

Final Report

Plural - Associação Nacional das Distribuidoras de Combustíveis, Lubrificantes, Logística e Conveniência

International Benchmarking of Downstream Fuel Chain

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Executive summary

Executive Summary (1/2)

- Brazil fuel sector is going through some analysis and discussion as a result of recent supply disruption by a truck drivers' strike in protest of large frequent price hikes at the pump.
- The essence of the problem with the strike was a **combination of oversupply of truck freight (and low freight prices)** with unsophisticated owners that didn't use price volatility protections such as hedging, heavy dependency of road logistics (goods and fuel distribution), **AND sharp hikes in exchange rate and international fuel prices** simultaneously
- Government policymakers, regulatory agencies, and the industry should focus on the principles and conditions of free and competitive market. Information to the general public is critical because diverse, multi-player and competitive market does not guarantee low fuel prices to end consumers
- If Brazil wants to continue with a free and deregulated market, allowing an attractive environment for investments, price controls should be avoided
- The first step for improving the fuel market conditions and structure is to reform and improve two key areas: Legal and law enforcement and fuels taxation. The rules should be transparent for all segments of the fuel supply chain and taxes shouldn't favor one channel of the supply over the others
- Once these pre-requisites have been established, the vertical integration may be eventually allowed gradually and conditionally, by virtue of the legacy domination of Petrobras in all segments, until the market share is completely fragmented in all sectors (refining, logistics). Of course, Petrobras shouldn't be penalized and it should be allowed to integrate as well

Resumo executivo (1/2)

- O setor de combustíveis do Brasil está passando por algumas análises e discussões como resultado da recente interrupção do fornecimento por uma greve de motoristas de caminhão em protesto contra os grandes aumentos frequentes de preços na bomba
- A essência do problema com a greve foi uma **combinação de excesso de frete de caminhão (e baixos preços de frete)** com proprietários não sofisticados que não usavam proteções de volatilidade de preços, como hedge, dependência pesada de logística viária (distribuição de bens e combustíveis) e **aumento acentuado de taxa de câmbio e preços internacionais de combustível** simultaneamente
- Os formuladores de políticas governamentais, agências reguladoras e a indústria devem se concentrar nos princípios e condições do mercado livre e competitivo. A informação ao público em geral é fundamental porque o mercado diversificado, multiplayers e competitivo não garante baixos preços dos combustíveis para os consumidores finais
- Se o Brasil quiser continuar com um mercado livre e desregulamentado, permitindo um ambiente atrativo para investimentos, os controles de preço devem ser evitados
- O primeiro passo para melhorar as condições ea estrutura do mercado de combustíveis é reformar e melhorar duas áreas-chave: Legal, aplicação da lei e taxação de combustíveis. As regras devem ser transparentes para todos os segmentos da cadeia de fornecimento de combustível e os impostos não devem favorecer um canal da oferta sobre os outros.
- Uma vez estabelecidos esses pré-requisitos, a integração vertical pode eventualmente ser permitida de forma gradual e condicional, em virtude do legado de dominação da Petrobras em todos os segmentos, até que a participação de mercado em todos os setores (refino, logística) seja completamente fragmentada. Claro, a Petrobras não deve ser penalizada e deve ser permitida a integração também

Executive Summary (2/2)

- Different types of contracts between distributors and retail owner already take place in Brazil, similar to the types observed in the USA and Europe
- Fidelity to the brand is a contractual obligation between a distributor and retail owner and should **be respected** during the validity of the contract.
- Unbranded and branded (own brand) retailers **WITH a contract must respect** any condition of **exclusive supply** with a particular distributor/ jobber
- Enforcement of brand fidelity is not a responsibility of the regulator in the US and Europe.
- In Brazil, in case of fraud or breach of contract, **law enforcement agencies do not ensure that a distributor who owns the brand or has a supply contract can resolve the dispute quickly and efficiently through local authorities.** In this way, a collaboration between the ANP, other government oversight agencies, and distributors becomes indispensable in this current scenario.
- Brazil's retail sector is competitive and diverse. **Anti-trust policies, legal and regulatory stability, transparent and market-defined prices can bring investments and diversity to the refining and midstream sectors** which consequently will bring more dynamic and competitive conditions resulting in benefits to the end consumer

Resumo executivo (2/2)

- Diferentes tipos de contratos entre distribuidores e proprietários de varejo já ocorrem no Brasil, semelhante aos tipos observados nos EUA e na Europa.
- **A fidelidade à marca é uma obrigação contratual** entre um distribuidor e o proprietário do varejo e deve ser respeitada durante a vigência do contrato.
- Varejistas sem marca e de marca (marca própria) **COM um contrato devem respeitar** qualquer condição de **fornecimento exclusivo** com um determinado distribuidor / jobber
- A fiscalização da fidelidade à marca não é uma responsabilidade do regulador nos EUA e na Europa.
- No Brasil, em caso de fraude ou quebra de contrato, agências de aplicação da lei (law enforcement agencies em inglês) não asseguram que um **distribuidor detentor da marca ou com um contrato de fornecimento possa resolver a disputa de forma rápida e eficiente através das autoridades locais**. Desta forma, uma colaboração entre a ANP, outros órgãos de fiscalização do governo, e os distribuidores torna-se indispensável no presente cenário.
- O setor de varejo do Brasil é competitivo e diversificado. **Políticas antitruste, estabilidade legal e regulatória, preços transparentes e definidos pelo mercado podem trazer investimentos e diversidade para os setores** de refino e midstream, que conseqüentemente trarão condições mais dinâmicas e competitivas, resultando em benefícios para o consumidor final.

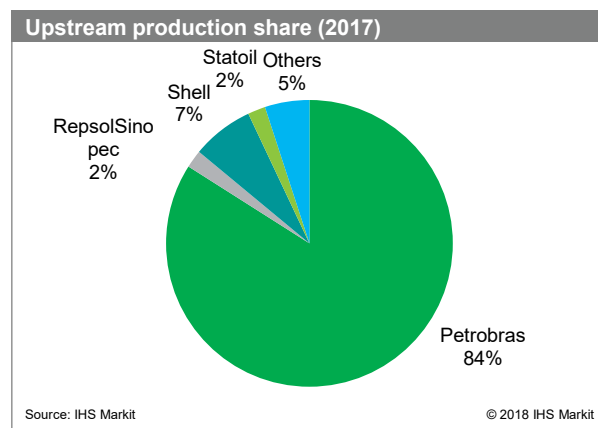
Base case – Brazil's current model

- Downstream structure at glance
- Supply and demand outlook
- Retail and marketing snapshot
- Regulatory framework and fuel supply chain

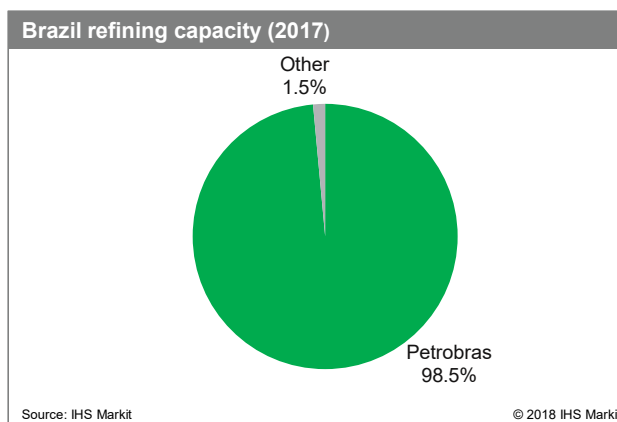
Besides retail and marketing, Brazil's oil industry still very concentrated in Petrobras

Brazil's oil industry diversity

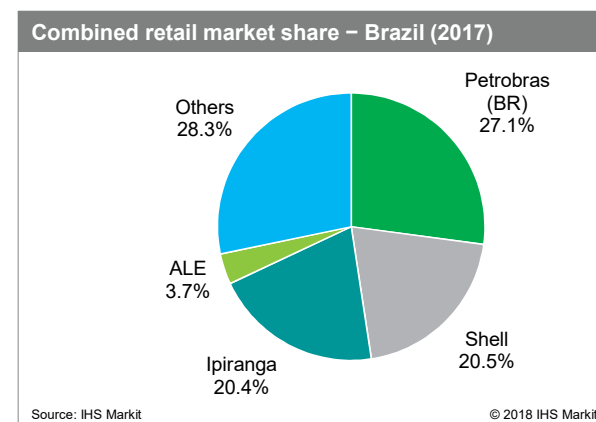
Upstream



Refining



Retail and Marketing



Source: IHS Markit

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Downstream infrastructure

Five relatively distinct “supply basins”

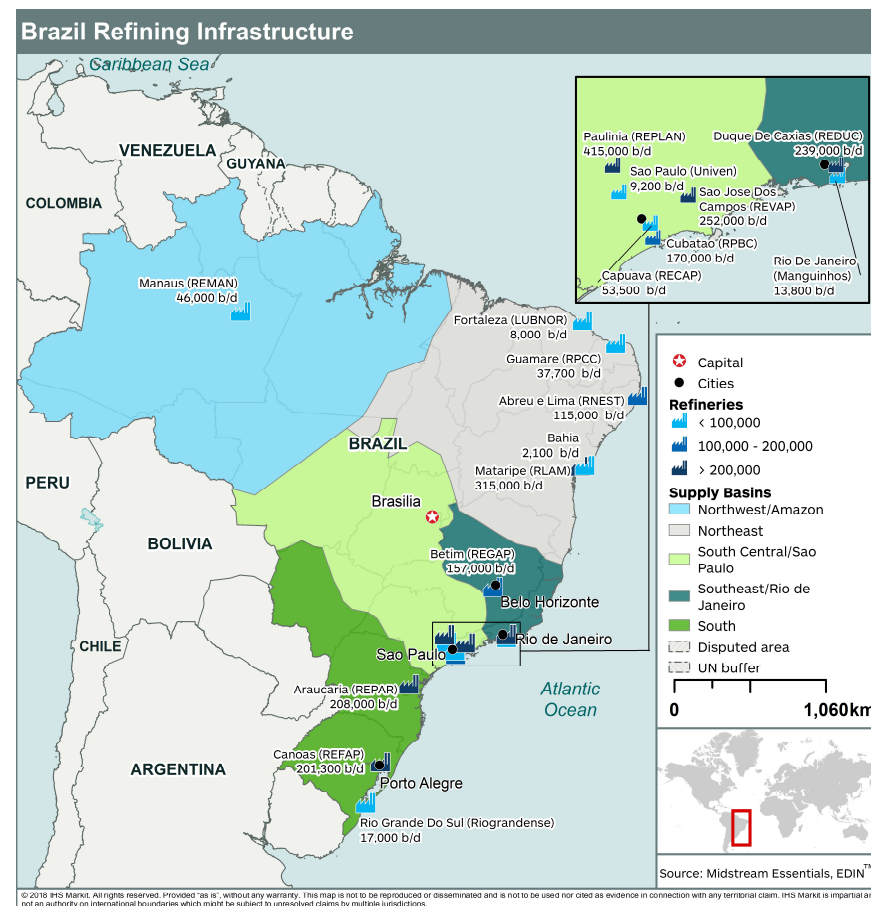
- For a country of its breadth, Brazil’s downstream infrastructure is somewhat limited geographically.
- Refining capacity is currently insufficient to meet domestic demand and, even though the country’s population is concentrated on the coasts (around its refineries), there are still significant swaths of Brazil that are logistically isolated.
 - There is only one true long-haul product pipeline in Brazil, which extends from São Paulo to the capital Brasília.
- The other inland markets are reliant on rail, truck, or river barge for product supply.
- The country can be roughly divided into five “supply basins”.
 - These five refined product value chains (Northwest, Northeast, South, São Paulo, and Rio de Janeiro) are semi-distinct, with little competition among them.
- Downstream infrastructure is currently dominated by Petrobras, but the company is looking to sell 60% stakes in its South and Northeast value chains.



Refining infrastructure

Largest refining market in Latin America

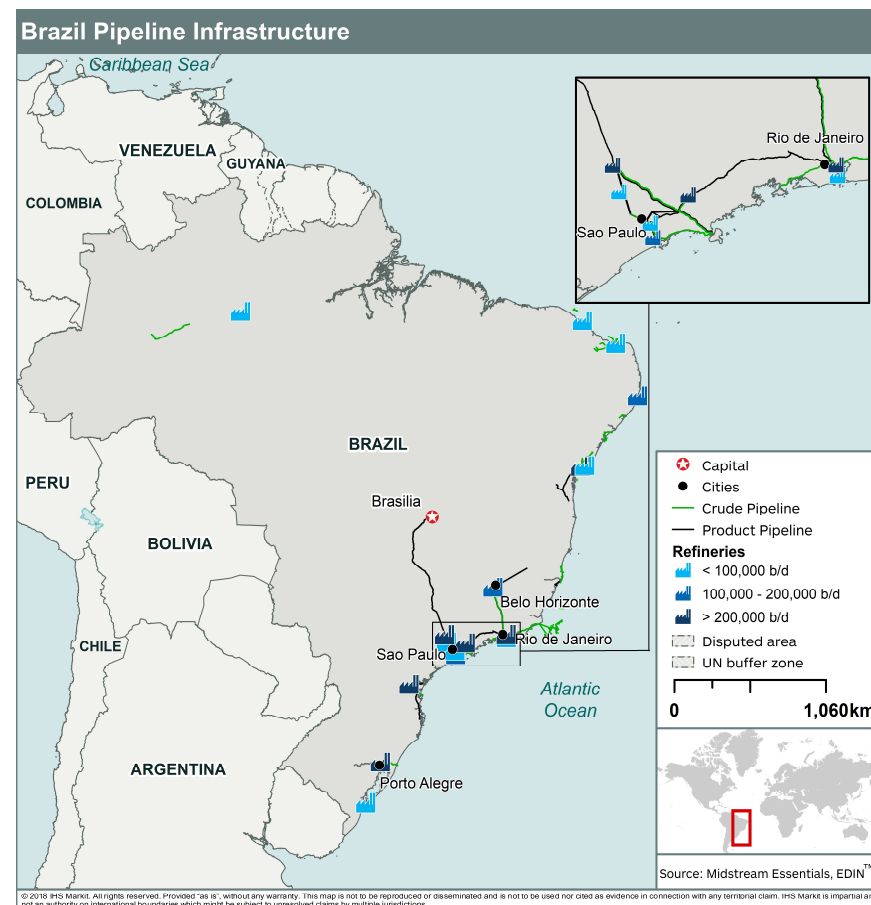
- Brazil has 17 refineries (16 of which are operational) with a combined distillation capacity of around 2.26 million b/d.
- Effectively all of that capacity (2.22 million b/d) is maintained at the 13 Petrobras-operated refineries.
- That could potentially change since Petrobras is attempting to sell a 60% stake in four of its refineries.
- Mirroring population (and refined product demand), refining capacity is concentrated along the coast.
- Approximately half of Brazilian refining capacity is located in the São Paulo and Rio de Janeiro greater metropolitan areas.
 - Petrobras is building another refinery (COMPERJ) outside of Rio de Janeiro, though construction has been severely delayed.
- Another 25% of distillation capacity is located in other southern metro areas like Belo Horizonte or Porto Alegre.
- There are just four fuel refineries in the northern states.
 - Petrobras had plans to build three large refineries in the northeastern states, but two of them were cancelled and the third (Abreu e Lima) has only been partially completed.



Pipeline infrastructure

Very limited product pipeline capacity to inland states

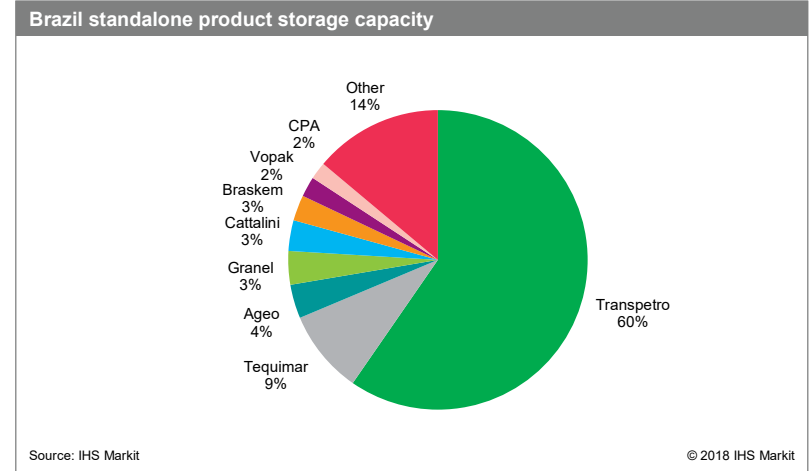
- Petrobras owns effectively all of the country's crude and product pipeline infrastructure.
 - Equal access is guaranteed to all market players, though in practice Petrobras is the primary (or only) shipper on most lines.
- There are just two crude distribution pipelines in Brazil, one extending from the upstream fields in the Amazonas Basin to the Coari river terminal and the other from the coast to the Betim refinery.
 - There are a handful of shorter-haul pipelines linking coastal refineries to offshore fields or marine terminals.
- Similarly, there are several pipelines facilitating product distribution adjacent to Brazil's refineries (e.g. within and between the São Paulo and Rio de Janeiro metro areas).
- There are only three long-haul distribution product pipeline systems.
 - OSBRA, linking São Paulo area refineries with markets to the north, including the capital and third largest city of Brasília.
 - ORBEL, linking the Betim refinery with Rio de Janeiro.
 - A 260 km pipeline linking Betim to the regional city of Governador Valadares.
- Much of the country's population lives relatively close to a refinery or one of these pipelines, but there are still millions of Brazilians in other regions that must rely on rail, barge, or truck for product supply (Campo Grande and Cuiabá are two such metropolitan areas).



Storage infrastructure

Petrobras subsidiary Transpetro dominates crude and oil product storage sector

- The Brazilian terminal sector is only slightly more diversified than the pipeline one.
- Petrobras (via Transpetro) owns 37 of the market's 92 standalone product terminals.
 - However, Transpetro's terminals are far larger than average and, as such, the company accounts for a full 60% of refined product storage capacity.
- The only other major player in the sector is Tequimar (part of Ultra Group) which owns six terminals and around 9% of standalone storage capacity.
 - The Ultra Group also owns Ipiranga, Brazil's second largest fuel retailer.
- Petrobras owns 100% of Brazil's crude storage capacity and all of the product storage capacity located at its refineries.
 - If this on-site refinery capacity is included, Petrobras owns more than 80% of the country's refined product storage capacity.
- Storage capacity is concentrated along the coast, which means that the bulk of the population is located close to a terminal.
 - It also means that supply logistics are cumbersome for the smaller interior markets, which, as noted, are also isolated from the nation's pipeline network.



Storage infrastructure

- As noted, storage capacity is overwhelmingly located along the coastal population centers.
- There are five states located along Brazil's northern and western borders that have no storage capacity at all.
- Though among the smallest states in Brazil, they are still collectively home to around 7 million people.
- They are hundreds of kilometers from the nearest refinery.
- These states also lack pipeline infrastructure so product distribution is via rail, truck, and/or barge.
- Several other interior states are also underserved in terms of storage capacity and/or logistical infrastructure.

Brazil storage capacity by state (1,000 m ³)			
State	Crude	Product	Total
Sao Paolo	4,212	8,602	12,815
Rio de Janeiro	2,551	2,380	4,931
Rio Grande do Sul	1,076	1,534	2,610
Bahia	544	1,890	2,434
Parana	412	1,571	1,983
Pernambuco	507	1,180	1,688
Minas Gerais	319	960	1,279
Santa Catarina	467	108	574
Amazonas	178	296	474
Rio Grande do Norte	166	115	281
Maranhao	-	256	256
Espirito Santo	78	147	225
Sergipe	156	-	156
Ceara	56	98	154
Goiias	-	122	122
Distrito Federal	-	72	72
Alagoas	21	37	58
Paraiba	-	43	43
Para	-	41	41
Tocantins	-	22	22
Mato Grosso do Sul	-	12	12
Piaui	-	8	8

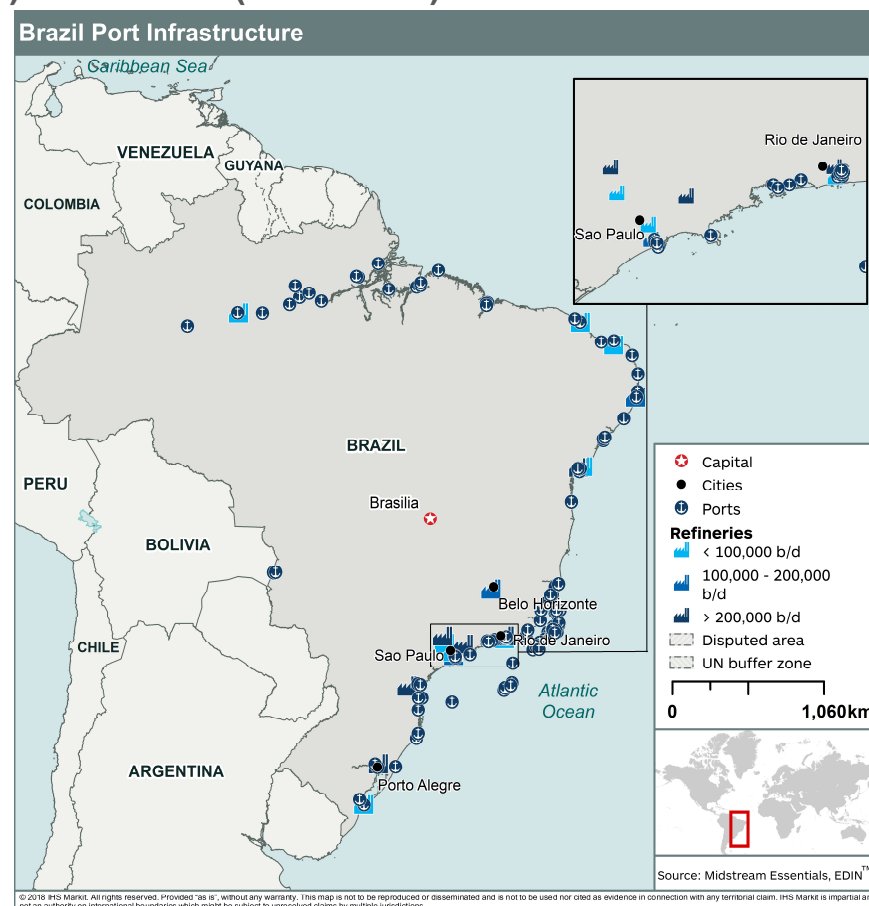
Source: IHS Markit

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Port infrastructure

Well-developed port infrastructure for products (inbound) and crude (outbound)

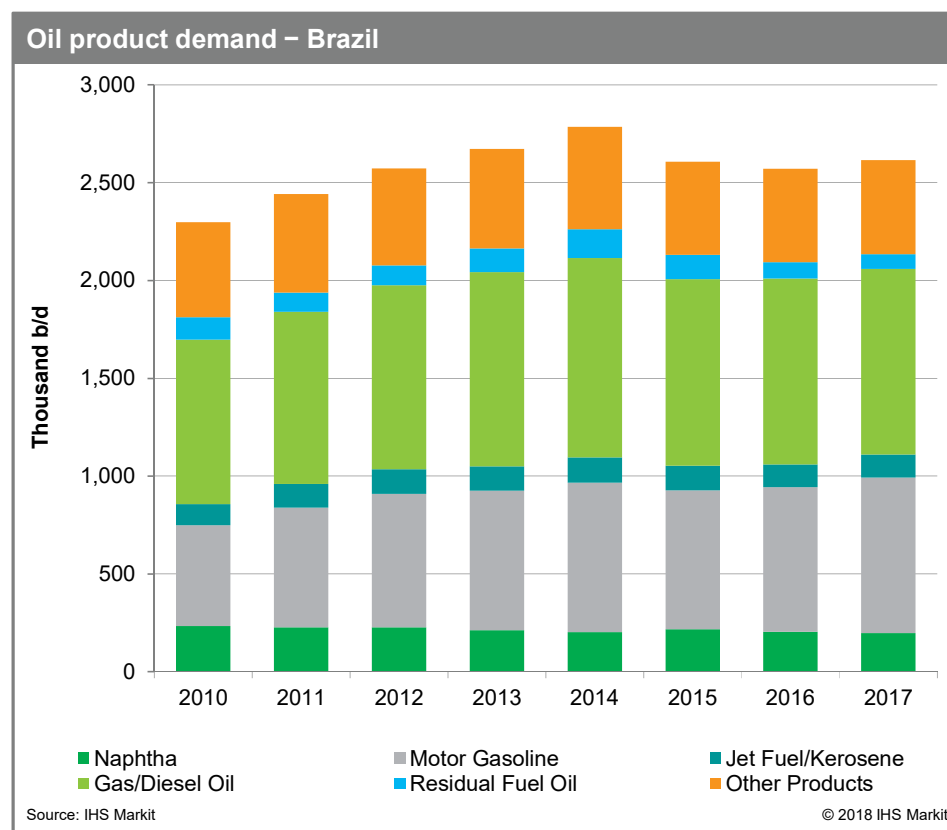
- Since Brazil is both a major crude exporter and major product importer, it has a large (and growing) port infrastructure.
- Brazil is also one of the world's biggest mineral exporters (predominantly iron ore and bauxite).
- Brazil is home to Latin America's busiest container port (Santos), which is located just outside of São Paulo.
- The Açú Superport, located some 300 km northeast of Rio de Janeiro, opened in June 2016.
 - The port, owned by Prumo Logistica, has over 15 miles of docks, an offshore oil terminal, a maritime diesel terminal, and an LNG terminal.
- There are many other smaller offshore loading ports in the southeast since the continental shelf there is home to the bulk of Brazil's crude production.
- There are also several small ports on the Amazon River.



Oil product demand

Powered by gasoline, Brazilian product demand rebounds slightly in 2017

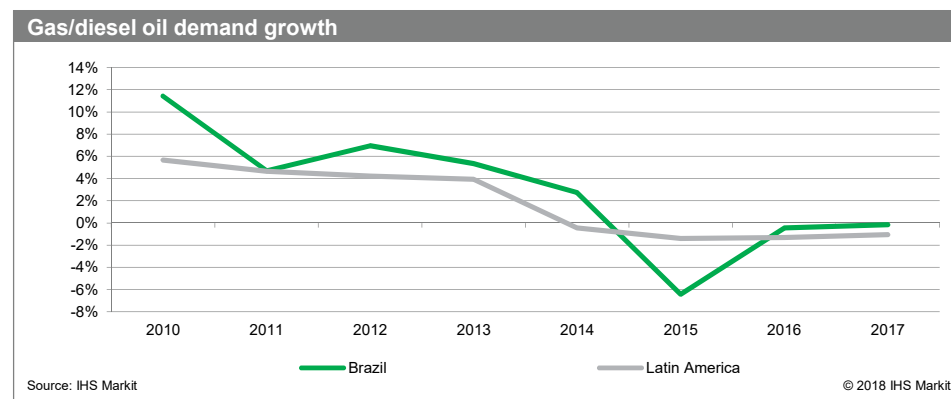
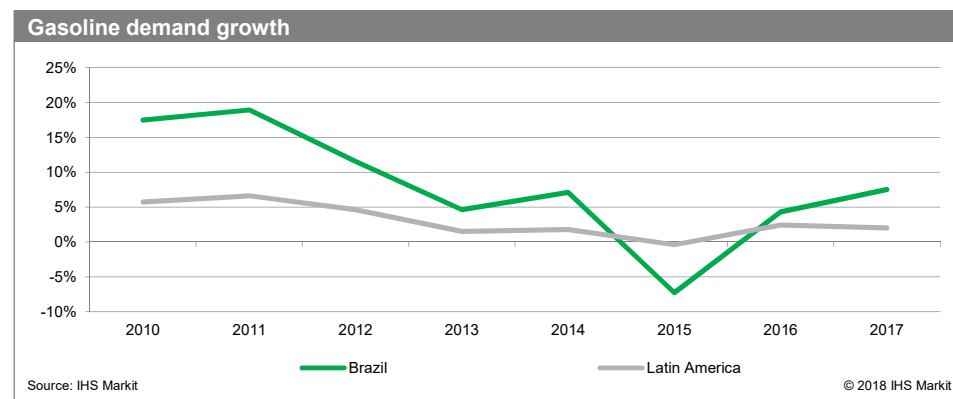
- After two years of decline, Brazilian refined product demand rose slightly (+1.7%) in 2017.
- The country has begun to emerge from recession, with GDP rising by 1.0% in 2017 after two years of 3.5+% contraction.
- Gasoline accounted for effectively all of this increase, with consumption rising by 7.5% y-o-y.
- LPG demand rose by around 2% and jet fuel by around 1%, though the increase was small in an absolute sense.
- Demand for all other major products declined, including a 10.6% drop in RFO consumption and 14.2% decrease for asphalt.
- Overall product demand is still down by more than 6% from the 2014 peak.
 - Gas/diesel oil and RFO account for the most of this decrease, with the latter down by nearly 50% from 2014.
 - Gasoline, meanwhile, reached a new all time high last year at 795,000 b/d.
 - Notably, this volume includes the sizeable impact of ethanol blended into the gasoline pool.



Oil product demand

Gasoline and gas/diesel oil demand growth surge past Latin American average

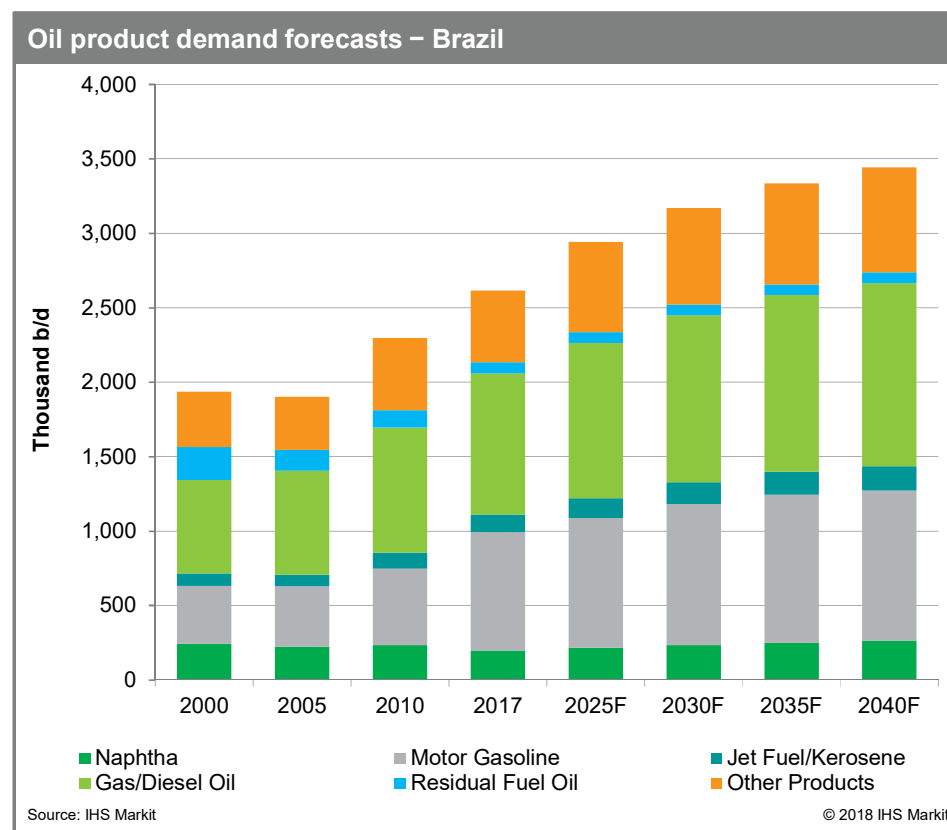
- Though demand growth has decelerated recently, Brazilian gasoline consumption is up dramatically over the past several years.
 - Growth was 7.5% last year, though it had averaged above 15% annually between 2010 and 2012.
 - Brazilian gasoline demand can be relatively volatile since a large fraction of its vehicle fleet can utilize either the regular E27 gasoline blend (known as Gasoline C) or pure hydrous ethanol (100% ethanol).
 - For example, strong gasoline demand growth in the early 2010s was partly due to the fact that ethanol prices were relatively high, which led consumers to shift away from E100. Similarly, gasoline demand plummeted in 2015 partly due to the recession, but also due to a relative decrease in the price of ethanol, which led flex-fuel consumers to shift back to E100.
- Gas/diesel oil demand has now declined for three consecutive years, though the change over the past two years was effectively nil.
 - As elsewhere, gas/diesel oil consumption is strongly associated with economic health.
- Brazilian gasoline and gas/diesel oil demand growth rates have been higher than the region at large over the past two years.



Oil product demand forecast

Brazilian product demand to approach 3.0 million b/d by 2025

- Brazilian product demand growth is expected to continue for the foreseeable future, albeit at a much slower pace than the previous 10-15 years.
- Indeed, annual growth will average around 1.5% through 2025.
- Gasoline, LPG, and gas/diesel oil will account for most future growth.
 - Transport gas/diesel consumption will rise 17% by 2025, while LPG demand will increase by more than 20%.
 - Gasoline demand, meanwhile, is expected to grow by just 9.4%, barely faster than population growth during this time.
- Growth for these three products will wane further post-2025 as population growth slows, the economy matures, and efficiency improves.
- Asphalt demand is expected to increase significantly over the medium term as the Brazilian economy rebounds, rising more than 90% by 2025.
 - Asphalt will, of course, remain a small fraction of total consumption.
- Jet fuel is expected to grow slowly and steadily through 2040.
- Residual fuel oil is the only major product that will decline going forward, pulled down by shifting demand from the industrial and energy sectors.
 - This does not include demand from the international bunker sector, which is expected rise slightly.

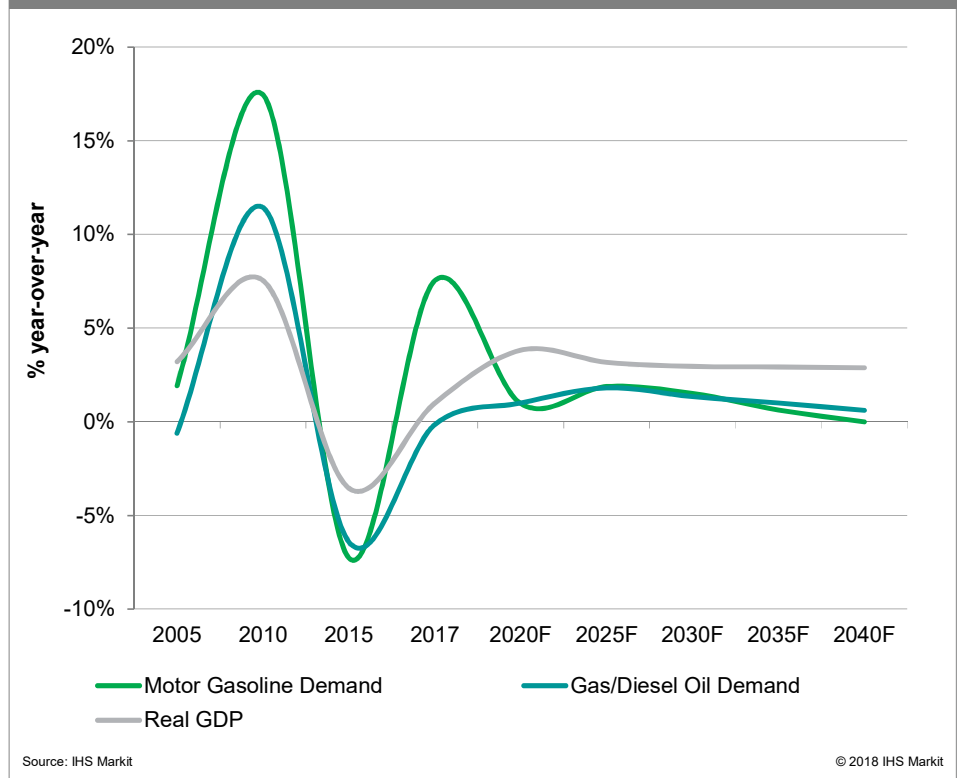


Oil product demand forecast

Large flex fuel fleet creates additional layer of uncertainty for Brazil gasoline forecast

- As elsewhere, Brazilian diesel and (to a lesser extent) gasoline demand is associated with economic growth.
- As the economic recovery gains steam in the coming years, gas/diesel oil consumption will steadily increase.
- Gas/diesel oil demand growth will reach around 2% by 2025 before hitting its longer term plateau of 0.5%-1.0% due to the typical efficiency gains of a maturing economy.
- Gasoline demand growth will follow a similar trajectory but will remain lower than that for gas/diesel oil.
- As elsewhere, efficiency gains will be more pronounced in the passenger vehicle fleet.
- More so than in most other markets, uncertainty exists within the Brazilian gasoline forecast due to that country's unique ability to rapidly switch from refined gasoline to pure hydrous ethanol.

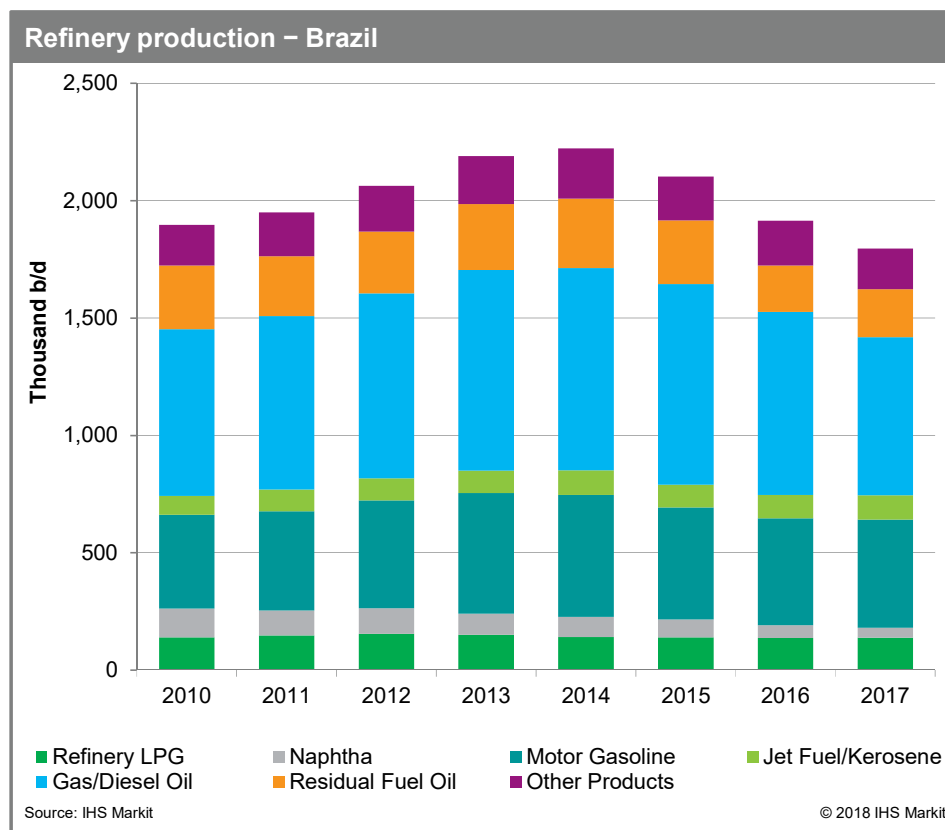
Motor gasoline demand and economic growth – Brazil



Refinery production

Petrobras throttling back on production in order to optimize operations but also facing competition from imports

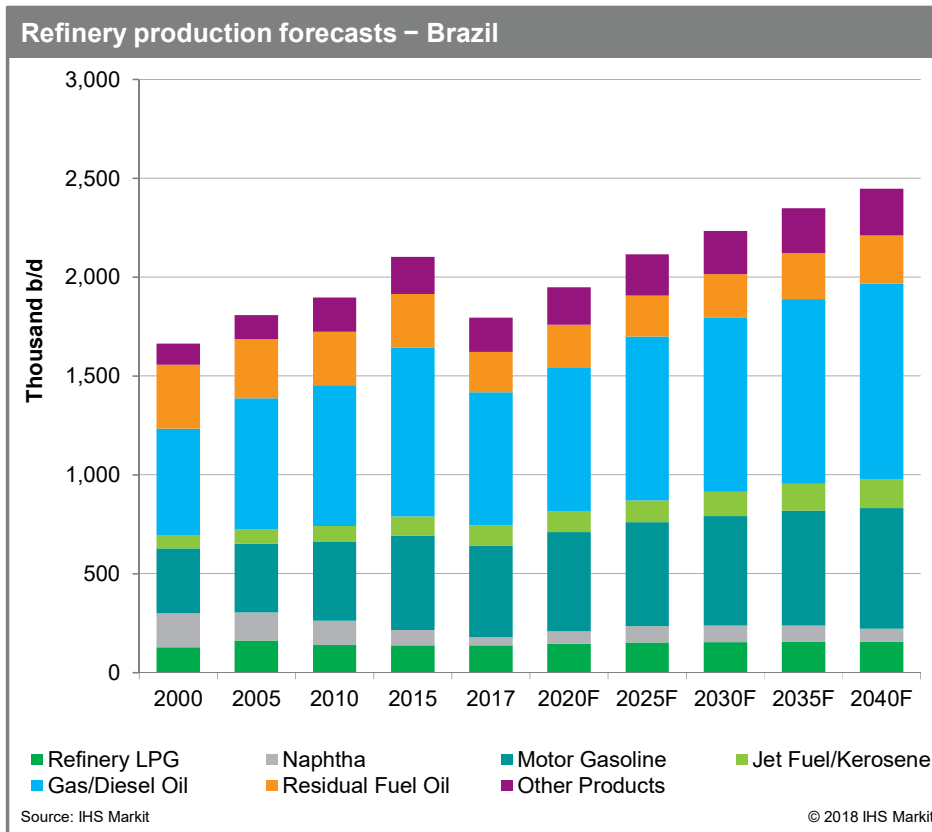
- Mirroring demand, Brazilian refinery production has trended downward since 2014.
 - However, unlike demand, production continued to decline last year, falling by another 6.2%.
- Production last year was nearly 20% below the 2014 record, and the lowest it has been since 2003.
- Output has unsurprisingly fallen across all products, but production of lower value naphtha and RFO has decreased the most dramatically.
 - RFO production is down by 31% between 2014 and 2017, with naphtha output down by some 50% during this period.
- Gasoline production, meanwhile, is down by just 11.5% and jet fuel output is effectively unchanged.
 - Mirroring demand, gas/diesel oil still accounted for the bulk (37.5%) of refinery production last year.
- Lower throughput has allowed Brazil to better optimize yields, as has ongoing refinery investment by Petrobras.



Refinery production forecast

Output will recover, but will take time to approach the 2014 record level

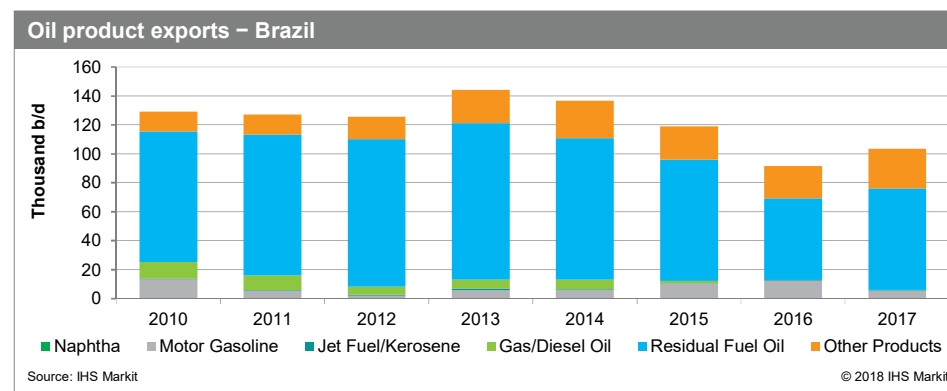
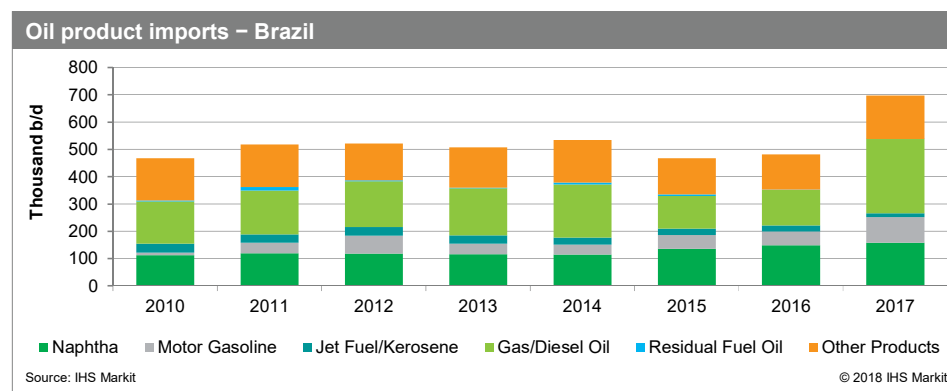
- Brazilian refinery production will recover from the 2017 low point - but this recovery will be gradual.
- Output is not expected to return to the 2014 record level until 2030, and even then refinery utilization will remain lower.
 - A combination of import pressure and a focus on profitability rather than pure production will combine to keep utilization in check.
- The country's yield will continue to lighten, with the RFO fraction expected to drop from 11.4% last year to below 10% in 2023.
- Gas/diesel oil yield, meanwhile, will steadily recover, approaching 40% by 2030.
 - Gasoline fraction will hold relatively steady at 25%, though gross production will increase as throughput rises.
- Overall, gasoline production will rise 14% by 2025, with gas/diesel oil output increasing by 23%.
 - Naphtha output will more than double during this period.



Oil product trade

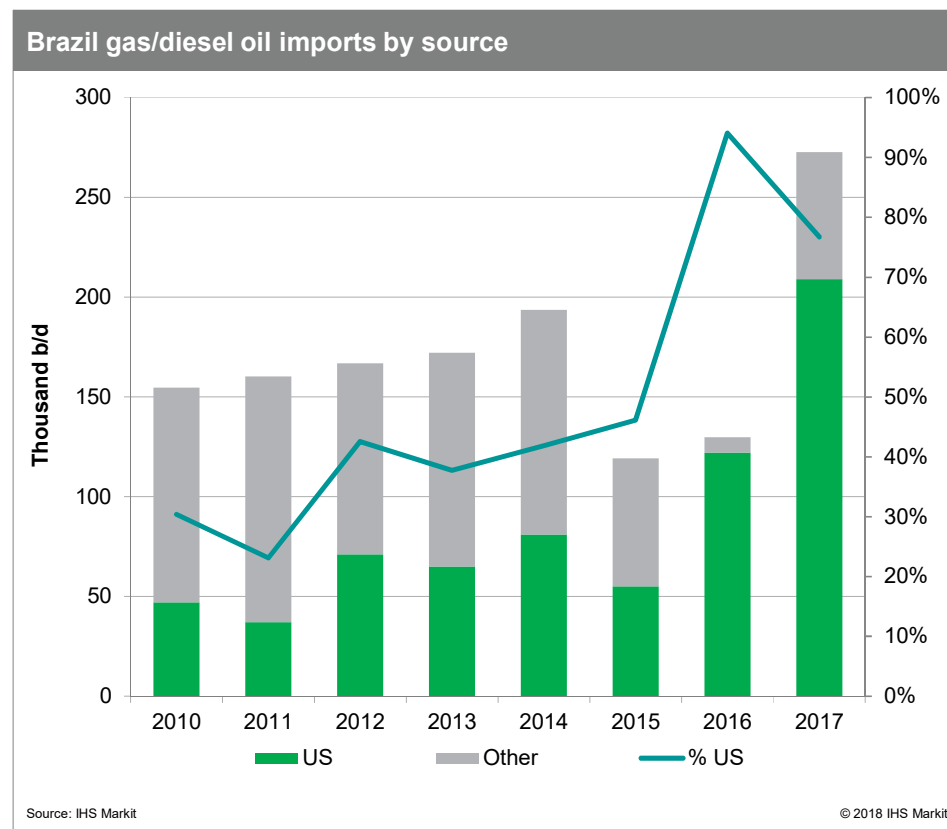
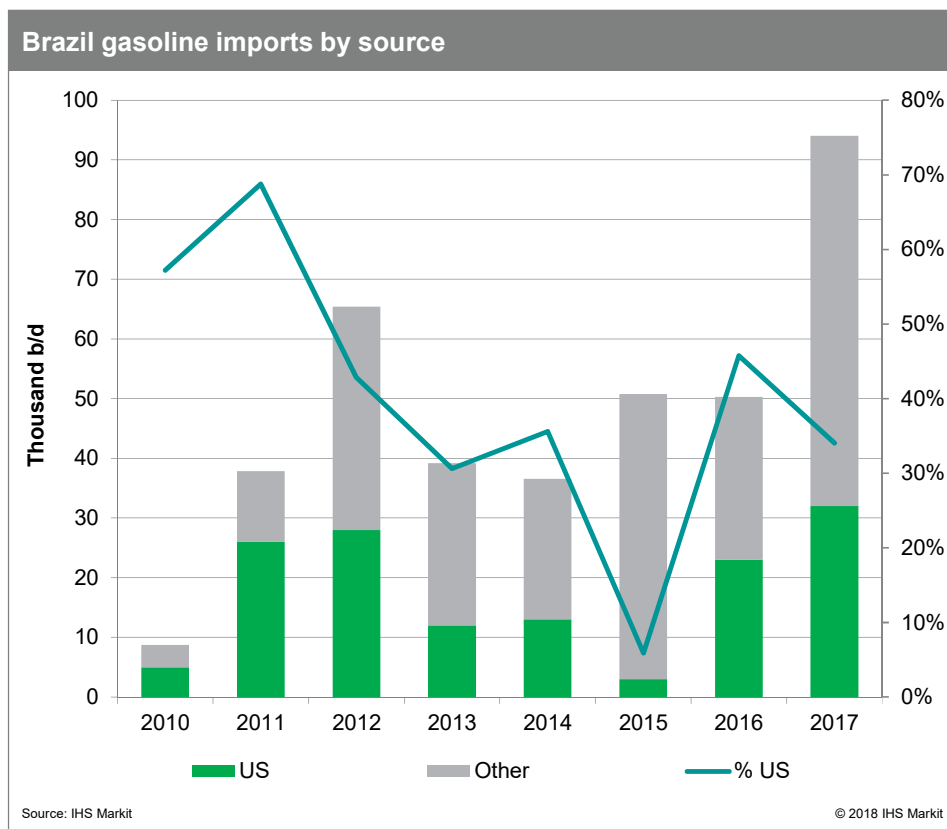
Imports surge in 2017, with Petrobras ceding control to private parties

- The combination of recuperating demand and the continued refinery production decrease has translated to a sharp rise in imports.
- Gasoline imports rose by 87% year on year, with gas/diesel oil imports more than doubling. Combined imports of the two products averaged nearly 370,000 b/d in 2017.
- LPG imports increased by 13.7% and are up by around 25% since 2014.
- The country is also a sizeable naphtha importer, receiving more than 150,000 b/d last year.
- Imports, previously handled exclusively by Petrobras, are now done predominantly by third parties as Petrobras adopted import parity pricing structure to incentivize investments in the sector.
- Brazil also exports a significant volume of product – predominantly RFO and heavy/unfinished products.
 - RFO exports have dropped sharply as refinery output of that product has also declined.



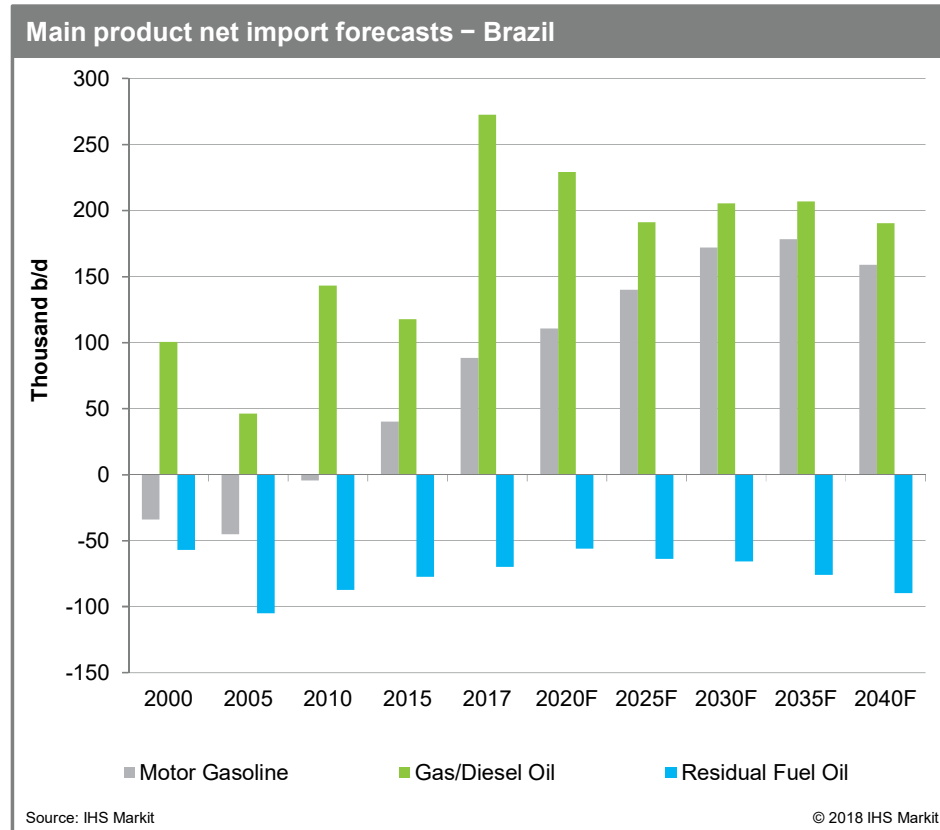
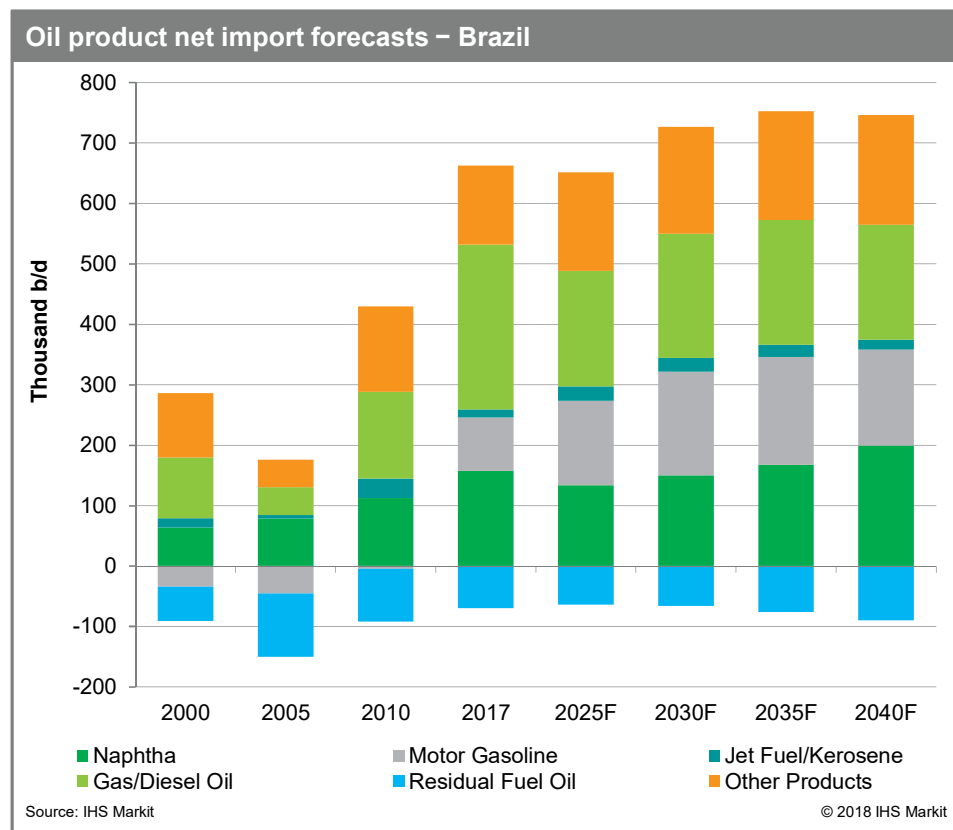
Oil product trade

US import dependence high for gas/diesel oil, relatively modest for gasoline



Oil product trade forecast

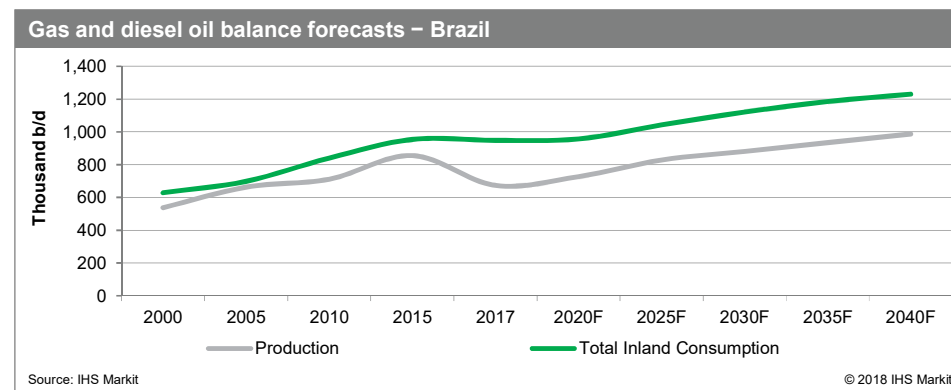
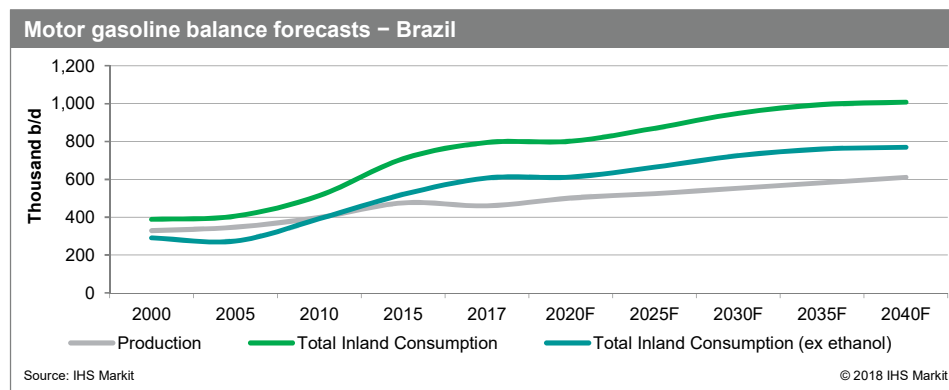
Overall product deficit will hold steady, with gas/diesel imports falling while gasoline receipts rise



Oil product balance forecast

Gasoline balance will worsen while gas/diesel oil balance improves

- While the government had previously entertained designs at meeting all Brazilian demand locally, it appears to have traded this goal in favor of more profitable operation for Petrobras.
- Brazil is expected to have a lasting (and significant) deficit for gasoline and gas/diesel oil.
- The completion of COMPERJ and RNEST II (which are both diesel-oriented) will narrow the gas/diesel oil deficit in the early-2020s.
 - But absent future hypothetical refinery expansion, the deficit will re-widen, though it will not return to last year's record level.
- With future refinery investment geared towards diesel, Brazil's gasoline deficit is expected to remain relatively wide.
 - It, too, will narrow in the near term as production rebounds and demand holds steady.
 - Expected increase in the ethanol blend will help offset some of rising supply deficit.

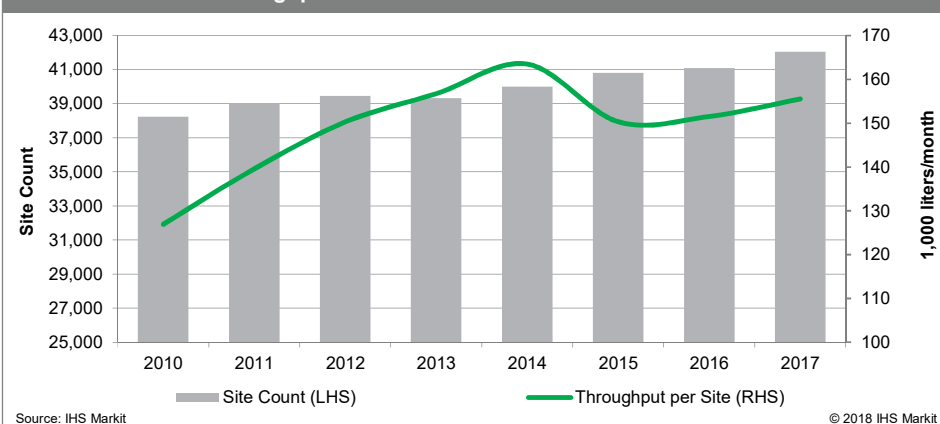


Retail overview

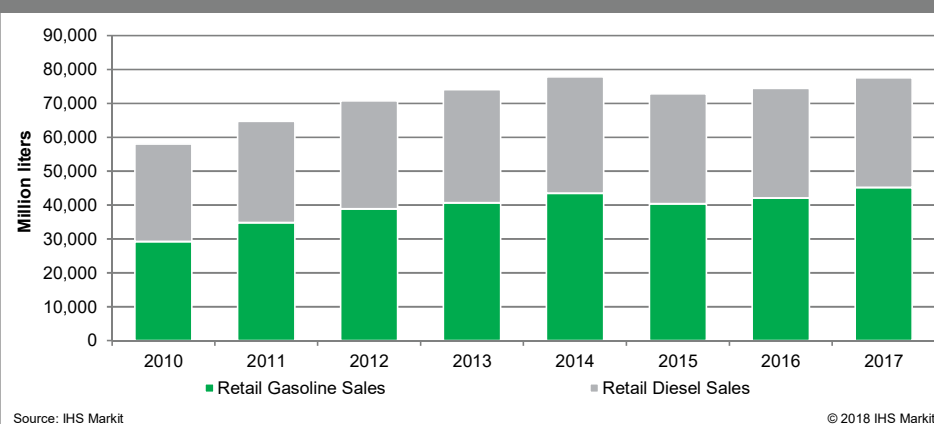
Gasoline sales stall in 2017, but diesel sales increase sharply

- Brazil's retail network, by far the largest in Latin America, continued to expand last year, increasing 2.3% to more than 42,000 service stations.
 - Network size relative to light vehicle fleet is far higher than that in other big Latin markets: Argentina, Mexico, and Venezuela.
- Retail fuel sales rose 4.2% last year, the second consecutive year of strong growth after 2015's sharp drop.
 - Growth was entirely attributable to higher gasoline sales, which rose 7.5% in 2017 to reach a record 45 billion liters.
 - Retail diesel sales, meanwhile, fell sharply in 2015 and have continued to slide down slightly since then. Sales last year were down to 32.4 billion liters.
- Overall retail fuel sales were just slightly less than the all time high from 2014.
- However, coupled with the network expansion, Brazilian per site throughput is still well below that from 2014.
 - Brazil's per site fuel throughput is among the lowest in Latin America, ahead of only Paraguay.
 - A significant portion of Brazil's vehicle fleet utilizes pure hydrous ethanol (E100), which is not reflected in the data below, but even if such sales were included, Brazil's per site fuel throughput would still trail far behind every other major market except Paraguay and Colombia.

Retail network and throughput – Brazil



Retail fuel sales – Brazil



Retail overview

Per site fuel throughput rises, but remains among the lowest in Latin America

Fuel retail market – Brazil									Change	Growth	CAGR
	2010	2011	2012	2013	2014	2015	2016	2017	'17/'16	'17/'16	'17/'10
Network (Count)											
Service Stations	38,235	39,027	39,450	39,328	39,993	40,809	41,094	42,037	942	2.3%	1.4%
Annual Change	0.7%	2.1%	1.1%	-0.3%	1.7%	2.0%	0.7%	2.3%	-	-	-
Site Count per 100 Vehicles *	12.54	11.69	10.81	9.94	9.44	9.18	11.50	11.62	0.12	1.0%	-1.1%
Site Count per 1,000 sq.km	4.5	4.6	4.7	4.7	4.7	4.8	4.9	5.0	0.1	2.3%	1.4%
Sales (million liters)											
Retail Gasoline Sales	29,248	34,782	38,799	40,599	43,478	40,316	42,045	45,210	3,165	7.5%	6.4%
Annual Change	17.5%	18.9%	11.5%	4.6%	7.1%	-7.3%	4.3%	7.5%	-	-	-
Retail Diesel Sales	28,797	29,922	31,963	33,484	34,326	32,560	32,418	32,367	-51	-0.2%	1.7%
Annual Change	11.4%	3.9%	6.8%	4.8%	2.5%	-5.1%	-0.4%	-0.2%	-	-	-
As a percent of total diesel **	58%	58%	58%	58%	58%	58%	58%	58%	-	-	-
Total Retail Sales	58,045	64,704	70,761	74,083	77,804	72,876	74,463	77,577	3,114	4.2%	4.2%
Throughput (1,000 liters/site/month)											
Gasoline Throughput	64.0	75.0	82.4	85.9	91.4	83.2	85.6	90.6	5.1	5.9%	5.1%
Annual Change	15.1%	17.3%	9.8%	4.2%	6.4%	-9.0%	2.9%	5.9%	-	-	-
Diesel Throughput	63.0	64.5	67.9	70.8	72.1	67.2	66.0	64.9	-1.1	-1.6%	0.4%
Annual Change	9.2%	2.5%	5.2%	4.4%	1.8%	-6.9%	-1.8%	-1.6%	-	-	-
Total Retail Throughput	126.9	139.6	150.3	156.7	163.5	150.3	151.5	155.5	4.0	2.6%	2.9%

Notes: * Vehicle fleet is a sum of passenger cars and light commercial vehicles. ** Share of retail sales of a fuel in its total inland consumption in transportation (by land and other means).

Source: IHS Markit

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Retail fuel competitive landscape

Petrobras still the dominant retailer in terms of market share (especially for diesel), but its lead continues to shrink

Fuel retail company overview – Brazil													
Top Players *													
	Count '16	Count '17	'17'16 Change	Network Share '17	Sales			Market Share			Throughput		
	Sites	Sites	%	%	Gasoline	Diesel	Combined	Gasoline	Diesel	Combined	Gasoline	Diesel	Combined
					million liters						1,000 liters/site/month		
Petrobras (BR)	8,176	8,277	1.2%	19.7%	10,968	10,056	21,024	24.3%	31.1%	27.1%	111	102	213
Ipiranga	7,548	8,005	6.1%	19.0%	8,961	6,894	15,855	19.8%	21.3%	20.4%	96	74	170
Shell	5,900	6,272	6.3%	14.9%	9,358	6,538	15,897	20.7%	20.2%	20.5%	128	90	218
ALE	2,100	2,050	-2.4%	4.9%	1,958	906	2,864	4.3%	2.8%	3.7%	79	36	115
Others	17,370	17,433	0.4%	41.5%	13,965	7,972	21,937	30.9%	24.6%	28.3%	n/a	n/a	n/a
Grand Total/Average	41,094	42,037	2.3%	100.0%	45,210	32,367	77,577	100.0%	100.0%	100.0%	90	64	154

Notes: * Site count and other indicators for a company refer to all filling stations displaying the company's brand name(s).

Source: IHS Markit

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Retail market evolution

Dramatic expansion by independents and unbranded retailers since 2015

Combined retail sales – Brazil								
	2010	2011	2012	2013	2014	2015	2016	2017
Retail sales (million liters)								
Petrobras (BR)	20,379	22,392	23,845	24,496	25,631	23,289	21,539	21,024
Shell	6,060	10,460	10,984	13,533	14,716	14,129	15,006	15,897
Ipiranga	12,182	13,867	15,257	16,112	16,639	15,834	15,415	15,855
ALE	2,540	2,741	3,120	3,802	3,878	3,309	3,107	2,864
<i>Others</i>	<i>16,884</i>	<i>15,244</i>	<i>17,555</i>	<i>16,140</i>	<i>16,940</i>	<i>16,315</i>	<i>19,396</i>	<i>21,937</i>
Total Market	58,045	64,704	70,761	74,083	77,804	72,876	74,463	77,577
Combined market share								
Petrobras (BR)	35.1%	34.6%	33.7%	33.1%	32.9%	32.0%	28.9%	27.1%
Shell	10.4%	16.2%	15.5%	18.3%	18.9%	19.4%	20.2%	20.5%
Ipiranga	21.0%	21.4%	21.6%	21.7%	21.4%	21.7%	20.7%	20.4%
ALE	4.4%	4.2%	4.4%	5.1%	5.0%	4.5%	4.2%	3.7%
<i>Others</i>	<i>29.1%</i>	<i>23.6%</i>	<i>24.8%</i>	<i>21.8%</i>	<i>21.8%</i>	<i>22.4%</i>	<i>26.0%</i>	<i>28.3%</i>
Total Market	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: IHS Markit

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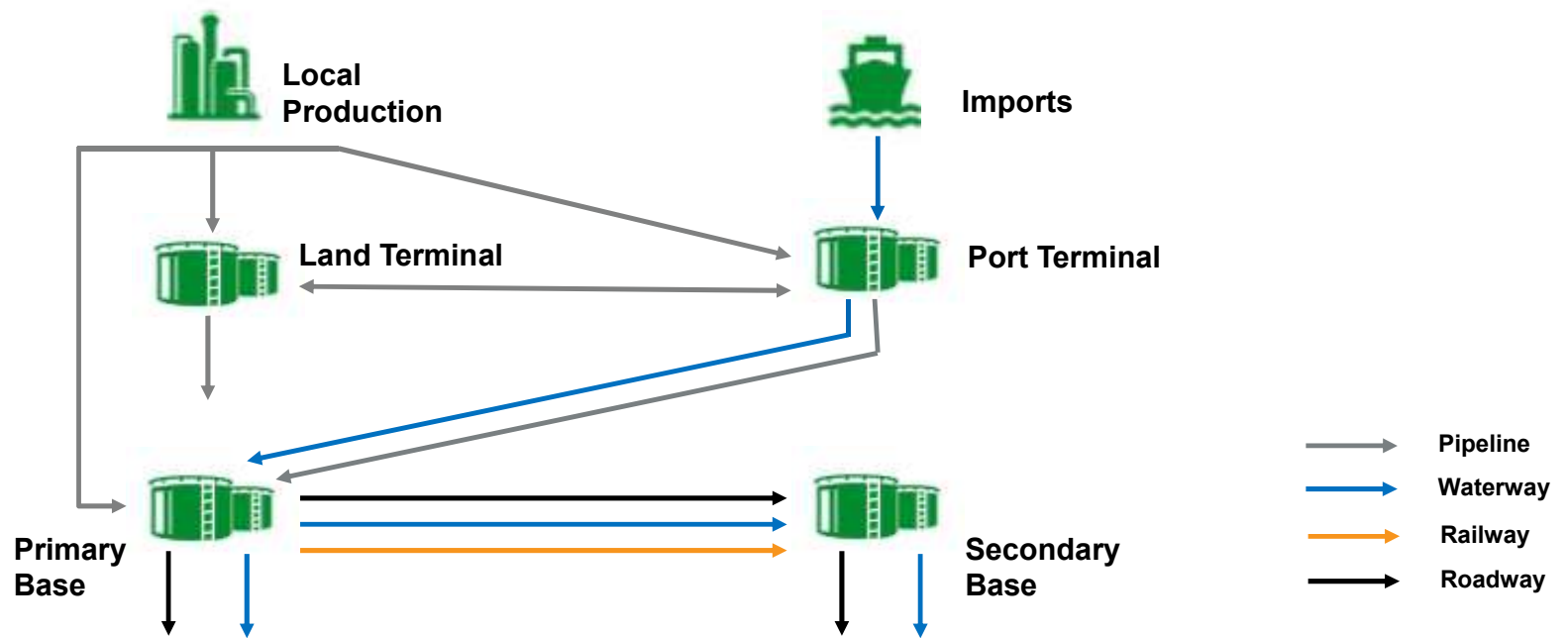
Combined throughput per site – Brazil								
	2010	2011	2012	2013	2014	2015	2016	2017
Throughput per site (1,000 liters/month)								
Shell	209	251	199	237	239	211	215	218
Petrobras (BR)	234	252	263	266	273	241	220	213
Ipiranga	182	197	203	204	201	185	174	170
ALE	136	140	150	171	164	135	125	115
Nat. Avr.	127	138	149	157	162	149	151	154

Source: IHS Markit

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Brazil is still largely dependent of fuel distribution through waterways and roadways to reach most distributors

Supply, transport, and storage types for Gasoline A and Diesel A in Brazil



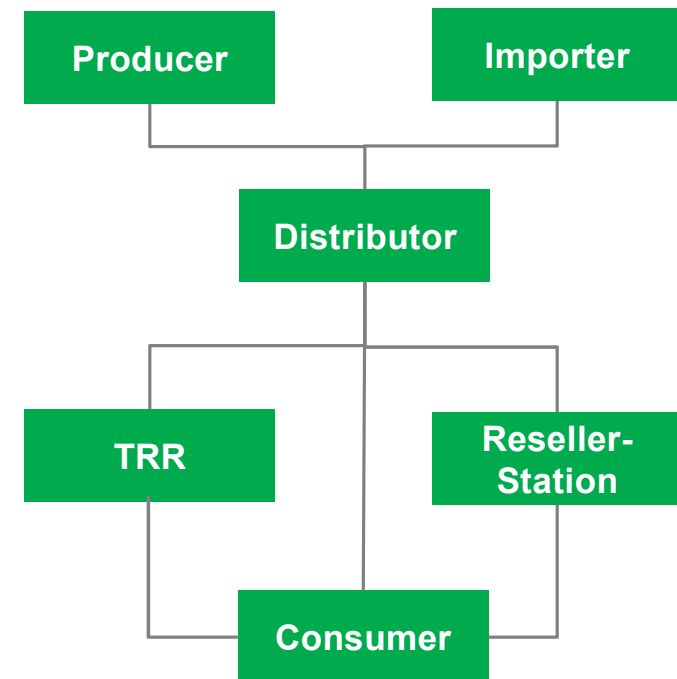
Source: ANP

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The “Petroleum Law” was intended to deregulate and open the oil and gas sector but fear of “unfair competition” and convoluted legal and fiscal rules maintain distortions in the market

- As noted previously, local supply is heavily concentrated with Petrobras. In the last 3 years Petrobras share was between 80% and 90% of gasoline A and between 67% and 92% of diesel A delivered to distributors.
- The fuel supply chain is very regulated and constrained:
 - Law 9.478/97 and ANP Ordinance 41/2013 prohibits that refiners and distributors of owning retail stations
 - ANP Ordinances 314/2001 and 313/2001 limit imports to be done only by producers, importers, or final consumers
 - TRR are bulk resellers prohibited of selling motor gasoline, LPG, biodiesel, biodiesel blend, aviation fuel and vehicular natural gas.

Fuel supply chain – gasoline and diesel



Source: ANP

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Fuel supply agents by the numbers




Suppliers	Distributors	Resellers/Retailers	Consumers
<ul style="list-style-type: none"> • 18 oil refiners • 378 ethanol refiners • 407 Importers and exporters • 108 Lubricants producers • 206 lubricants importers • 13 lubricants refiners • 51 biodiesel producers 	<ul style="list-style-type: none"> • 156 liquid fuels distributors • 18 solvents distributors • 19 LPG distributors • 28 Asphalt distributors • 7 Jet fuel distributors 	<ul style="list-style-type: none"> • 379 TRRs • 42,536 Retailers (18,746 Unbranded-"white flag") • 70,424 LPG retailers • 279 Jet fuel retailers • 22 lubricants collectors 	<ul style="list-style-type: none"> • 18,607 supply points • 60 industrial solvents consumers

Note: as of October 2018
Source: ANP

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Regulatory overview

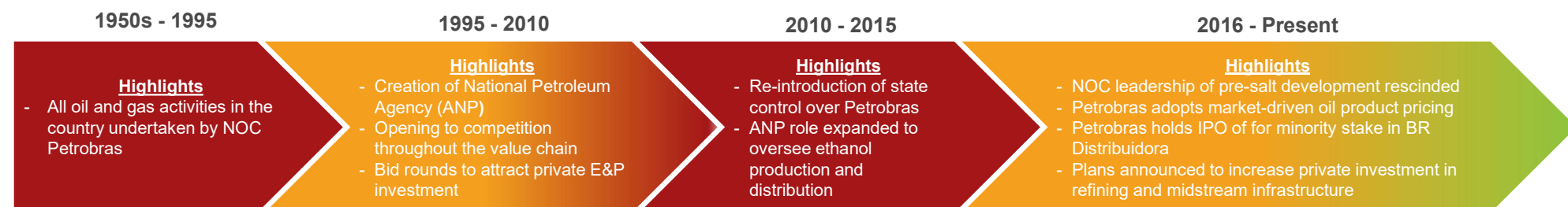
Formal barriers to entry are low, but Petrobras' dominance limits private investment in practice

	Is legal framework very open?	Does NOC have a dominant position?	Are there barriers to private competition?
 REFINING	Yes. No legal restrictions to private participation are in place.	Yes. Petrobras owns better than 98% of active refining capacity.	No.
 IMPORTS & LOGISTICS	Yes. No legal restrictions to private participation are in place.	Yes. Petrobras owns all pipeline infrastructure and 96% of crude and product storage capacity through its subsidiary Transpetro.	No. However, the government's ability to influence domestic product prices has been a deterrent to private participation if those prices are below import parity.
 RETAIL	Yes. No legal restrictions to private participation are in place.	No. Although Petrobras is the largest of the three leading retailers.	No.

Regulatory overview

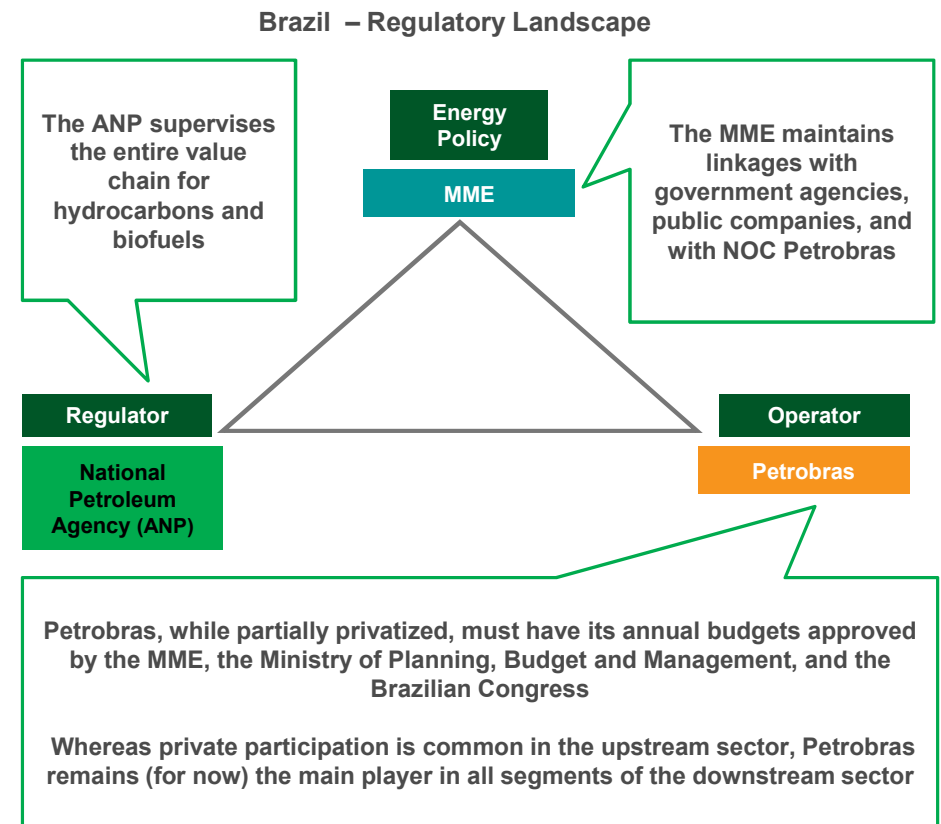
Market is technically open, but Petrobras is still the dominant player

- Brazil carried out an extensive liberalization program between 1997 and 2002, leaving the hydrocarbon sector technically deregulated and private participation permitted through the value chain.
- In practice, most segments remained monopolized by Petrobras and (indirectly) by the government. For example, Petrobras owned effectively all refining capacity and logistical infrastructure. As such, national refined product prices were effectively set by Petrobras, even though there was no longer a “formal” government price-setting mechanism in place.
- And, following Brazil's massive pre-salt oil discoveries in the late-2000s, the government moved to secure control over what it viewed as the country's future. Foreign companies were barred from operating pre-salt blocks and Petrobras was required to hold at least a 30% stake in any project.
- However, the government's role in the hydrocarbon sector has been rapidly rolled back over the past two years.
- Notably, the government now allows private oil companies to operate pre-salt blocks themselves, held a partial IPO of Petrobras's product distribution subsidiary, and is selling a majority stake in four Petrobras refineries (and their associated logistical assets).
- The government also loosened the reins on Petrobras in terms of refined product pricing. Prior to 2015, Petrobras was “influenced” by the government to keep its product prices (and thus the product prices for the entire country) artificially low, resulting in billions of dollars of losses for the NOC. Since then, Petrobras has been able to keep its prices at or above import parity and has steadily increased the frequency with which it updates its prices, though this may now be in question in the aftermath of the truckers' strike.



Hydrocarbon institutions and government decision making

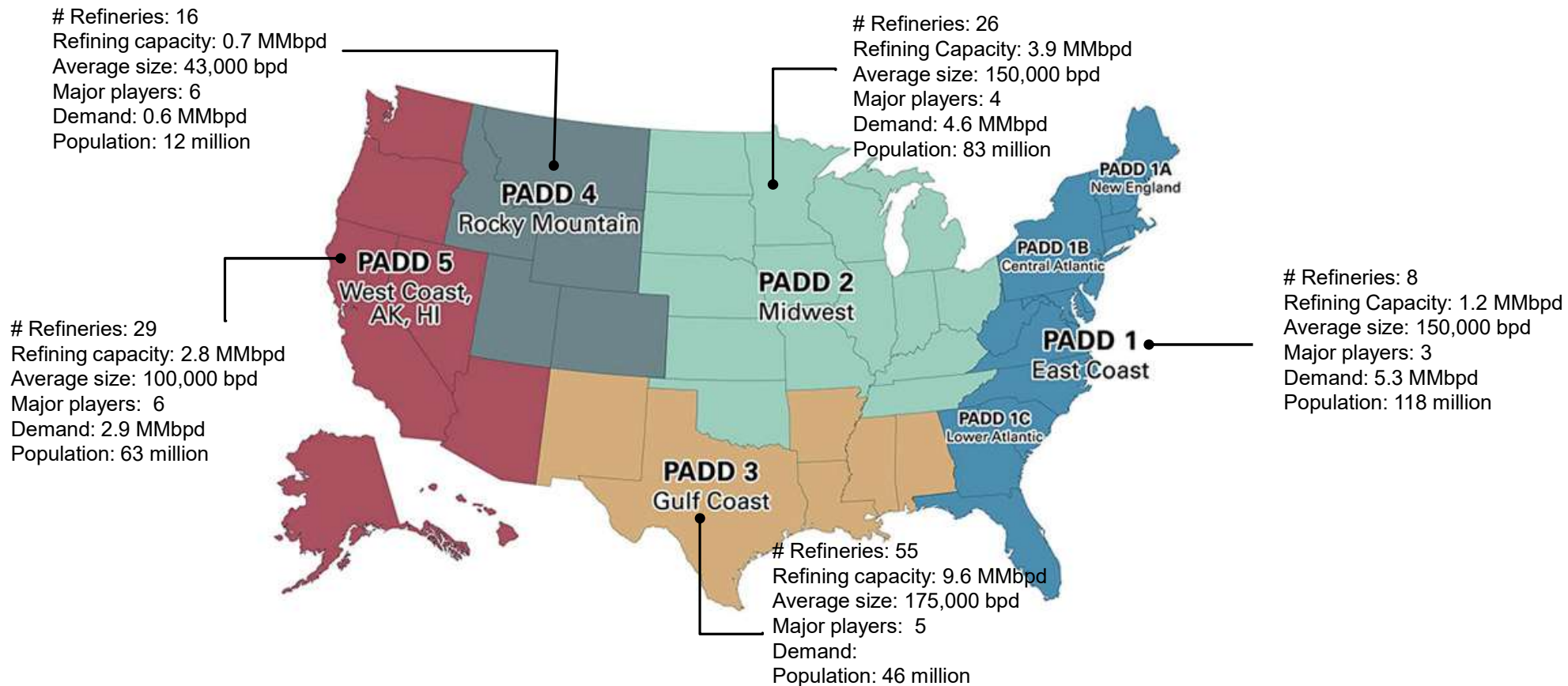
- Brazil's energy policy is overseen by the Ministry of Mines and Energy (MME), which supervises upstream and downstream energy activities as well as mining.
- Three of the country's four secretariats oversee downstream activities: the Petroleum, Natural Gas and Renewable Fuels Secretariat; the Energy Planning and Development Secretariat; and the Electricity Secretariat.
- The major regulatory agency for the energy sector is the National Petroleum Agency (ANP).
 - The ANP was created in the late-1990s to implement the government's market-oriented reforms.
- The regulatory structure of Brazil's energy sector has remained stable since the mid-2000s, despite the various changes described in the previous slides.
- Since September 2011, ANP monitors Brazil's large sugarcane industry, specifically overseeing production and milling, as well as import and export activities. Previously, the ANP was only responsible for supervising the distribution of ethanol.



Distribution model benchmarks

- U.S. fuel distribution model
- European fuel distribution model

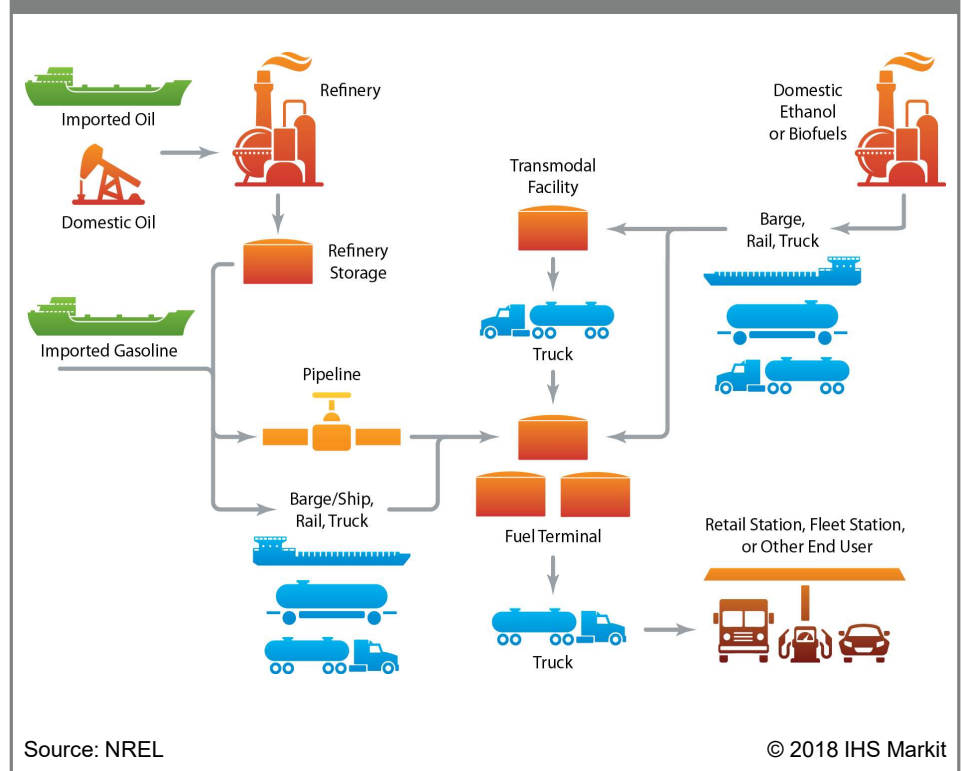
U.S. Refining snapshot



U.S. fuel value chain and diversity - Overview

- The US fuel distribution value chain is extremely fragmented – both vertically and horizontally.
- There is no regulatory restriction on vertical integration.
- There are 141 operable refineries (30+ different companies) in the US with a total refining capacity of 18.2 Million bpd
 - More than 50% of refinery capacity is owned by companies without significant exploration and production activity
 - No single player has more than 16% of the total refining capacity
- Most of refined products are transported by pipelines (oil companies and third parties)
- There are 100+ Wholesalers, 8000+jobbers
- The number of actors proliferates as one moves further down the value chain. There is about 150,000 gas station in the US
 - More than 60% of US retail stores are owned by small (<10 stores) operators, including a many single store operators
 - Major oil companies pretty much have exited the retail operation

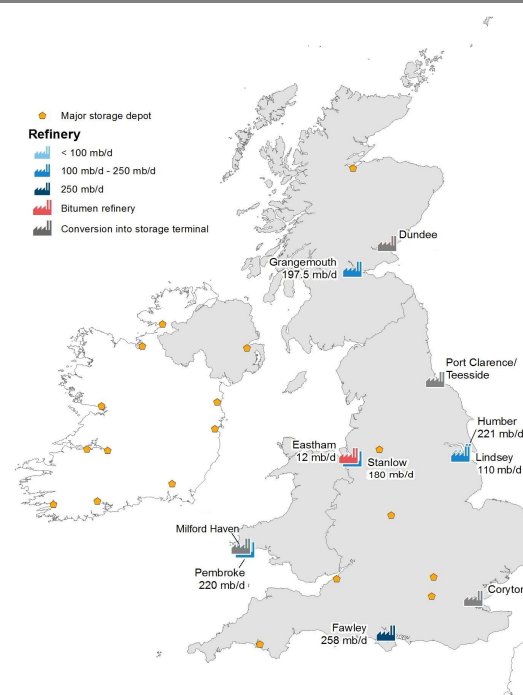
U.S. Fuel chain – from well to consumer



UK Refining – Infrastructure Overview

- UK currently has 1.2 million b/d of refining capacity at seven refineries and 7 different companies
 - Capacity reduced following the closure of several refineries and capacity reductions at others
- Refineries all located at sea ports and most are close to major demand centers
- Inland pipeline systems distribute product to demand centers (see Logistics section for details)
 - Since closure of Coryton, Stanlow is the only refinery linked to the UKOP pipeline
 - Fawley is linked to the Midline pipeline
 - Pembroke is linked to the Mainline pipeline, as was Milford Haven before its conversion to a terminal
- Otherwise product travels by rail or road tanker
- Scotland is dependent on supplies from Grangemouth
- Northern Ireland, which has no refinery, is supplied via imports to Belfast Port; much of it from Grangemouth
- Main refinery-based storage centers are supplemented by sites at Kingsbury (Warwickshire), Plymouth, Avonmouth, Buncefield, Manchester, Belfast, Glasgow and Aberdeen, in addition to many smaller terminals around the country

UK refining infrastructure (2017)

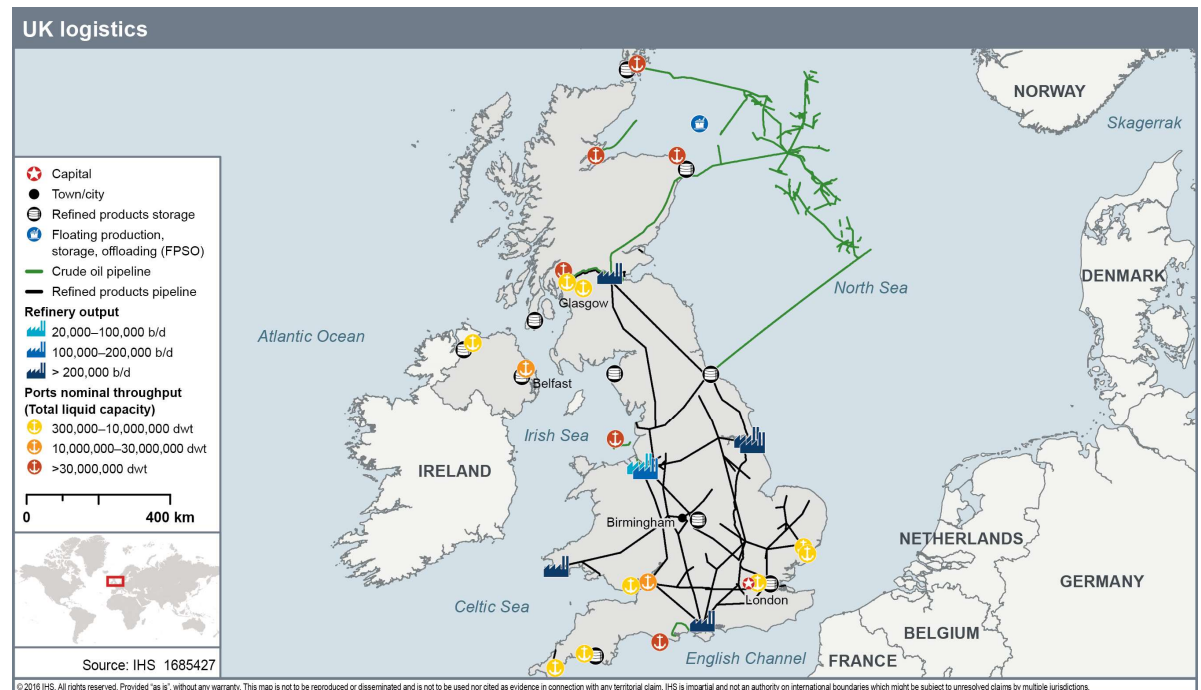


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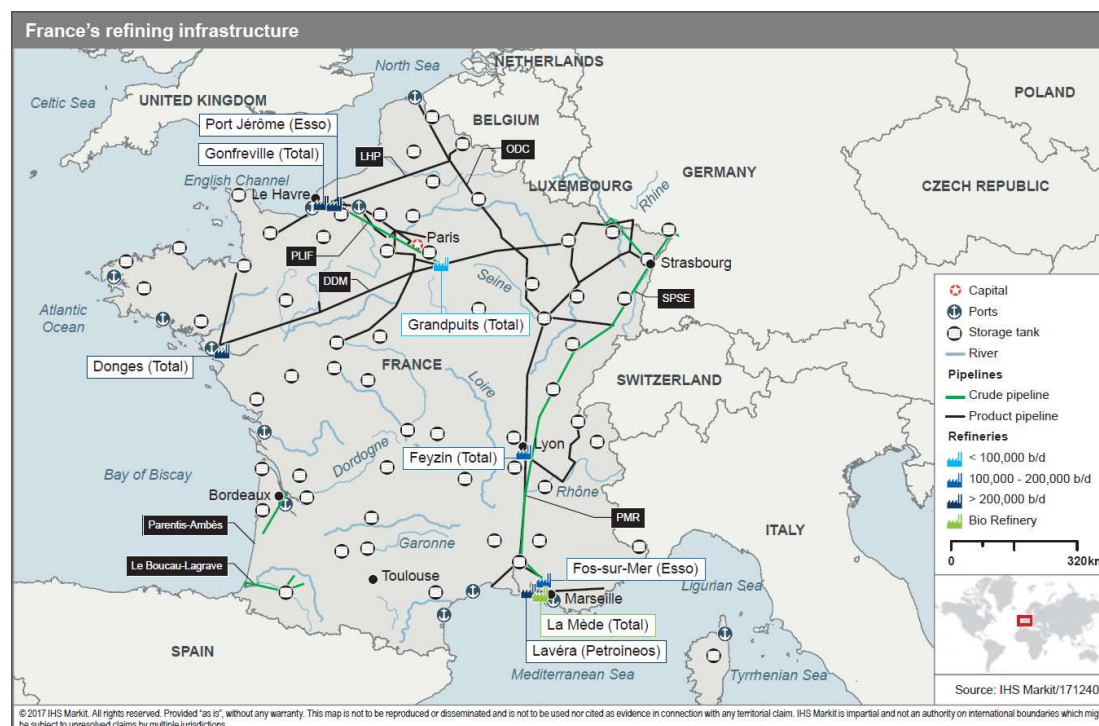
UK Logistics and Distribution - Overview

- The UK's refineries are all located at sea ports and linked to inland demand centers via pipeline systems
- There are some 65 large distribution terminals in the UK in addition to a number of smaller depots, with active M&A in the storage sector
- Emerging trend in product distribution is towards outsourcing of road transport deliveries. Many oil majors now using third party storage depots
- There are about 8,500 service stations in the UK in operation with still some presence of oil companies in ownership and operation



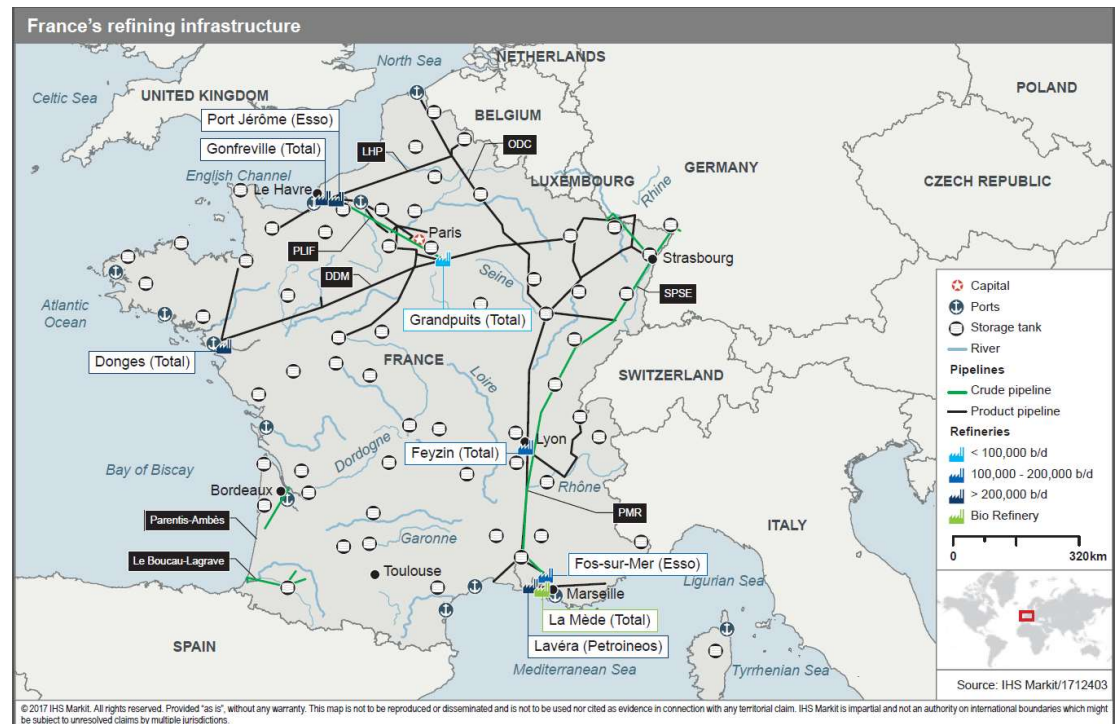
France Refining – Infrastructure Overview

- France is home to 7 refineries out of which 5 are located in coastal areas
- All refineries are well connected by either access to ports or crude pipelines, as well as by product pipelines
- At 255 mb/d, French Total's Gonfreville refinery is the biggest and most complex refinery
- Total owns most of the refineries, followed by American Esso and Petroineos, a JV between PetroChina International and Ineos
- Coastal refineries being vulnerable to both domestic and import competition, Total's southern La Mède refinery shut down in 2016, but the company is investing € 200 million to convert the refinery into a bio refinery, planned to be operational by 2018



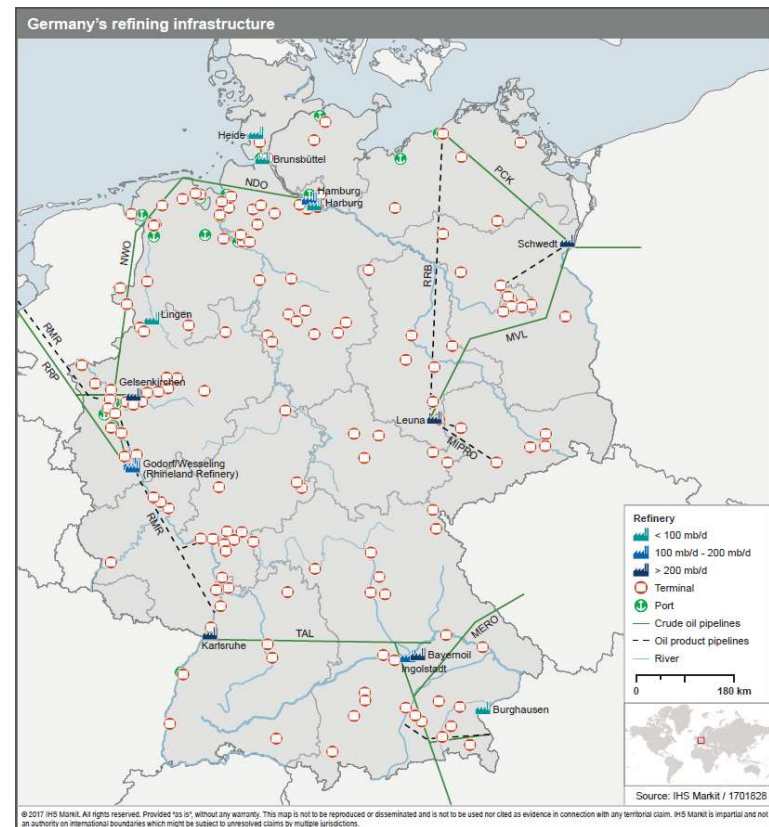
France Logistics and Distribution - Overview

- France is above all supplied by a vast network of pipelines, as well as via road, notably in rural areas
- With a network of around 6,000 km, pipeline is the major form of logistics and distribution in France
- A third of all volumes is transported by road
- Storage is split between corporate players and state-level organizations
- There are about 11,000 service stations in France.
- The network is split between hypermarkets and oil companies, which account for 46% and 42% of total sites respectively



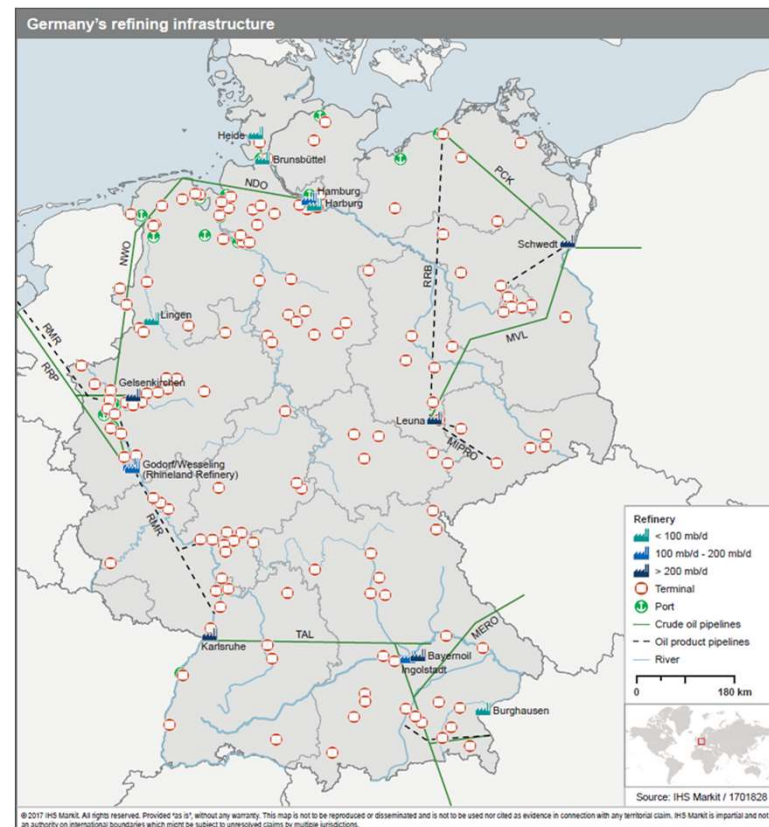
Germany Refining – Overview

- German refining sector is the largest in Europe, with around 2 million b/d of capacity at 13 main plants and 5 major companies.
- Sector has seen several refineries change hands – with notably Rosneft increasing its refining reach in 2016 – and one definitive closure (Wilhelmshaven in 2011)
- Germany's refining industry can be divided into five geographical areas, with highest capacities concentrated in the south and west
 - Southern refineries (Bayernoil, Burghausen and Ingolstadt) in Bavaria are best hedged against imports from Rotterdam
 - On the Rhine, the western refining center (Gelsenkirchen, Godorf & Wesseling) is exposed to direct competition from ARA imports
 - The northern refining area includes Hamburg, Heide and Wilhelmshaven, which face competition from Scandinavian imports
 - In the east, Schwedt and Leuna enjoy direct pipeline supply of Russian crude and face competition from imports of Central European product
 - Between the south and west lies Karlsruhe, referred to as southwest, taking in the MiRO refinery – by far the largest unit in the country



Germany Logistics and Distribution - Overview

- Nearly all of Germany's refineries are inland sites, relying on an extensive product pipeline network and road transport for product distribution
- Germany's around 1,300 km of product pipelines are particularly positioned for transport from refineries along the Rhine to nearby major demand centers
- The product pipeline network also facilitates intermediary product and feedstock interchanges between refineries, supporting Germany's sizeable chemical/petrochemicals operations
- The Rhine is a key transport artery for oil products.
- Independent storage companies making up the national storage association (UTV) account for 75% of total non-refiner capacity
- With over 14,482 sites at mid-2017, Germany's fuel retail network is the second largest in Europe, surpassed only by Italy



Italy Refining – Overview

- Refining sector is among the largest in Europe (1.72 mmb/d). However, the sector is characterized by endemically low utilization rates and overcapacity
- Recent wave of rationalization due to overcapacity, with five refineries permanently shut since 2011, eliminating close to 450 mb/d of capacity; however, no further closures announced
- ENI dominates the Italian refining sector, accounting for almost a third of national topping capacity
- Eni operates three fully owned refineries and owns 50% of the Milazzo refinery, with a total combined capacity of 489 mb/d
- ExxonMobil (Esso) in second position, with shares in two refineries, (Augusta and S. Martino di Trecate)
- Lukoil now the third largest operator, since it took 100% ownership of the ISAB refinery

Italy refining infrastructure (2017)



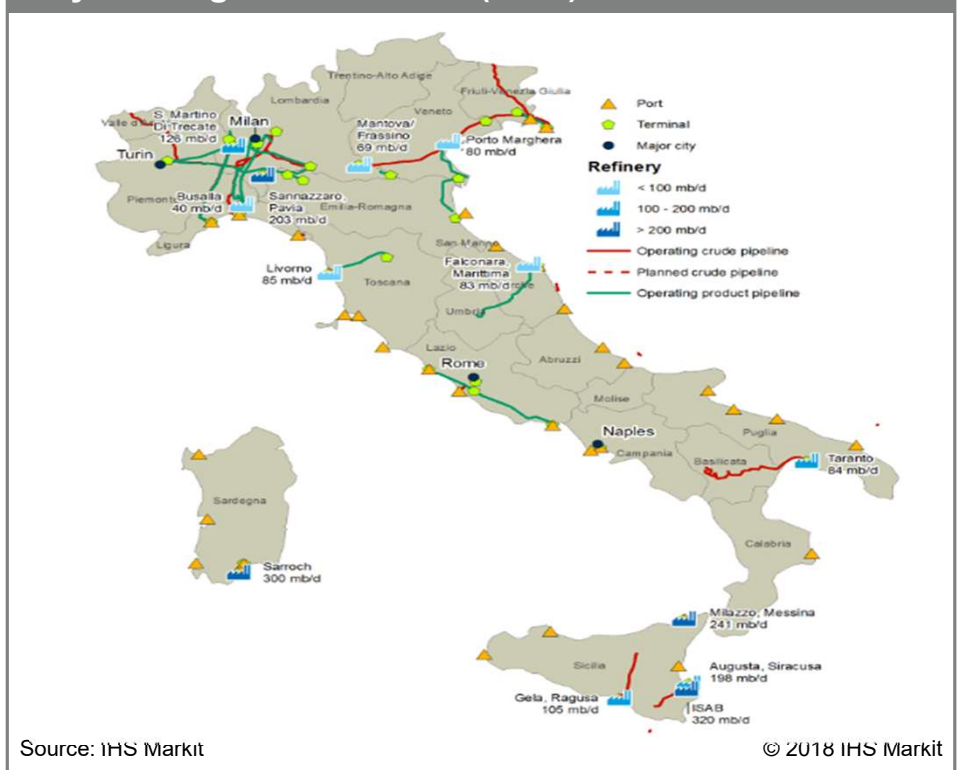
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Italy Logistics and Distribution – Overview

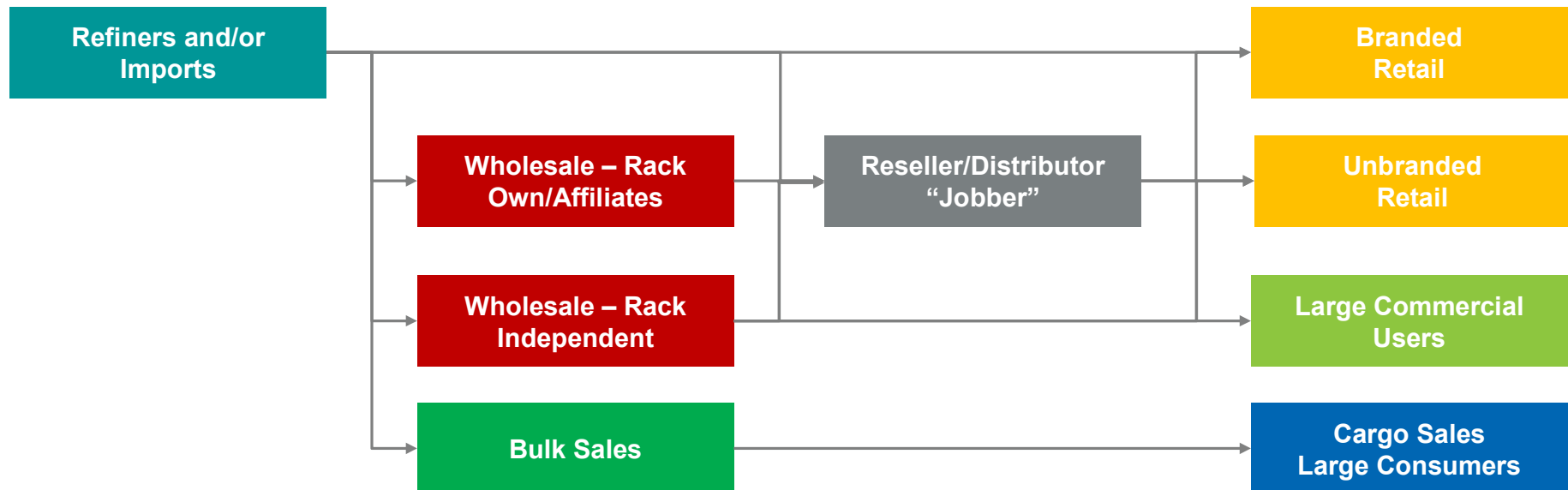
- With 8 out of 10 of Italy's refineries located on the coast, most refiners source directly via sea port
- 15 major ports support hydrocarbon traffic
- In northern regions, refined product is distributed via a ~ 1,250 km product pipeline network, as well as by road and rail
- Product distribution in southern and central regions is almost exclusively by road and rail transport, as the regions lack significant pipeline networks
- Italy's has the largest network in Europe, counting around 20,750 sites at end-2016, despite progressive rationalization since 2011

Italy refining infrastructure (2017)



The US and most major European countries share the same fuel supply chain modes. Free market, fair tax law, and competition dictate options. Vertical integration is not prohibited

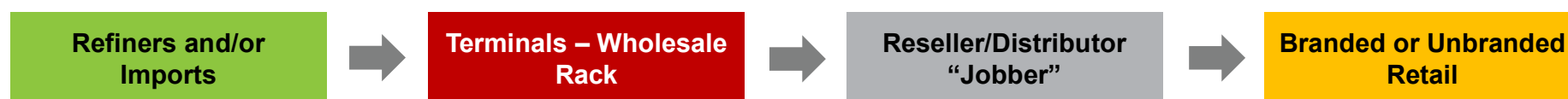
Fuel supply channels in developed markets



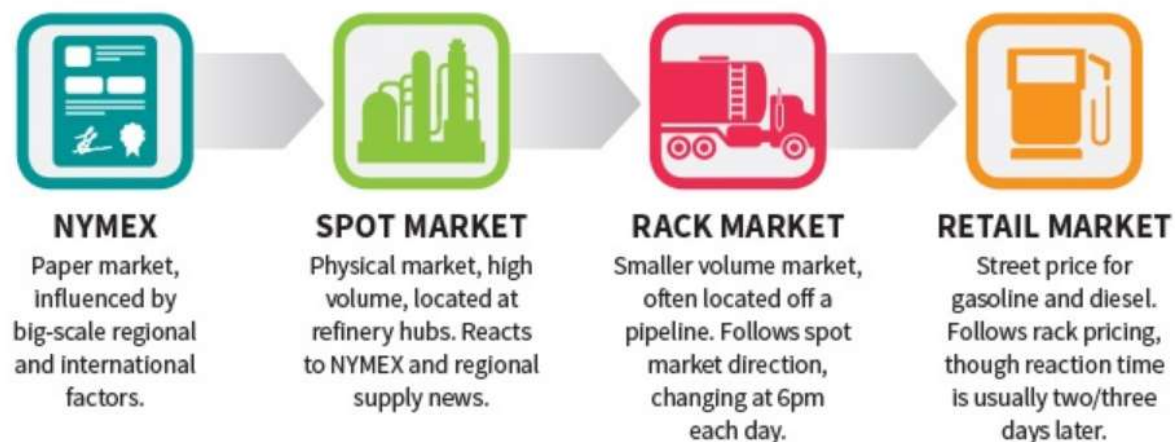
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Fuel price influence chain – US example for futures price



The Fuel Price Influence Chain



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Retail market models

- Basic definitions
- U.S. retail market models
- European retail market models

Basic definitions – branded and unbranded

U.S. and major European countries have similar definition

- Base gasoline and base diesel are fungible commodities traded globally in spot and futures markets

Fuel	Definition	Examples
Unbranded	It is the finished regular gasoline or diesel that meet the minimum quality standards determined by the regulatory body at federal and regional levels. It does carry the minimum content of generic additives and detergents	
Branded	It is the finished regular gasoline gasoline and diesel with the <u>addition of a proprietary/patented additive and/or detergent package</u> by a specific brand	  
Retailer	Definition	Examples
Unbranded	This is the most generic type of retailer. It is associated neither with a refiner/oil company brand nor with a supermarket/distributor/c-store name. This is typically a small station, without a supply contract	No logo
Branded	<p>The service station has an exclusive supply contract with a specific distributor/jobber or refiner.</p> <p>The service station has a brand of either a fuel maker or a own brand of supermarket/distributor/c-store</p>	<p>Branded Fuel:</p>    <p>Unbranded Fuel:</p>    

Basic definitions - Retailers types examples

Branded Retailer

Branded Fuel



Branded Retailer

Unbranded Fuel



Unbranded Retailer

ALWAYS Unbranded Fuel



Branded retailer of branded fuel

Example: US BP gas station



Proprietary additive



Zoom



- **ALL** pumps sell **ONLY BRANDED** fuel. It cannot have any other pump selling unbranded/generic fuel. Putting unbranded fuel into the station could result in fines and penalties and supply contract could be canceled.
- **Supply comes only from exclusive distributor/jobber or refiner** contracted by retail owner.

Branded retailer of unbranded fuel

Example: US 7 Eleven gas station



NO proprietary additive

Zoom

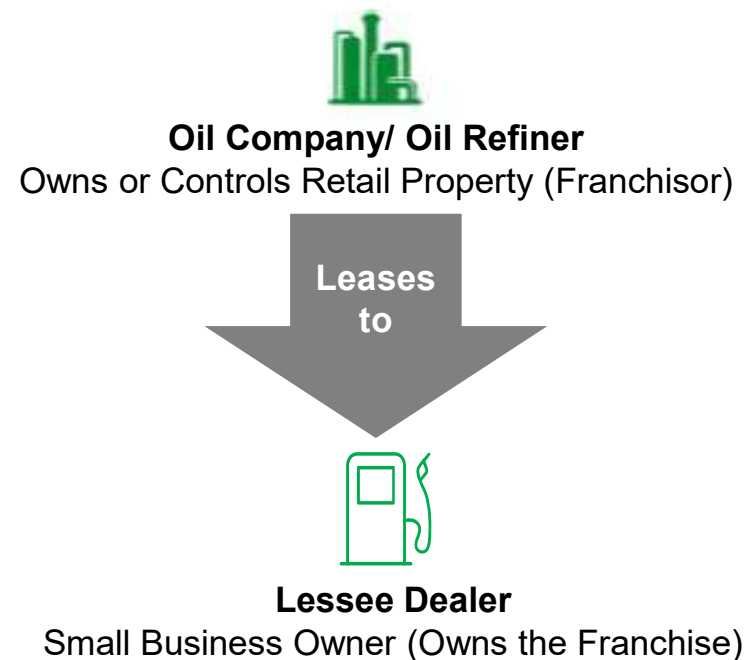


- **ALL** pumps sell **ONLY UNBRANDED** fuel. It cannot have any other pump selling branded fuel
- **Supply** comes only from **exclusive distributor/jobber** contracted by retail owner.

Typical retail arrangements – model 1

- The traditional service station property is owned by a OIL COMPANY/REFINER, is leased and franchised to the dealer who is a small business owner. There is a property rental agreement and a supply franchise agreement.
- Dealers pay rents to the oil company/refiner. Fuel is sold to the dealer at a price determined by the oil company/refiner.
- This price is called DTW (Dealer Tank Wagon).
- Dealers purchase gasoline **exclusively from contracted** OIL COMPANY/REFINER in full truck loads of 8500 gallons and manage their own inventory.
- Dealers set the retail price on the pump. This is determined by local market competition.
- The employees at this location are all employed by the dealer (small business owner). The traditional gasoline service station has 2-3 service bays and does auto repairs too, or may include a convenience store

Retail model 1



Source: NJGCA

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Typical retail arrangements – model 2

- The traditional service station property may owned by a DISTRIBUTOR/JOBBER, is leased and franchised to the dealer who is a small business owner. There is a property rental agreement and a supply franchise agreement.
- Gasoline is sold to the dealer at a price is determined by the DISTRIBUTOR/JOBBER. This price is called DTW (Dealer Tank Wagon).
- Dealers purchase gasoline **exclusively from contracted** DISTRIBUTOR/JOBBER in full truck loads of 8500 gallons and manage their own inventory.
- Dealers set the retail price on the pump. This is determined by local market competition.
- The employees at this location are all employed by the dealer (small business owner). Agreements between the branded refiner allow the distributor to be the franchisor and the dealer is the franchisee (owns the franchise).

Retail model 2



Distributor/Jobber

Owns or Controls Retail Property (Franchisor)



Leases
to



Lessee Dealer

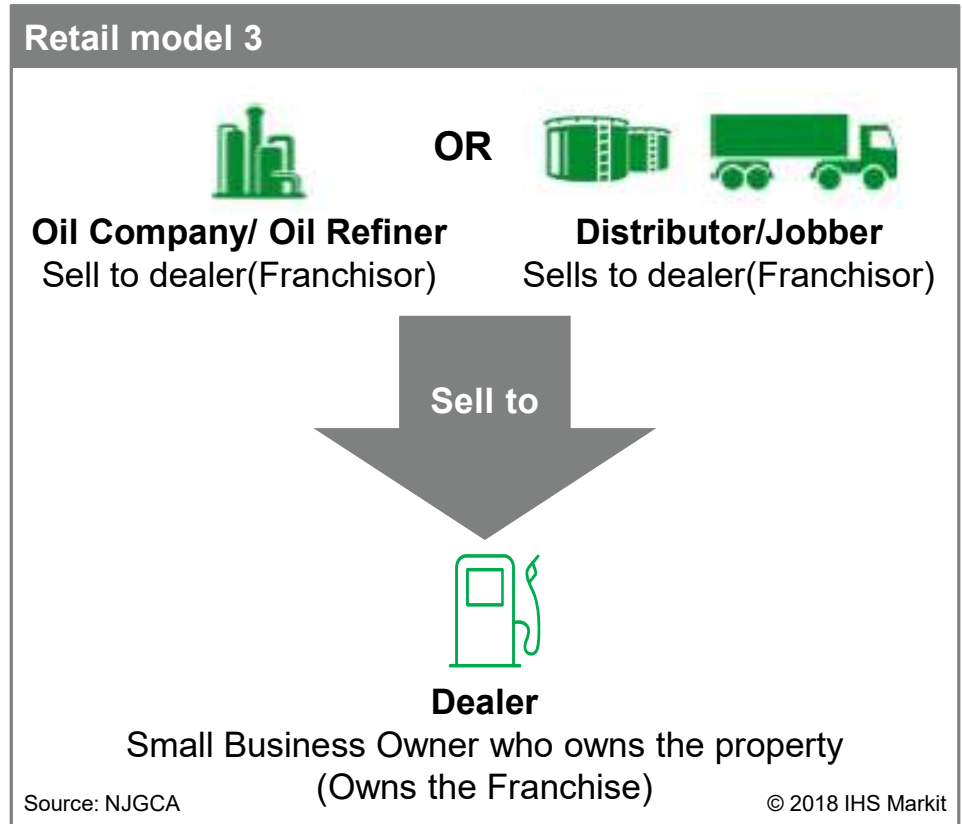
Small Business Owner (Owns the Franchise)

Source: NJGCA

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Typical retail arrangements – model 3

- The traditional service station property may be owned by the DEALER, who is a small business owner. The dealer controls what brand is sold at the location and negotiates with multiple refiners and distributors to get the best contract brand-price.
- If the dealer owner chooses to be unbranded, most likely it won't have a supply contract.
- **IF unbranded and no contract**, the dealer usually buys at rack price plus delivery charges and a small markup for delivery.
- **IF branded**, gasoline is sold to the dealer at a price is determined by the DISTRIBUTOR/JOBBER. This price is called DTW .
- Dealers purchase gasoline in full truck loads of 8500 gallons and manage their own inventory.
- Dealers set the retail price on the pump. This is determined by local market competition.
- The employees at this location are all employed by the dealer (small business owner). Agreements between the branded refiner allow the distributor to be the franchisor and the dealer is the franchisee (owns the franchise).



Typical retail arrangements – model 4

- The traditional service station property may be owned by a DISTRIBUTOR/JOBBER. The franchise is owned by the distributor and the commissioned agent operates the location and is paid a commission.
- Fuel is delivered to the station as needed but remains the property of the distributor.
- The distributor sets the retail price at the pump. Commissioned agents do not set the price. Since distributors pay rack price for product, the price at the pump is usually more competitive than retail locations that require dealers to pay a higher wholesale (DTW) and also must add a markup for profit.
- The employees at this location are usually employed by the commissioned agent.
- Although commissioned agents may be considered small businesses because they operate repair shops, commissioned agents do not have any franchise rights and agreements may be terminated at any time.

Retail model 4



Distributor/Jobber

Owens or Controls Retail Property (Franchisor)



Commissioned Agent

Operates the station (does NOT Owns the Franchise)

Source: NJGCA

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Typical retail arrangements – model 5

- The traditional service station property may owned AND operated by a DISTRIBUTOR/JOBBER. The franchise is owned by the distributor and workers are employed by the distributor/jobber.
- Fuel is delivered to the station as needed and is property of the distributor.
- Setting up service station investment under Distributor/Jobber responsibility.
- The distributor sets the retail price at the pump. Since distributors pay rack price for product, the price at the pump is usually more competitive than retail locations that require dealers to pay a higher wholesale (DTW) and also must add a markup for profit.
- Some mega distributors that operate their locations purchase in such large volume that they can buy whole barges of finished product and may even have their own bulk storage and rack facilities. This allows mega distributors to price hyper competitive compared to other retail locations

Retail model 5



Distributor/Jobber

Owns or Controls Retail Property
(Franchisor & owns the retail franchise)



Distributor/Jobber

Operates the station
(has company employees at the location)

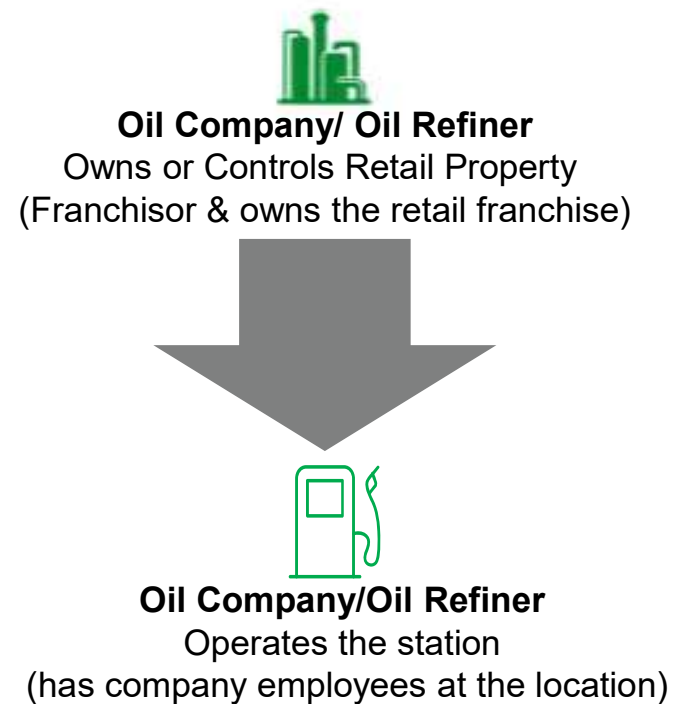
Source: NJGCA

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Typical retail arrangements – model 6

- The traditional service station property may be owned AND operated by a OIL COMPANY/REFINER. The franchise is owned by the oil company/refiner and workers are employed by the oil company/refiner.
- Fuel is delivered to the station as needed and is property of the oil company/refiner.
- The oil company/refiner set the retail price on the pump. Since refiners control the rack price, prices at the pump are usually more competitive than other retail locations that require dealers to pay a higher wholesale price (DTW) and also must add a markup for profit.
- In the US this model is becoming extinct. In Europe is still relatively present.

Retail model 6



Source: NJGCA

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Resellers/Jobber - definition

- Both in the U.S. and Europe, generally, once the fuel gets to the rack, the fuel is most commonly picked up by what in the U.S. refer to as “jobbers” also referred to as distributors (like in Brazil) whereas in Europe they are called “dealers”. However, some companies may operate in the transportation of the fuel from the refinery all the way to the gas station
- Jobbers are also referred to as resellers, or distributors.
- A jobber/distributor is company/entity who takes the fuel and either puts it in its own retail stations (branded, or unbranded) or, if it doesn't own its own stations, resells it to other retailers. The jobber/distributor also resells it to end-users in a multiple of industries, or he can also do “wet hosing,” or mobile refueling.
- Unlike end-users who treat fuel as a cost center, for jobbers, fuel is a REVENUE center.
- Most jobbers offer branded and unbranded fuel. Some jobs offer the complete package for a small business owner to set up a service station, either branded or independent.
- A distributor/jobber can offer multiple brands/flags to choose from.

Examples of wholesaler/jobber

Multiple brands offered by a single jobber. The choice is made by retail owner

US.Oil

(www.usoil.com)

- **Operations:** From bulk distribution, to terminals, to retail solution. Branded and unbranded
- **Brands offered:**



Kendrick Oil

(www.kendrickoil.com)

- **Operations:** terminals and wholesale/jobber – branded and unbranded
- **Brands offered:**



Greenergy

(www.green.com)

- **Operations:** Global wholesaler with operations in UK, Canada, and Brazil
- **Brands offered (UK):**



Unbranded Retailer

- Unbranded retailer does not affiliate the station with any name/brand (oil company/refiner, c-stores, etc)
- It cannot sell any branded fuels since brand companies require specific contracts and requirements and for the same reason it cannot have multiple brands under the same service station.
- The fuel sold still has to comply with all federal and state quality requirements, including a minimum amount of generic additive

Advantages	Disadvantages
<ul style="list-style-type: none"> • Flexibility in selecting suppliers • Able to find the best “deal” for wholesale product on the open market • Open contracts • <i>Typically</i> less expensive for consumers than branded 	<ul style="list-style-type: none"> • Limited marketing and recognition • Vulnerability to shortage in supply - oil companies/distributors first service their stores, their branded contracts and their other contracts. • No support in setting up the station

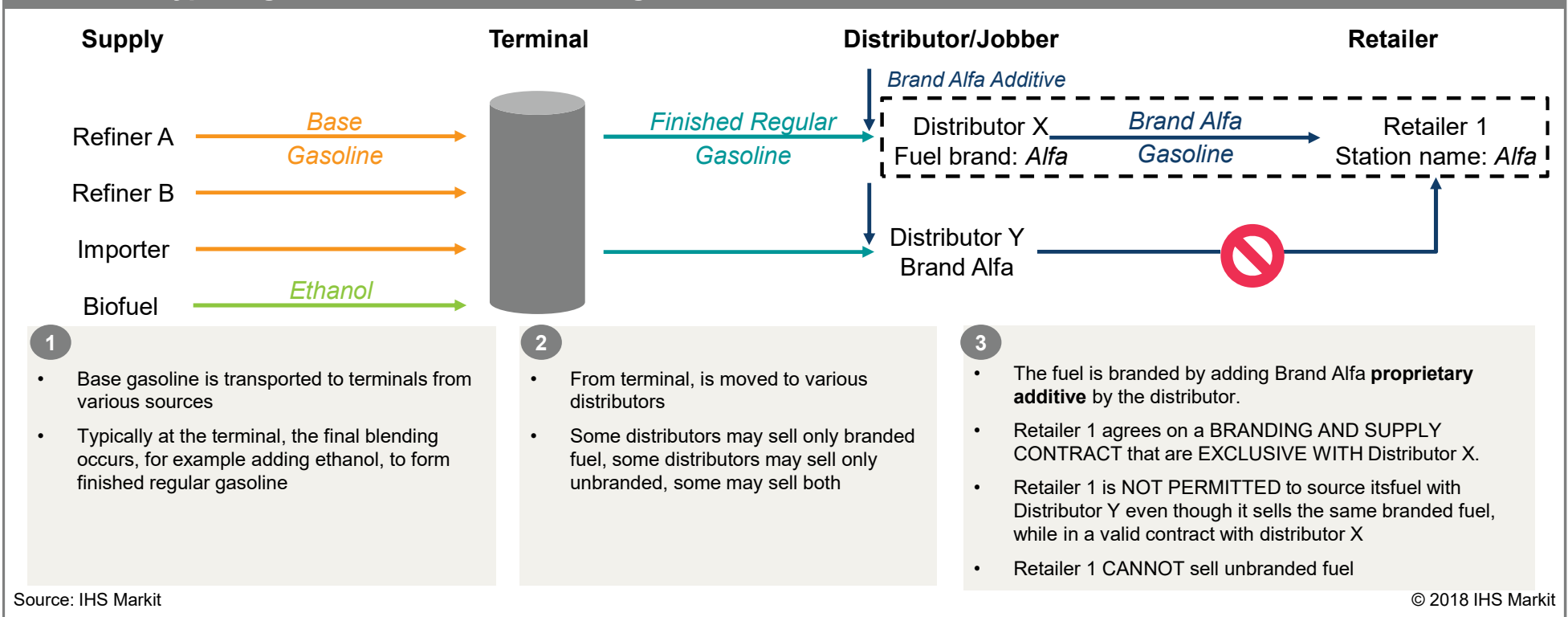
Branded Retailer

- Branded retailers affiliate the station name/brand (oil company/refiner, c-stores, etc)
- If the brand owner offers a proprietary additive package, the station will sell branded fuel
- Contracts between distributor and retail owner provide multiple resources and support AND supply exclusiveness
- The branded fuel owner is responsible and carefully monitors if the branded retailers is selling its branded fuel

Advantages	Disadvantages
<ul style="list-style-type: none"> • Consumer recognition • <u>Guarantee supply contract</u> • Resources and support in setting up station 	<ul style="list-style-type: none"> • Contract may require minimum monthly sales • Minimum room for price negotiation • <i>Typically</i> more expensive • Strict image requirements

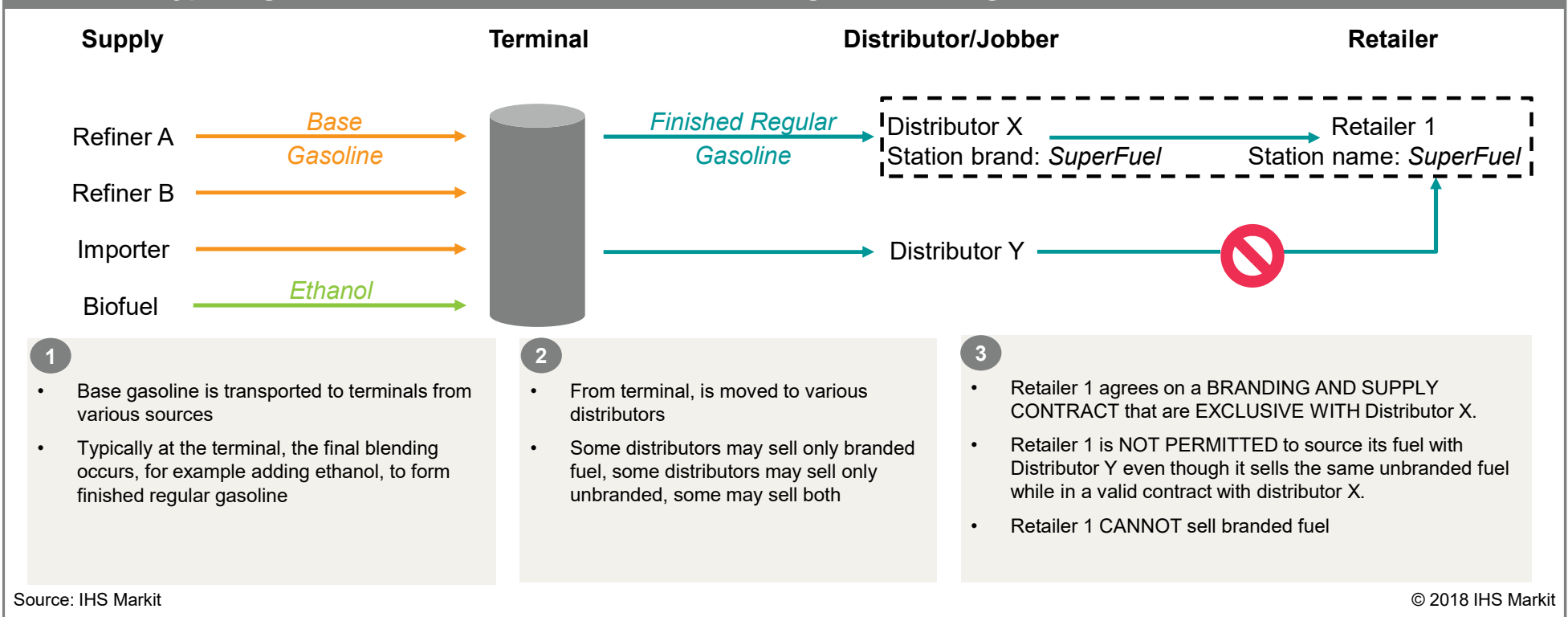
How a fuel gets branded and how a branded retailer (selling same branded fuel) source its supply

Illustrative typical gasoline chain for branded gasoline AND branded retailer



How a branded retailer (selling unbranded fuel) source its supply

Illustrative typical gasoline chain for branded retailer selling unbranded gasoline



Typical branded contracts characteristics

- While every contract differs, here is a broad overview of what is included in these contracts:
- **Length:** A typical contract is for 10 years, although it could run as long as 20 years or as short as 3 years for renewals.
- **Volume requirements:** Contracts typically set forth a certain amount of fuel each month that retailers must sell. Usually retailers can sell more than the agreed-to amount, but when supply disruptions exist, they may be put on allocation and only given a percentage of what they historically receive in a given time period. This enables the supplier to more efficiently manage fuel distribution to all branded outlets in an equitable fashion.
- **Image requirements:** A branded retailer receives marketing muscle from its oil company partner, which may include broad advertising to encourage in-store sales. Also, the oil company may provide financial incentives to display its brands. This also depends on who operates the station and whether the store owner has access to capital. In exchange, the oil company expects the store to adhere to certain imaging requirements, including specific colors, logos and signage, standards of cleanliness and service. The oil company often relies on mystery-shopping programs to assess compliance.
- **Wholesale price requirements:** A branded retailer must purchase fuel from a branded supplier or distributor. Branded contracts benchmark the wholesale price to common fuels indexes plus a premium of a few cents for brand/marketing support. Some branded contracts also stipulate the retail markup on the fuel through a “consignment agreement,” whereby the supplier or distributor retains ownership of the fuel until it is sold and pays the retailer a commission.

Source: NACS, IHS Markit

US fuel market trends

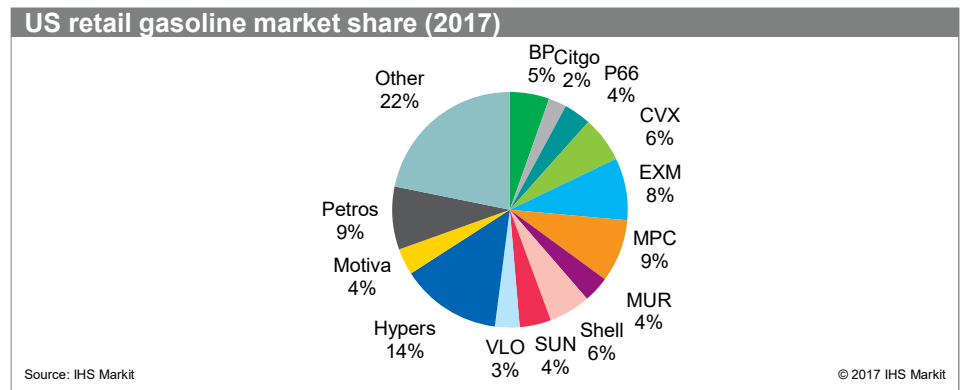
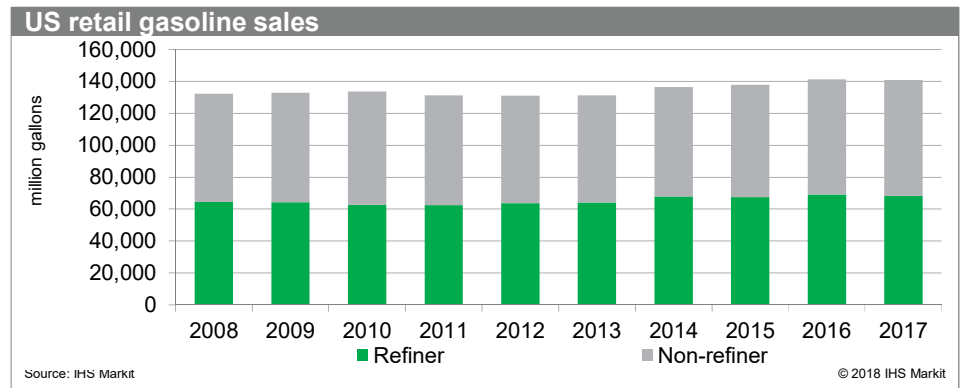
- In the past, by lack of standardization and marketing, oil companies brand stations were associated with the “only guarantee of quality”.
- As standardization and better fuel quality of regular gasoline and diesel became uniform, the above perception started to change.
- As consumers sensitivity to price increases and purchasing habits evolve (c-stores or hypermarket convenience for a one-stop shop) gas station brand not associated with an oil company name are becoming more accepted and popular.
- With that, and focusing on better margins (oil production and refining), major oil companies practically exited the ownership and operation of retail stations. Nonetheless, they managed to maintain their brands.
- As demand is forecasted to decline in the near future and facing the competition of unbranded fuel, oil companies and automakers created recently a new brand category called TopTier™ promising even more addition of additives to improve fuel efficiency and fuel quality.

US fuel market trends

- Volatility in energy markets has made everyone, including end-users with fuel budgets, more aware of fuel prices
- Many jobbers and fuel distributors are either selling off their businesses, or buying other distributors, and becoming large volume “super jobbers.”
- End users have far more challenges in managing fuel budgets, and need to become more cognizant of what is happening in fuel markets, especially with regard to price trends.
- Buying methods – for jobbers and for end users – have become far more complicated, and varied in the U.S.

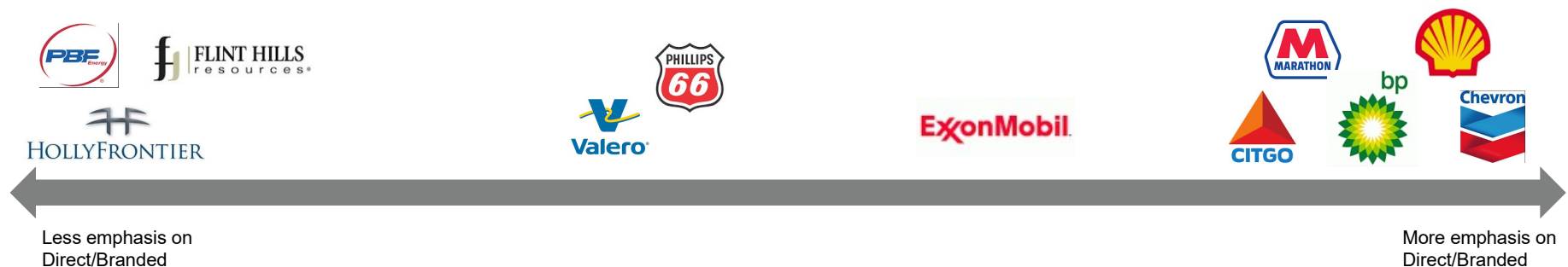
U.S. retail market composition

- Generally, the trend among refiners has been towards greater reliance on Unbranded or Bulk sales.
 - That is, a greater fraction of US refinery production is sold through “unaffiliated” brands or simply exported.
 - This is partly due to their own preference but also driven “up” to them by the market (i.e. non-refiner retail brands have proliferated and export demand is booming).
- That said, the overall market share of refiner brands in the retail market has been relatively consistent at around 50%.
- The US retail market is extremely fragmented though, with no brand holding more than 10% of the national market in 2017.
 - Some companies own more than one brand (e.g. Exxon and Mobil) and some brands (e.g. Shell) are now supplied by multiple refiners.
 - Major non-refiner brands include hypermarketers (e.g. Costco, Safeway), local c-store chains (e.g. Sheetz, Maverik), and international c-store chains (e.g. 7-Eleven, Circle K).
- The lack of consolidation is slightly less dramatic as the geographic focus is tightened but the US is undeniably the most fragmented retail market in the world.



US fuel distribution overview

- US refiners sell fuel through four basic sales channels.
 - Direct: Sales to same-branded retail stations directly owned by the refiner.
 - Branded Jobber: Sales to same-branded retail stations owned by a third party under a long-term (5-10 year) contract.
 - Unbranded Jobber: Sales to retailers that utilize different brands; typically under short term (1+ year) contract.
 - Bulk: Exports or sales to wholesalers (including other refiners), who then resell through the three channels above.
- The degree to which a refiner relies on any of the sale channels varies dramatically.
 - Some refiners (e.g. HollyFrontier, PBF Energy) do not have any branded jobbers while others (e.g. Shell or Chevron) sell more branded gasoline than they produce internally.
- At this point, only one US refiner still directly owns a significant portion of its retail network.
 - Marathon (including recently acquired Andeavor) owns ~3,800 of its ~11,500 locations.



US fuel regulatory overview

- The US regulatory landscape is also extremely fragmented, with specifications and laws governing retail stations varying from state to state and even from metro to metro.
- That said, few if any restrictions are placed on value chain integration (i.e. actors are free to participate at all levels of the value chain).
 - US competition authorities are more concerned with monopolies at any given point of the value chain than vertical integration.
- Similarly, US retail stations and c-stores generally have no restrictions on their maximum size or operating hours.
 - The biggest variation is whether a state or municipality allows alcohol sales in retail stations.
- There are literally dozens of gasoline specifications sold in the US, though of course some standards (e.g. sulfur content) are uniform.
 - Spec differences are primarily in terms of RVP, octane, and VOCs.
 - Specs also change throughout the year, with RVP limits being lowered significantly during the summer months in most (but not all!) markets.

Summary of US regulatory institutions

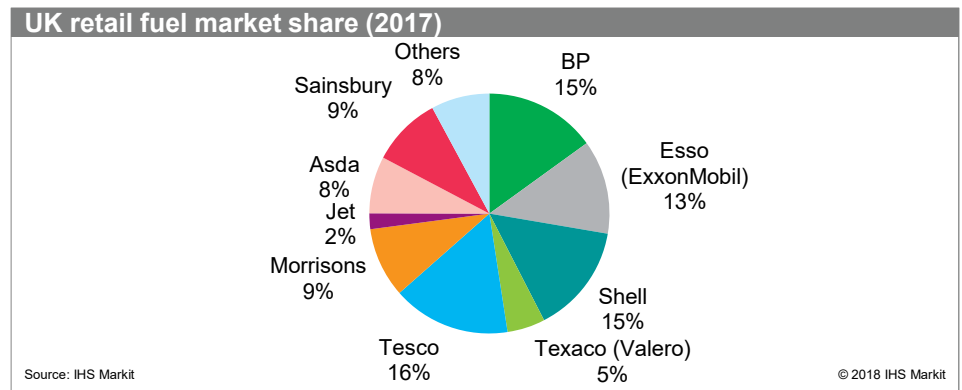
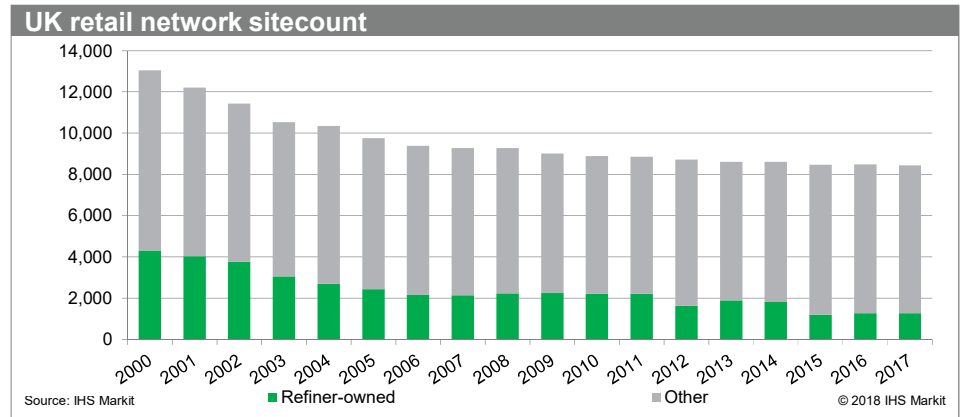
- Congress, Senate, and Department of Energy: Policymakers
- Environmental Protection Agency (EPA): regulatory agency for fuel quality standards at Federal level. EPA does not regulate contracts between retailers and refiners/distributors. All fuel additives are certified and registered with EPA
- State agencies: Several states have specific standards in addition to EPA's. State's agencies do not regulate contracts between retailers and refiners/distributors. Regional agencies/offices control requirements and laws for gas station operations. State agencies are responsible for monitoring fuel quality control at the station
- IRS and State's department of taxation: tax collection of Federal and state fuel taxes respectively
- Federal Trade Commission (FTC): Anti-trust organization to protect consumers by preventing anticompetitive, deceptive, and unfair business practices, enhancing informed consumer choice and public understanding of the competitive process, and accomplishing this without unduly burdening legitimate business activity.

Europe fuel market overview

- For the most part, fuel distribution in Europe is similar to that in the US, though less fragmented vertically and (often) horizontally.
- Refiners own a greater (sometimes significantly greater) share of the pipeline, terminal, and retail networks in Europe.
 - The trend is very much towards fragmentation, though, with refiners shedding assets downstream of the refinery.
- Retail sites, in particular, are being sold by refiners, with the industry shifting to a model more akin to the Jobber model that now dominates in the US.
- The other difference is one of terminology: in the US, the independent retailer is typically referred to as a “jobber”, whereas in Europe they are called “dealers”.
- The European fuel sector also generally features a greater degree of consolidation horizontally.
 - At just about every level of the value chain, the number of players is fewer.
 - This is, to some extent, not surprising given the far smaller size (geographically and in terms of demand) of European markets relative to the US.
- Finally, regulations governing the fuel sector are also generally more “protectionist” for retailers than they are in the US.
 - At the same time, tightening environment regulations in some markets on retail sites are compelling rationalization – particularly of independent sites.

UK Retail market composition

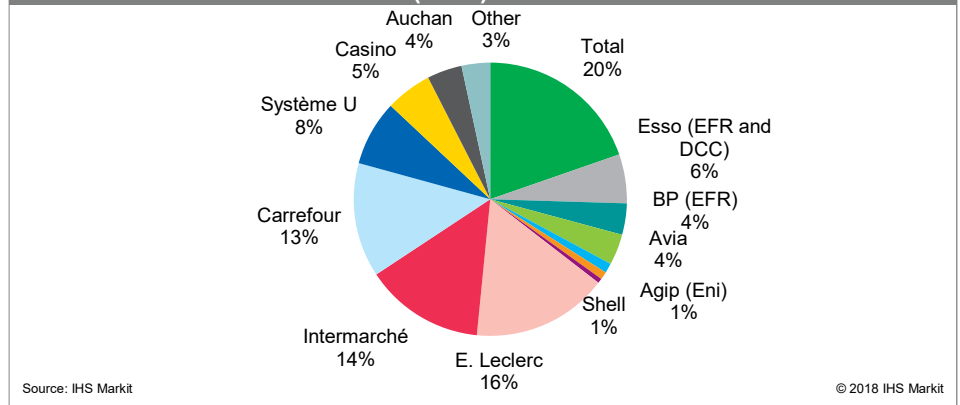
- The UK fuel distribution supply chain is among those most similar to the US.
- Relatively fragmented market share and majority of retail stations owned by non-refiners.
- Shell (~50%) and BP (~24%) still own large chunks of their networks.
- Top three players also account for close to 50% of retail fuel sales, far more than in the US (~23%).
- Market also features much stronger penetration by hypermarketers (e.g. Tesco, Sainsbury), which collectively account for almost 45% of sales.
- And far less penetration by independent (i.e. non-hypers, non-majors) retailers; collectively account for around 6% of fuel sales.



France retail market composition

- In most aspects, the French fuel distribution supply chain is considerably more fragmented than that in the UK.
- The only truly vertically integrated players in the country are TOTAL and ExxonMobil, which together hold just 26% of the retail fuel market. None of the other retailers maintain a refining presence in France, and most are not refiners at all.
- On the other hand, the supply sector is quite consolidated, with TOTAL accounting for 55% of refining capacity and ExxonMobil another ~28%.
- Similarly, ownership of retail networks is more consolidated because most same-branded sites are owned/operated by the same company.
- So, whereas BP- or Esso-branded sites in the UK are owned and operated by many different entities (as in the US), this is not the case for most French sites.
- Hypermarketers have an even stronger presence in France than in the UK, collectively accounting for more than 60% of fuel sales.
- Aside from TOTAL, the only other major brands are Esso and BP, both of which are supplied and operated by two large dealers.
- European Forecourt Retail Group (EFR) owns the BP network and a portion of the Esso network. DCC Energy owns the remaining Esso sites

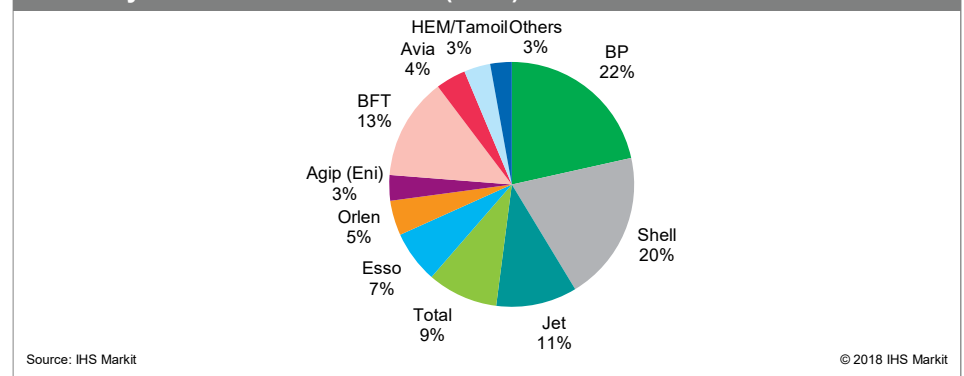
France retail fuel market share (2017)



Germany retail market composition

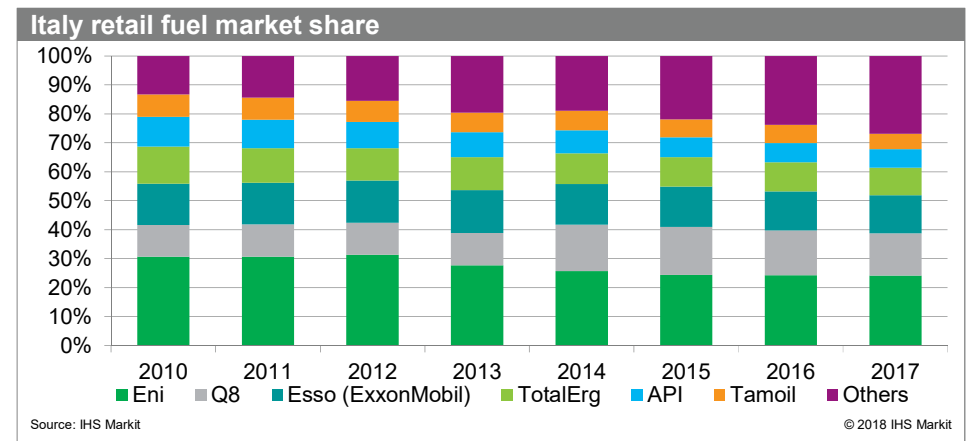
- Germany, like Italy, features a strong presence by integrated refiners, as well as a healthy independent sector.
- The supply landscape is relatively open, with ample access to both foreign and domestic supply.
 - The storage terminal landscape is relatively diverse as well, two things which should enable proliferation of low-price, non-integrated players.
- However, the regulatory environment – and the preferences of the German consumer – have helped preserve a relatively “traditional”, more vertically-integrated retail operating model.
 - Germany has historically placed few restrictions on c-stores, which has underpinned the development of a robust non-fuel sector and prevented penetration by unmanned stations and hypermarketers.
 - Integrated refiners account for around 75% of the retail fuel market (including the top six positions), with effectively all of the remainder being independent retailers.
- The German retail sector is quite stable, with limited opportunities for second or third tier players to gain on the leaders.
 - Consolidation is typical for Western Europe but competition authorities have made clear they will not tolerate further.

Germany retail fuel market share (2017)



Italy retail market composition

- In many ways, the trends that have been underway within France, the UK, and the US are only just now starting to take hold in Italy.
 - The established legacy players were protected by the regulatory environment, which has been changed to encourage independent players (and overall rationalization/efficiency).
- There is still a relatively high degree of vertical integration.
 - The top five retailers (~67% of market) all have local refining capacity and two thirds of their sites are directly owned.
- However, as shown in the graph, independent retailers have more than doubled their market share at the expense of the legacy refiner-retailers. And, among refiner-retailers, there has been some movement away from direct ownership.
 - ExxonMobil, for example, sold the last of its stations to EFR parent Intervias last year though, as noted, almost half of all Italian sites are still refiner-owned.
- Despite the changes, hypermarketers have not made inroads into the market and account for only around 1% of fuel sales.
 - Thus, Italy's retail sector thus features a much larger presence by independent (non-hypermarketer) players than France or the UK.



Summary of European regulatory institutions

- Countries under the European Union and the UK abide to the fuel quality standards determined by the European Commission (EC)
- The EC also regulates some areas of the retail business, for example the standard labeling of fuel types at the pumps in retail stations
- The EC also monitors and intervenes in case of market monopoly practices
- Local regulatory bodies by country control the requirements for establishing and operating a service station and responsible for monitoring fuel quality control at the station

Commentary on Brazil retail model

- Comparison with international models
- Comment on new regulations by ANP
 - Vertical integration
 - Brand Fidelity

Fuels market in Brazil – main takeaways (1/2)

- Law 9.478/97 was conceived with the goal to deregulated the oil and gas sector in Brazil and create a free and competitive market.
- Out of all the sectors in the fuel chain in Brazil, distribution and retail are the most diversified and fragmented.
- However, the law and regulators didn't address the supply (refining) concentration in one single agent, Petrobras. With a pre-dominated market, political instability and implicit intervention in fuel prices, and legal framework unclear, no new agents have entered the market. Only recently, with the reintroduction of price transparency and import parity by Petrobras, independent importers came back to the market. That was also short-lived with Petrobras leveraging its position to contain loss of market share and this year's diesel subvention as a response to truck drivers' strike.
- The same law has also constrained how an agent can act in the chain prohibiting vertical integration. This indirectly creates over-regulation and impede companies to find efficiencies in the supply chain to be more competitive.

Fuels market in Brazil – main takeaways (2/2)

- Although vertical integration is prohibited, there is an implied large and dominant integration through Petrobras (Petrobras, Transpetro, BR Distribuidora).
- There are branded fuels in the market but ANP has removed the mandate for companies to register the additives (ANP Ordinance ANP nº 704/2017).
- ANP is the sole responsible for defining fuel quality standards nationwide.
- Most recently, unbranded retailer (independent retailer) have gained market share as station owner/operator try to have control on prices at the pump and flexibility in supply
- There is enough fragmentation and diversity from distribution to the retail but these aspects limited a more free and competitive environment:
 - Limited local supply options – local refining sector dominated by a single player
 - Constrained channels and modes of operation from supply to final customer – prohibition to vertical integration and lack of diversity in logistics (heavily dependent on road/truck)
 - Convolutated and uneven taxation which may favor a certain path in the fuel supply chain
 - Legal and law enforcement inefficiencies
 - Partial price transparency

Fuel supply chain comparison

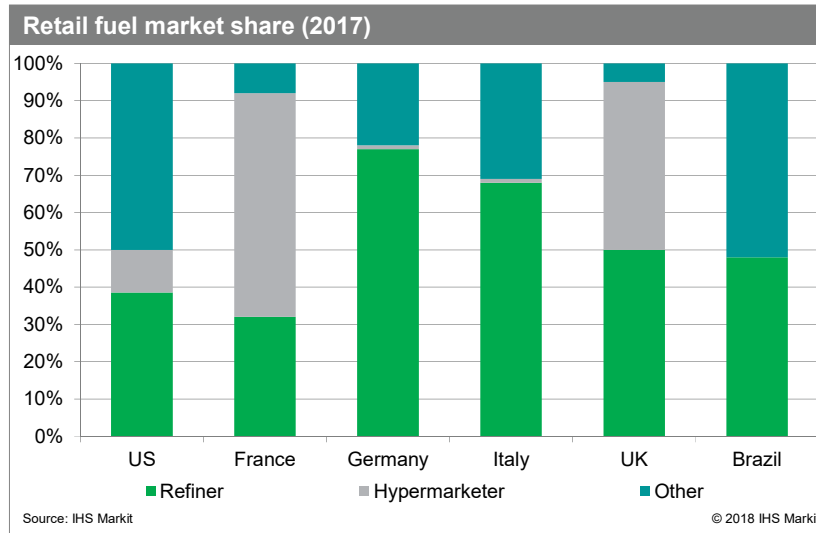
Fuel supply chain benchmarking						
	US	France	Germany	Italy	UK	Brazil
Supplier consolidation	Low	High	Low	Medium	Medium	Very high
Network ownership by refiners	Minimal	Low	Medium	High	Low	Minimal
Network ownership fragmentation	Very high	Low	Medium	Low	High	High
Top 3 player retail market share	23%	50%	53%	52%	46%	68%
Refiner brand retail market share	47%	32%	77%	68%	50%	48%
Hypers retail market share	14%	60%	1%	1%	45%	n/a
Independent retail market share	61%	8%	22%	31%	5%	52%

Source: IHS Markit

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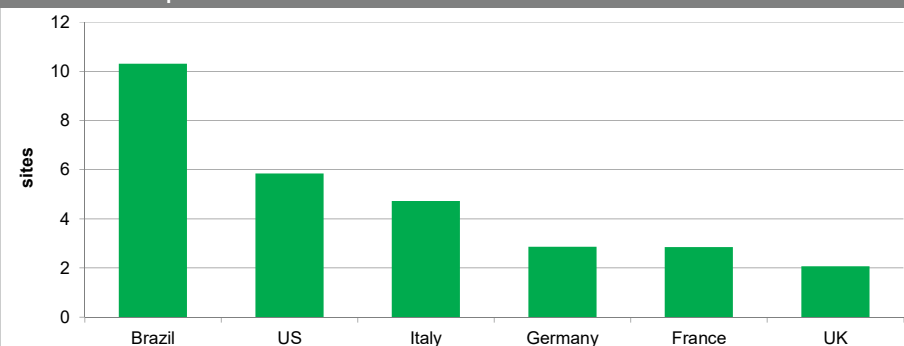
Notes:

- Refiner brand for Brazil refers to BR and Shell. Shell does not have/operate refineries in Brazil.
- “Hyper” not categorized in Brazil’s database



Retail sector competitive benchmarking

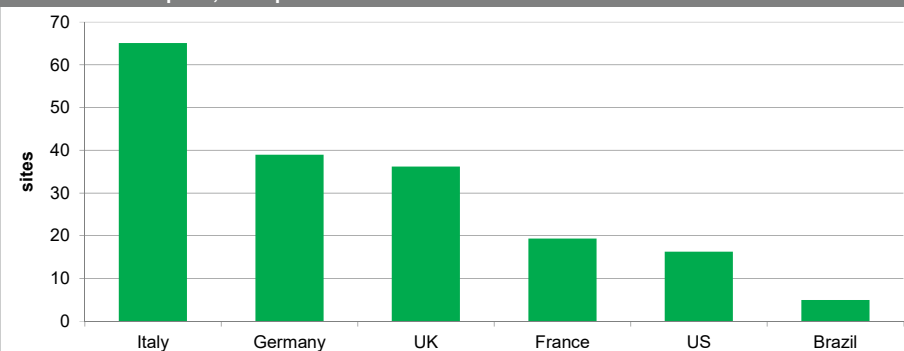
Retail sitecount per 100 vehicles



Source: IHS Markit

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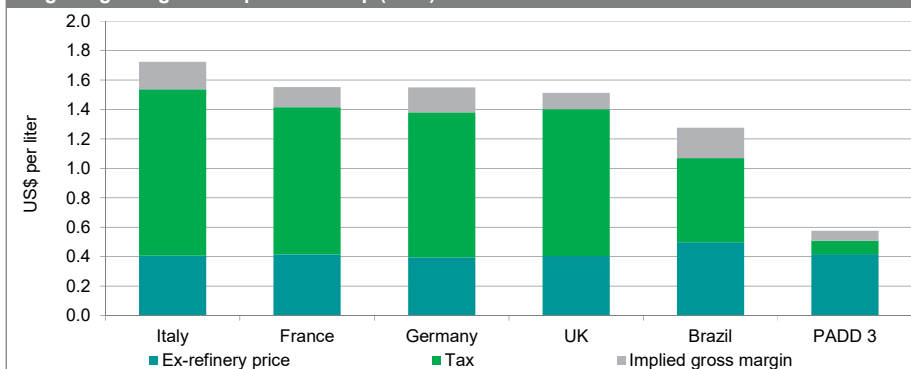
Retail sitecount per 1,000 sq. km.



Source: IHS Markit

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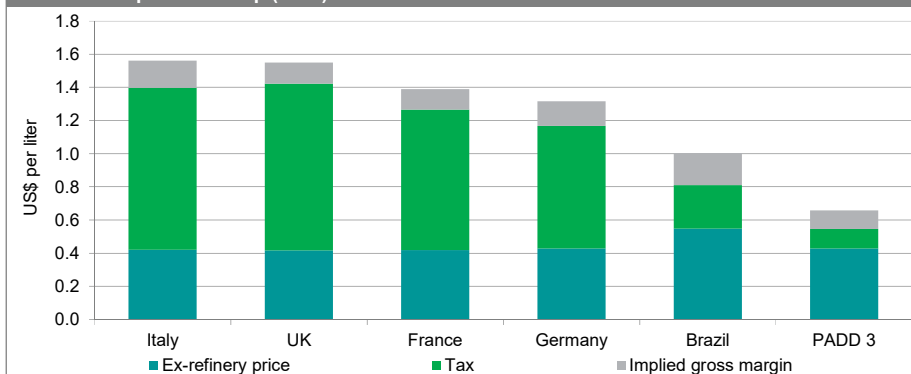
Regular grade gasoline price build up (2017)



Source: IHS Markit

© 2018 IHS Markit

Road diesel price build up (2017)



Source: IHS Markit

© 2018 IHS Markit

Comments on vertical integration in Brazil (1/4)

ANP Public Hearing 3/2018

- Vertical integration is not detrimental for competition in fuels markets as it is observed in developed and highly competitive markets. Agent and investors will find the mechanisms to stay competitive and delivery quality product at competitive prices to consumers. There are basic fundamentals that need to be in place:
 - A single player share may not be large enough to manipulate the market, either integrated or non-integrated, that characterizes as monopoly
 - Taxation fairness so that one pathways is not favorable over the others. Specific market competition will dictate option selection of linkage
 - Price transparency – Futures Price, Spot Price, and Rack Price – by regulators and price reporting agencies (not yet established in the country)
- **Brazil has 3 major constraints**
 - Dominant position of Petrobras in refining
 - Limited number of agents and infrastructure options on midstream (mainly dominated by Transpetro)
 - Government intervention on fuel prices through subsidies and/or indirectly through Petrobras

Comments on vertical integration in Brazil (2/4)

ANP Public Hearing 3/2018

- From a broad and high-level perspective, the vertical integration in Brazil may need to be developed in phases and some of the issues and constraints are more complex and/or require a large investments (such as infrastructure). Some considerations:
- **Short-term initiatives**
 - Fuel tax reform
 - Brazil's tax burden on fuels is comparable to the highest in the world. In addition ad valorem tax exacerbates the upside volatility of international prices for local prices at the pump. The most important aspect is to “even out” taxes between supply and point of delivery so that a pathway is not favored indirectly as well as among states
 - In the U.S., at the Federal level, the majority of the taxes are collected when product is removed from the bulk storage terminals. The companies pay the tax to the Internal Revenue Service (IRS). The states have different rules for the point of taxation as some tax the product “at the rack”, which is upon removal from the bulk terminal, while other states impose the tax at the distributor level, having a series of approved bulk distributors, who hold licenses and file regular (usually monthly) returns where the state and local taxes are paid. However, uneven state taxes allow tax evasion

Comments on vertical integration in Brazil (3/4)

ANP Public Hearing 3/2018

- Quality control
 - Quality control must be a shared responsibility between adjacent points in the supply chain so that a path to the final consumer is not immune of inspection leading to irregularities and cost avoidance
- Free market monitoring and legal action
 - CADE, supported by ANP, is the ultimate entity responsible for monitoring monopolistic practices, unfair competition, and market manipulation such as price dumping, gouging, fixing
- Price transparency
 - This is critical to provide all agents and final consumers access to price formation, without price controls by the government, and to attract investments in all segments of the supply chain. A place that everyone – refiners, suppliers, traders, jobbers, retailers, or end-users – can see the value of a commodity at any given time.
 - Futures Prices – implied by import parity and NYMEX until a local stock exchange house can establish its own futures
 - Spot Prices – implied import parity with spot prices
 - Rack Prices – available locally as long as prices are not controlled, explicit or implicit, by the government

Comments on vertical integration in Brazil (4/4)

ANP Public Hearing 3/2018

- **Long-term initiatives**

- Diversification of local refiners/suppliers
 - As long Petrobras retains almost all of the refining capacity and supplies approximately 80-90% of the total demand of gasoline A and diesel A, distributors and retailers will continue to have limited option and focus on efficiencies downstream their business (from rack to retailers). Therefore, giving distributors options on supply via direct imports should be considered
- Investment incentives for midstream
 - Allowing vertical integration may attract distributors to invest in midstream (terminals, pipelines, ports, etc). For example, in the U.S. companies can form limited partnerships which have tax benefits if they are investing in pipelines

- **Final remarks**

- Vertical integration in the fuel supply in Brazil should be considered in a broader approach to free and deregulated market and not only as the mechanism that can protect consumers from fuel price hikes. Special consideration has been taken considering the market share dominance of Petrobras in the fuel chain

Comments on brand fidelity (1/3)

ANP Public Hearing 4/2018

- Branding a product or a establishment is a common and important practice for differentiation to attract customers. Nonetheless, base fuels are fungible commodities that have to meet some minimum requirements. Gasoline and diesel cannot be specified at the molecular composition. Thus, gasoline and diesel are branded by the addition of advanced chemicals, additives, with proprietary formulas, that are promised to improve combustion, reduction of build up on engines, and other advantages ABOVE the minimum requirements of quality of regular (unbranded) gasoline/diesel specified by the regulator.
- Regarding fidelity of a branded retailer, even those that do not sell branded fuel, with its supplier is a contractual fundamental premise associated with supply guarantees that has to be respected like any other contract between a seller and a buyer by the underwriting authority and legal institutions.
- Main considerations for the hearing:
- **Clarification of branded and unbranded fuel**
 - As explained previously, a fuel is branded when a company adds its proprietary (patented and trademarked) additive package to the finished gasoline/diesel regulated by a government body. This additives normally have a tracer/marker so the company owner of the additive package can monitor its dealers. In markets such as Europe and The U.S. all fuel additives are registered with the regulator.

Comments on brand fidelity (2/3)

ANP Public Hearing 4/2018

The regulator is not responsible for controlling compliance of branded fuels. The branded supplier has the ultimate interest in monitoring that its branded station is complying with quality.

- In the U.S, if a retailer of a branded fuel is caught selling unbranded fuel, the station owner will lose the contract, pay penalties, and respond criminal charges.
- A suggestion is that brand owners, distributors and ANP collaborate with inspection of branded fuels. In case of irregularity, a suspension of license to operate may be take place.

- **Branded retailer fidelity**

- In most developed markets, the contract between the distributor/jobber and retailer are private instruments and are subject to typical buyer/seller agreements legal protections that are not responsibility of the regulator. For example, it's not EPA's responsibility to control or intervene in a contract between a supplier of fuel and a retailer owner.
- It's not always the case that an unbranded retailer without a supply contract will have the lowest price. If a market is tightly supplied, refiners/suppliers always honor contracts (even if it's unbranded fuel) that have volume commitments first. This causes what in the U.S. is known as price "inversion". Suppliers will make unbranded prices higher than branded to discourage liftings and protect inventory.

Comments on brand fidelity (3/3)

ANP Public Hearing 4/2018

- **Final remarks**

- Branding fuel and branding retailer is a common practice in developed markets such as the U.S. and Europe. The role of the regulator is to ensure that the minimum quality standards are met to protect the final consumer and the environment.
- Once under a contract of supply and branding exclusivity both supplier and retailer have responsibilities and conditions that must be respected under the court of law and are not subjected by regulatory oversight of the fuel regulatory agency.

Conclusions

Conclusions (1/4)

- Brazil has a diverse and competitive retail market that is very similar with the American and European models. The country follows the principles of free and competitive market
- The Brazilian crude oil and refined products industry has large scale and complexity:
 - Pros
 - Brazil is a significant oil producer and will become a large net exporter
 - There is large capacity (~90% of total fuel demand) and complexity to make high quality fuel in the refining sector
 - Retail and marketing is diverse and competitive
 - Cons
 - Refining is heavily concentrated on a single player – Petrobras
 - Gap between demand and local supply is increasing and consequently imports of refined products are also increasing
 - Fuel distribution from refineries and ports to terminals still very dependent on expensive modes such as truck and barge. Pipeline network is limited. Operations of pipelines still dominated by a single player, Transpetro a subsidiary of Petrobras
 - Vertical integration is prohibited as a result of high risk of illegal/unfair practices by some agents, a deficient legal and law enforcement systems and a complicated and uneven tax structure

Conclusões (1/4)

- O Brasil possui um mercado de varejo diversificado e competitivo, muito semelhante aos modelos americano e europeu. O país segue os princípios de mercado livre e competitivo
- A indústria brasileira de petróleo e produtos refinados tem grande escala e complexidade:
 - Prós
 - O Brasil é um produtor de petróleo significativo e se tornará um grande exportador líquido
 - Há grande capacidade local (~90% de toda a demanda de combustíveis) e complexidade para fazer produtos de alta qualidade no setor de refino
 - O varejo e o marketing são diversos e competitivos
 - Contras
 - Refino está fortemente concentrado em um único jogador - Petrobras
 - A brecha entre a demanda e a oferta local está aumentando e, consequentemente, as importações de produtos refinados também estão aumentando
 - Distribuição de combustíveis de refinarias e portos para terminais ainda muito dependentes de modos caros, como caminhões e barcas. A rede de pipeline é limitada. Operações de dutos ainda dominadas por um único player, a Transpetro, subsidiária da Petrobras
 - A integração vertical é proibida como resultado de alto risco de práticas ilegais / desleais por alguns agentes, sistemas jurídicos e de aplicação da lei deficientes e de uma estrutura tributária complicada e assimétrica

Conclusions (2/4)

- The essence of the problem with the strike was a combination of oversupply of truck freight with unsophisticated owners that didn't use price volatility protections such as hedging, heavy dependency of road logistics (goods and fuel distribution), AND sharp hikes in exchange rate and international fuel prices simultaneously. The tax on fuels exponentially aggravated the problem
- The immediate response from Brazil's government was to create a temporary subsidy
- Crude oil and refined products (base, unbranded components of fuels) are global commodities and by nature its prices are volatile. In free, deregulated markets the law of supply and demand determines the price. Sellers and buyers use either future markets and other hedging mechanisms to minimize exposure to volatility
- Based on different cases of models of fuel price controls, Brazil should steer away from price controls either explicit or implicit. Frequently **artificial low fuel prices, through some form of price control**, have negative consequences:
 - Increase black markets, smuggling, fuel adulteration
 - Possible misuse of purpose of the subsidy fund or regulatory tax
 - Financial losses by fuel suppliers
 - Lack of refining and infrastructure investments
 - Increase fuel shortage as conservation and waste reduction is not encouraged
 - Subsidies contribute to debt accumulation, divert government spending away from other sectors such as health, education, and infrastructure

Conclusões (2/4)

- A essência do problema com a greve foi uma combinação de excesso de frete de caminhão com proprietários não sofisticados que não usavam proteções de volatilidade de preços, como hedge, dependência pesada de logística viária (distribuição de bens e combustíveis) e aumento acentuado de taxa de câmbio e preços internacionais de combustível simultaneamente. O imposto sobre os combustíveis exponencialmente agravou o problema
- A resposta imediata do governo do Brasil foi criar um subsídio temporário
- Petróleo bruto e produtos refinados (base, componentes sem marca de combustíveis) são commodities globais e, por natureza, seus preços são voláteis. Nos mercados livres e desregulamentados, a lei da oferta e da procura determina o preço. Vendedores e compradores usam futuros mercados e outros mecanismos de hedge para minimizar a exposição à volatilidade
- Com base em diferentes casos de modelos de controle de preços de combustíveis, o Brasil deve se afastar dos controles de preços explícitos ou implícitos. Frequentemente **baixos preços artificiais através** de combustível têm consequências negativas:
 - Aumentar os mercados negros, o contrabando, a adulteração de combustíveis
 - Eventual desafio de finalidade do fundo de subsídio ou imposto regulatório
 - Perdas financeiras por fornecedores de combustível
 - Falta de investimentos em refino e infraestrutura
 - Aumentar a escassez de combustível, pois a redução em consumo e desperdício não é incentivada
 - Os subsídios contribuem para o déficit do governo, desviando recursos de outros setores, como saúde, educação e infraestrutura

Conclusions (3/4)

- There's not a free market that guarantees low fuel prices to the end consumer indefinitely. Diversity of agents, competition, efficient legal and tax systems can help with better prices and quality to consumers. At the end, the law of supply and demand will dictate the market price of fuels
- Regarding the potential changes in the distribution and retail sectors, there are some fundamental pre-requisites that policymakers, regulators, and industry members must consider. These premises are not in place in Brazil currently:
- **Legal and law enforcement**
 - The legal framework needs to be transparent and unbiased to all members
 - By virtue of the high costs and large potential economic losses in the fuel business, administrative actions and legal disputes need to be fast and efficient
 - Monopoly and unfair competition must be monitor, investigated, and resolved by anti-trust agency
 - Law enforcement should be facilitated through all the channels (local police, local regulatory agents, etc)
 - Contractual disputes or reporting of illegal activities should have an easy and effective mechanism and immediate action by law enforcement, which is not the current scenario in Brazil.
- **Taxation**
 - Fuel taxes should be simplified and uniform throughout the chain
 - The tax burden should not be concentrated in one link of the fuel chain
 - To avoid interstate smuggling, tax should be uniform among states

Conclusões (3/4)

- Não existe um mercado livre que garanta preços de combustível baixos ao consumidor final indefinidamente. Diversidade de agentes, concorrência, sistemas legais e fiscais eficientes podem ajudar com melhores preços e qualidade para os consumidores. No final, a lei de oferta e demanda ditará o preço de mercado dos combustíveis
- Com relação às possíveis mudanças nos setores de distribuição e varejo, existem alguns pré-requisitos fundamentais que os formuladores de políticas, reguladores e membros da indústria devem considerar. estas premissas não estão presentes no Brasil:
- **Legal e aplicação da lei**
 - O quadro legal deve ser transparente e imparcial para todos os membros da cadeia de combustíveis
 - Em virtude dos altos custos e das grandes perdas econômicas potenciais no setor de combustíveis, as disputas legais precisam ser rápidas e eficientes
 - O monopólio e a concorrência desleal devem ser monitorados, investigados e resolvidos pela agência antitruste
 - A aplicação da lei deve ser facilitar o pensamento de todos os canais (polícia local, agentes reguladores locais, etc)
 - Disputas contratuais ou denúncias de atividades ilegais devem ter um mecanismo fácil e eficaz e ação imediata pela aplicação da lei, o que não representa o cenário atual no Brasil.
- **Tributação**
 - Os impostos sobre combustíveis devem ser simplificados e uniformes em toda a cadeia
 - A carga tributária não pode ser concentrada em um único elo da cadeia de combustíveis
 - Para evitar o contrabando interestadual, o imposto deve ser uniforme entre os estados

Conclusions (4/4)

- Once those premises are established, vertical integration, as long as it maintains a competitive market, should not be prohibited. Vertical integration is observed in developed and diverse markets
- Due to the remaining dominant presence of Petrobras and its subsidiaries in all sectors, vertical integration may be restricted until the competition field has leveled out with the introduction of other players.
- At the retail level, fidelity to the brand is a contractual obligation between the distributor/jobber and the retail owner. The legal system, law enforcement, and regulator must be agile when terms and conditions are not respected by any of the parties. This not the current situation in Brazil.
- Branded retailers ALWAYS have an exclusive supply and branding contract with a distributor/jobber or refiner.
- Unbranded retailers with contracts with a supplier must also follow the terms and conditions of a particular contract. Both parties will also respond legal and financial consequences if there's a breach in the contract.

Conclusões (4/4)

- Uma vez estabelecidas essas premissas, a integração vertical, desde que mantenha um mercado competitivo, não deve ser proibida. A integração vertical é observada em mercados desenvolvidos e diversos
- Devido à presença dominante remanescente da Petrobras e suas subsidiárias em todos os setores, a integração vertical pode ser restrita até que o campo competitivo se estabilize com a introdução de outros players
- No nível de varejo, a fidelidade à marca/bandeira é uma obrigação contratual entre o distribuidor/*jobber* e o proprietário do varejo. O sistema legal, a aplicação da lei e o regulador devem ser ágeis quando os termos e condições não forem respeitados por nenhuma das partes.
- Os varejistas com marca SEMPRE tem um contrato exclusivo de fornecimento e imagem.
- Os varejistas sem bandeira com contratos com um fornecedor também devem seguir os termos e condições de um determinado contrato. Ambas as paridades também responderão às consequências legais e financeiras se houver uma violação no contrato.

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