenance at key fields and its participation in the Opec/non-Opec cuts make this less certain.

Petrobras' Brazil Project Plans: All Projects Are Operated by the NOC



Non-Opec Supply: Major Growers and Decliners in 2019 (million b/d)

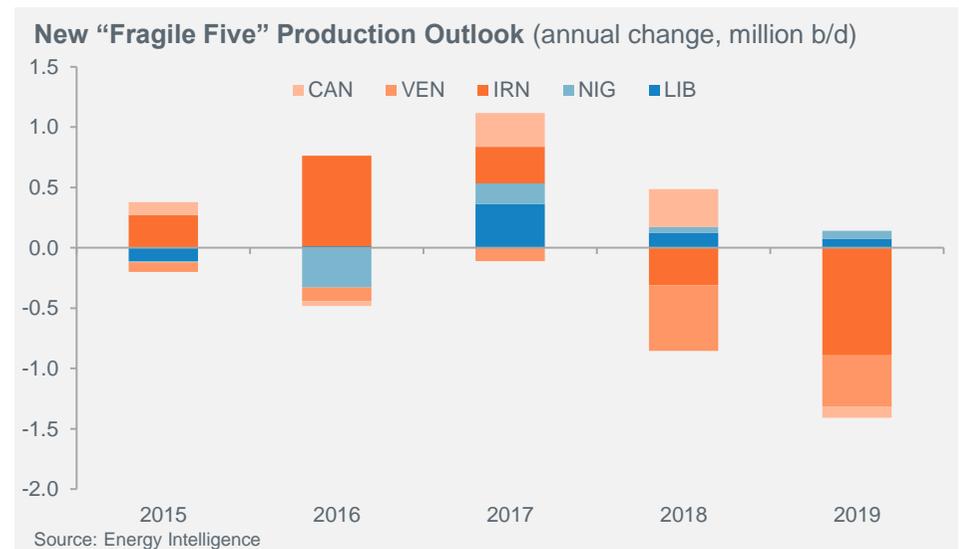
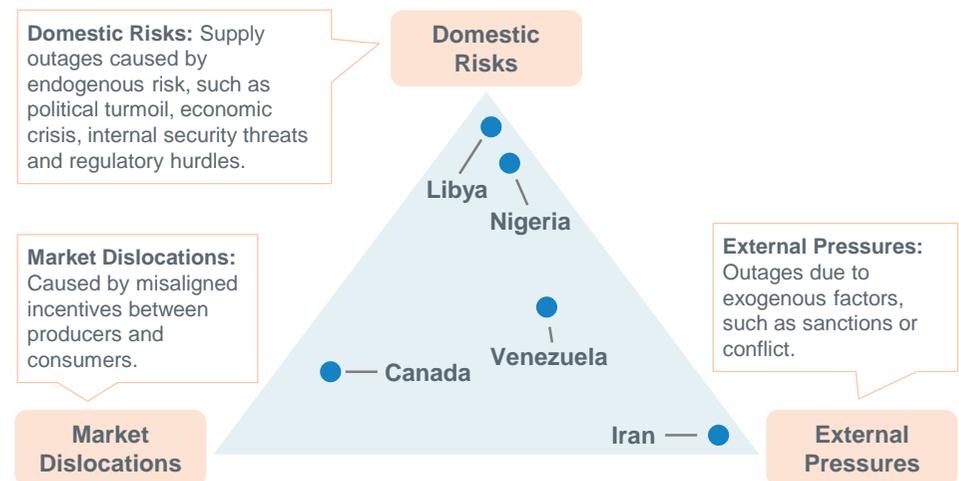


Supply Volatility: Near-Term Outages Could Still Shake Up Balances

Venezuela, Iran, Libya, Nigeria and Canada are the new “fragile five”

- **Near-term supply risks will remain high this year with traditional countries—Venezuela, Iran, Libya, and Nigeria—joined by Canada.**
- **Iranian** output took a big hit in late 2018, and further large declines are possible in 2019 depending on US sanctions policy and continued exceptions for major buyers.
- Output will continue to fall in **Venezuela** as neglect and underinvestment take their toll even in a best-case scenario. Risks are heavily weighted to the downside.
- **Canada**—mandated production cuts by Alberta in late 2018 are likely to ease after Q1’19. The cuts could be extended if Western Canadian inventories do not fall.
- **Libya and Nigeria’s** unsettled political and security situations will present ongoing risks, as evidenced by the latest outages in Libya.

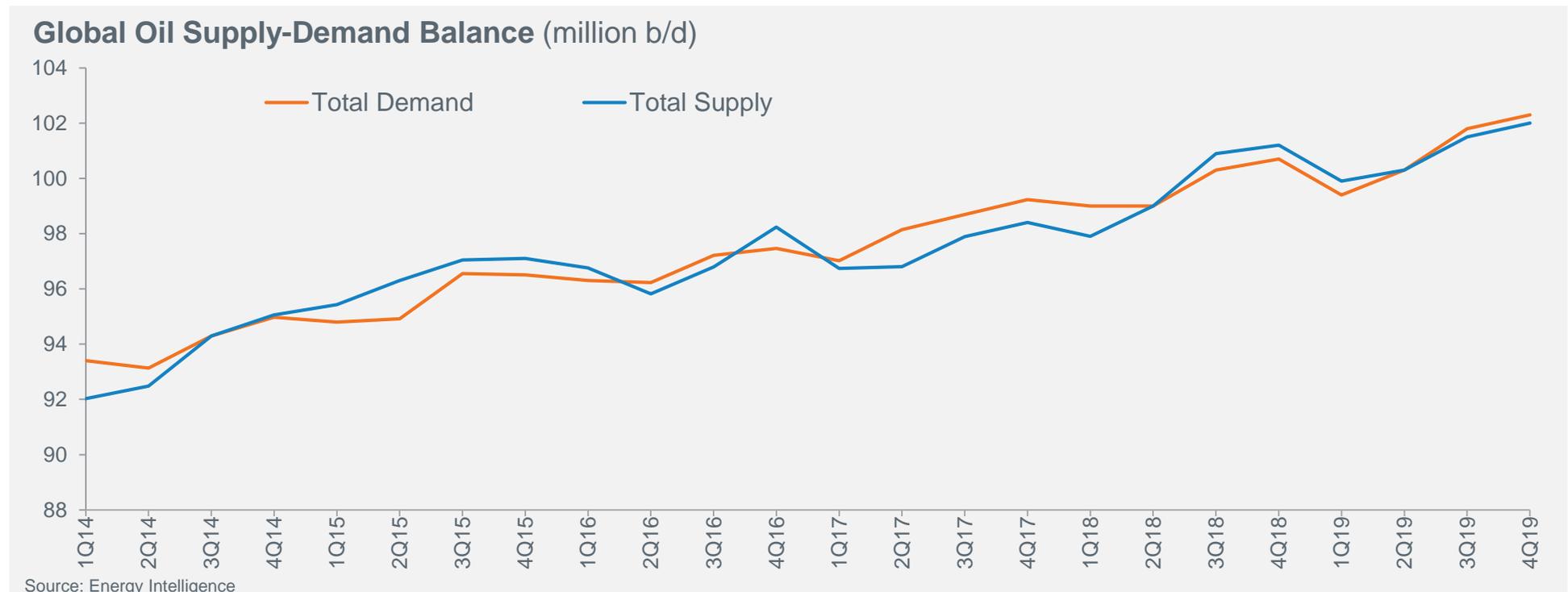
Supply Volatility: Risk Profiles of the New “Fragile Five”



Oil Market Management: New Deal Underscores Potential Centrality of Opec

Modest supply deficit forecast for this year if the Opec and non-Opec cuts hold up

- **Volatility is a challenge, but gives Opec and Russia an opportunity to be a stabilizing force.**
- Upholding the current 1.2 million b/d cut will likely prove critical to restoring balance this year. The deal should help to restore balance—and even yield small deficits—by the second quarter.
- Energy Intelligence anticipates an overall supply deficit of 300,000 b/d in 2019.
- The cuts are also helping Opec to restore spare capacity in the event of further outages. In the coming months, spare capacity is likely to rise to about 1.7 million b/d.



Opec and Non-Opec Cooperation to Continue

Group is likely to extend the current deal

- **Outwardly, the Opec and non-Opec group appears dysfunctional and divided by internal conflicts, but we think it is bound together by:**
 - Saudi Arabia and Russia, which still see value in a united front to deal with shale, geopolitics and the financialization of oil markets.
 - The influence of geopolitics on oil prices, requiring constant monitoring of oil markets.
 - Emergence of the US as the biggest wild card for oil markets in 2019, including shale's capacity to surprise the market.
 - The importance of unified messages to combat the powerful forces of volatility.
 - Need for higher prices, ideally \$70/bbl or more.

Estimated Opec Cuts for First-Half 2019 ('000 b/d)

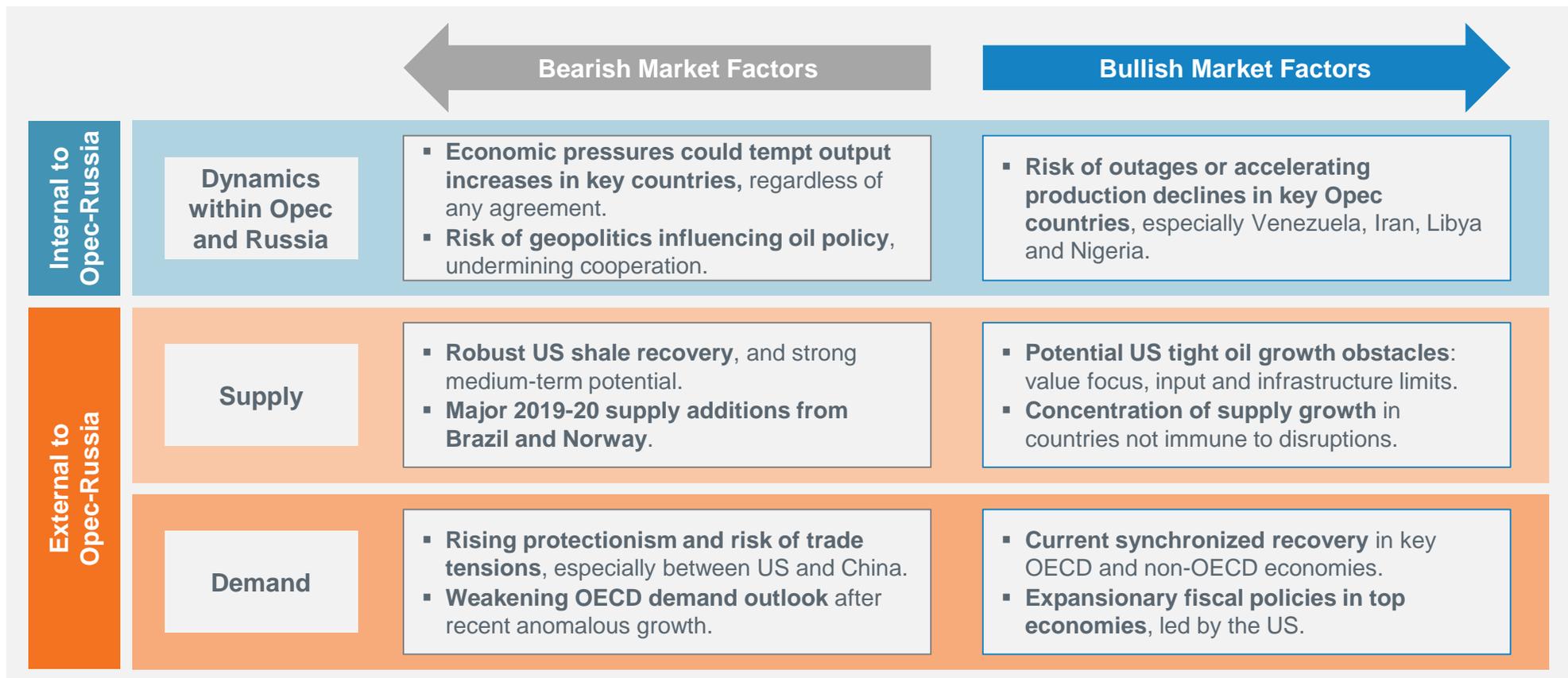
	Baseline	Pledged Cut	Quota	Dec. Output	Potential Spare	Adjusted Spare
Saudi Arabia	10,633	322	10,311	10,643	1,607	657
Iraq	4,635	141	4,494	4,699	150	0
UAE	3,168	96	3,072	3,250	250	250
Kuwait	2,764	85	2,679	2,802	348	98
Nigeria	1,738	53	1,685	1,630	0	0
Angola	1,528	47	1,481	1,445	0	0
Algeria	1,057	32	1,025	1,063	0	0
Ecuador	524	16	508	520	0	0
Congo (Br.)	325	10	315	338	0	0
Gabon	187	6	181	223	0	0
Eq. Guinea	127	4	123	85	0	0
Opec 11	26,686	812	25,874	26,698	2,355	1,005
Iran	3,296	0	--	2,545	0	0
Venezuela	1,171	0	--	1,074	0	0
Libya	1,114	0	--	953	0	0
Opec 14	32,267	--	--	31,270	2,355	1,005
Russia	11,421	230	11,191	11,470		

Source: Energy Intelligence, Opec, government data and Jodi. Notes on spare capacity: Potential spare includes constrained capacity. Adjusted spare is startable in 30 days and sustainable for at least 90 days. Iran excludes offshore condensates. Saudi Arabia and Kuwait equally share the Neutral Zone with 500,000 b/d capacity, which takes several months to bring back on. Notes on Opec cuts: Qatar not included in table. Iran, Venezuela and Libya are exempt from quotas. Volumes based on October 2018 secondary source production assessment and production volumes for non-Opec alliance as reported by Opec.

But This Year Will be the Biggest Test for Opec Cohesion Since 2014-15

Faltering demand and robust non-Opec supply could shift focus back to market share

- Opec's June and December decisions suggest that the cartel will take action when Brent prices are at risk of falling outside the \$60/bbl-\$80/bbl range on a sustained basis.
- The top threat to Opec/non-Opec cohesion is a twin shock scenario: a dramatic demand slowdown to below 1 million b/d led by an acute economic deceleration, and still-robust incremental supply.



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