



CORONATION

The Refining Business

A Nigerian & West African Lens on the Global Downstream
September 2026

Contents

1.	Executive Summary	3
2.	Introduction – Why Refining, Why Now, Why West Africa	5
3.	Refining 101 – How a Refinery Actually Works	6
4.	The Economics of Refining – Crack Spreads & Margins	8
5.	How Refineries Make Money (and How They Lose It)	11
6.	The Global Refining Landscape – Capacity, Balances & Trade Flows	12
7.	Key Global Refining Hubs	14
8.	The Current Refining Market – Where We Are in the Cycle	16
9.	The West African Fuel Market – Structure	18
10.	The Dangote Refinery – Anatomy of a Disruption	20
11.	The Impact of Dangote – Local, Regional & Global	22
12.	New Refinery Projects & the Global Capacity Pipeline	24
13.	Risks, Headwinds & the Energy Transition	26
14.	Investment Implications & Ways to Play	27
15.	Conclusion & Outlook	29
16.	Appendices	30
17.	Disclaimer & Disclosures	34

Exhibits

1.	US 3-2-1 Crack Spread (NYMEX/CME), 2021–2026 (\$/bbl)	5
2.	The West African paradox, in one line	6
3.	Anatomy of a Barrel (Yield Waterfall)	8
4.	Refinery Process Flow	8
5.	Nelson Complexity Index by refinery/region	8
6.	Worked example — building a 3-2-1 crack (illustrative)	9
7.	US 3-2-1 vs Singapore Gross Refining Margins (GRMs), \$/bbl (2017–2026)	10
8.	Global refining capacity by region, 2025 (mb/d)	13
9.	Net Product Trade Balances by Region (structural importers vs exporters)	14
10.	Hub Summary	16
11.	Net capacity additions vs demand growth to 2030 (mb/d)	18
12.	Nigeria’s State-Owned Refineries	19
13.	(Lagos) Pump Price Estimate Step-Change (2023–2026)	20
14.	Dangote Refinery at a Glance	21
15.	Dangote among the world’s largest refineries	23
16.	Before vs after the Dangote Refinery: Key West Africa flows	24
17.	Qualitative Synthesis Matrix	25
18.	African Refining Projects (Upcoming & Operational)	27
19.	Framing the opportunity set (not a recommendation)	29
20.	Scenario Table	30

Executive Summary

Oil refining is the toll booth between crude oil and the fuels an economy consumes. A refinery buys crude, physically separates it, and refines it into petrol, diesel, jet fuel, and other products, then sells them for more than the cost of the crude. That spread, the refining margin, or “crack spread”, is the single number that governs the industry's fortunes. It is volatile: refining can swing from losses to windfall profits within two or three years.

After the depressed years of 2015–20, the sector was jolted into a new era. The 2022 energy shock and the loss of Russian barrels drove margins to record highs, then normalised toward mid-cycle levels through 2024 before the 2026 Middle East conflict, military operations from 28 February 2026 and the effective closure of the Strait of Hormuz from early March, spiked them to record highs again. A Pakistan-brokered ceasefire allowed a partial reopening from April but broke down; by mid-July the conflict had reignited, and both product margins and crude had surged again. As of early September 2026, the US 3-2-1 crack holds at acute-stress levels (~\$63–65/bbl) after record prints in July and August, and crude, far from falling in price, has climbed to around \$97/bbl Brent as flows through the Strait remain a fraction of what is normally seen.

The Report in one view

- ✓ **The business:** refining earns the spread between product prices and crude cost; complexity and location decide who captures it.
- ✓ **The cycle:** cracks hit record highs in July-August (US 3-2-1 ~\$70-72/bbl, NYMEX basis) on refinery outages, not crude scarcity, and remain at acute-stress levels (~\$63–65/bbl) into September even as the conflict and crude have stayed elevated rather than resolving. Beneath the shock, a capacity wave still looms.
- ✓ **The disruption:** Dangote (700 kb/d) turns Nigeria from a fuel importer to a net exporter and rewires Atlantic Basin flows.
- ✓ **The lens:** West Africa is structurally short of fuel and long on demand growth, the most interesting vantage point in global refining.

Underneath the volatility sits a structural story: refining capacity is closing in the high-cost West (Europe, parts of the US) and being built in Asia, the Middle East, and, increasingly, Africa. The survivors of this shake-out are large, complex, well-located plants, and one of the largest and newest of them all sits on Nigeria's Atlantic coast.

The 700,000-barrel-per-day Dangote refinery near Lagos is the most consequential downstream project of the decade for the Atlantic Basin. In under two years, it has taken Nigeria from importing almost all its petrol to becoming a net exporter, collapsing the country's fuel-import bill, and beginning to redraw trade flows that European and US refiners had relied on for decades. It is both a compelling industrial story and an example of the building of a strategic national asset.

Key takeaways

- ✓ **Refining is a spread business, not a volume business.** Profitability is driven by the crack spread and by how much of that spread a given plant can capture, not by how much crude the world produces. Complexity, crude flexibility, and location are the levers that separate winners from losers.
- ✓ **Margins sit at acute-stress levels, and the tightness is now on the product side.** Underlying margins spent 2024–25 near mid-cycle (Singapore GRM ~\$5.5–6/bbl), but the 2026 Middle East war pushed the US 3-2-1 crack to successive record highs, reaching US\$69.66/bbl on 16 July 2026 and a record ~US\$72/bbl at the late-July/August peak (NYMEX basis), above the March multi-decade peak and several times the normal \$10–20/bbl band. The diesel (ULSD) crack reached an intraday all-time high of \$102.20/bbl on 17 August, settling around \$101.86/bbl, and the gasoline crack peaked near \$60/bbl on 17 July (levels last seen in June 2022).

Executive Summary

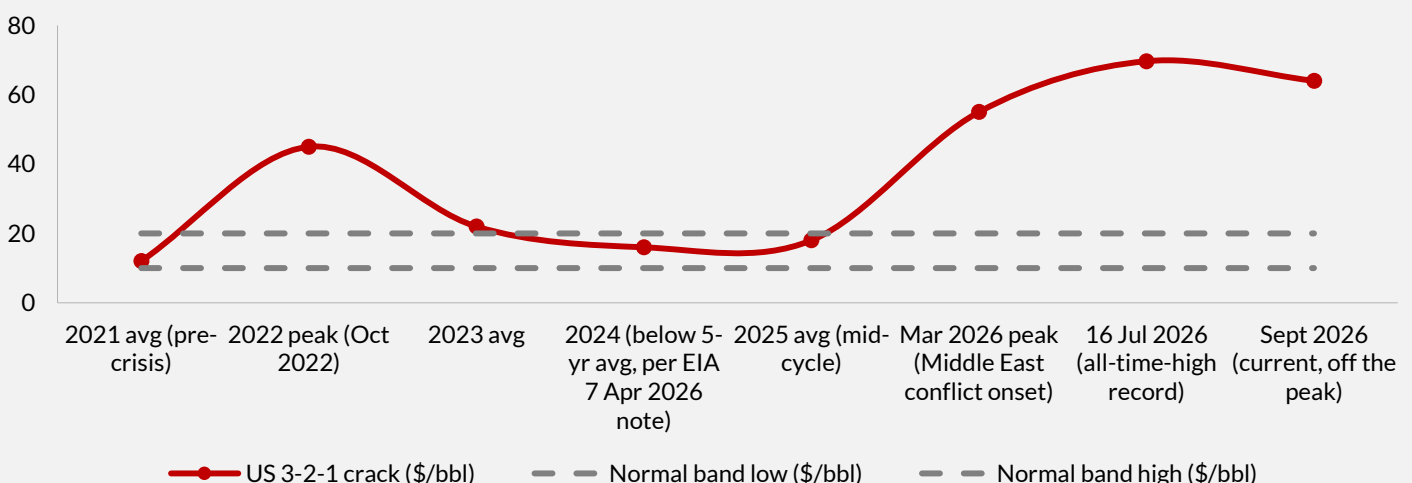
- ✓ Refinery outages, some Gulf capacity offline, a large share of Russian capacity down, Russia's late-stage suspension of diesel exports, and permanent US closures, rather than crude scarcity, are the binding constraint; while the July escalation in the Middle East has also pushed crude back up (Brent ~\$84-91), the product-side tightness is what is setting the record margins. As of early September 2026, the US 3-2-1 has eased from those records to roughly \$63- 65/bbl, still acute-stress levels, several times the normal band, while Brent has moved higher still, to around \$97/bbl, as the conflict has continued rather than resolved (see Section 8).
- ✓ **A capacity wave is the medium-term headwind.** The IEA expects roughly 4.2 mb/d of new capacity by 2030, only partly offset by ~1.6 mb/d of closures. Net additions of ~2.6 mb/d exceed product-demand growth, implying more forced closures of high-cost Atlantic Basin plants and pressure on margins.
- ✓ **Dangote changes the West African equation.** Dangote is exporting jet fuel to Europe and gasoline as far as the US and disintermediates the European (ARA) and US Gulf cargoes that historically supplied the region.
- ✓ **The demand backdrop in Africa is structurally different.** Where OECD fuel demand is plateauing, African demand is still growing on population, urbanisation, and low EV penetration, a tailwind for a domestic refiner that OECD peers do not enjoy.
- ✓ **The Dangote IPO is priced and open, and the first public financials are in.** The approved terms: 4.1bn shares at N525, raising ~N2.15tn (~3.3% of enlarged capital before over-allotment, ~\$49bn implied value); subscription runs 14 Sept-13 Oct 2026, with NGX trading expected in November. The prospectus's first-ever public financials show a FY2025 net loss of ~\$476m (at a \$13.70/bbl gross refining margin) swinging to a H1 2026 net profit of \$1.82bn (at \$24.50/bbl), the clearest evidence yet of the ramp's trajectory, discussed in full in Section 10.

What we are watching

Four swing factors that run through the report are:

- i. the pace and location of the global capacity wave and whether it overwhelms demand and compresses margins;
- ii. Dangote's domestic crude-supply security and its resolution of the pricing/monopoly dispute;
- iii. the trajectory of African demand growth relative to the global energy transition;
- iv. the pace at which offline Gulf and Russian refining capacity returns, the variable that decides how long product-side margins stay at crisis levels.

Exhibit 1: US 3-2-1 Crack Spread (NYMEX/CME), 2021 - 2026 (\$/bbl)



Source(s): Coronation Research, EIA, Bloomberg, and Reuters (September 2026)

Section 2: Introduction – Why Refining, Why Now, Why West Africa

The role of refining in the energy value chain

The oil industry is conventionally divided into three stages. Upstream is exploration and production, getting crude oil out of the ground. Midstream is transport and storage, pipelines, tankers, and terminals. Downstream is refining and marketing, turning crude into usable products and selling them to consumers. Refining is the pivot of the whole chain. Raw crude is almost useless to an end user. Only after refining does a barrel become the petrol (PMS) in a car, the diesel (AGO) in a truck, the jet fuel in an aircraft, or the feedstock for plastics.

For investors, refining is distinctive because it is a margin business sitting between two volatile prices. Upstream producers are essentially long the oil price; refiners are long the difference between product prices and crude, which behaves very differently. So refining can prosper when oil prices fall, because feedstock gets cheaper, and struggle when they spike. Read it on its own terms, not as a proxy for the oil price.

Why now

Refining margins have swung from structurally depressed in the second half of the 2010s to spectacular in 2022 and volatile since. The invasion of Ukraine and the dislocation of Russian product flows drove margins to record levels; they then normalised through 2023–24 as demand softened and new capacity started up, before the late-February 2026 Middle East conflict spiked them again, a spike that, unusually, has outlived the crude shock that caused it. At the same time, a structural realignment is underway: dozens of refineries are closing in Europe and parts of the US, while new mega-plants come online in the Middle East, Asia and Africa. The result is a market in transition, where the identity of the marginal supplier, and so the price-setter, is genuinely changing. Hence this report, and its timing.

Why a West African lens

West Africa sits at the sharpest edge of these dynamics. The region runs a striking paradox. It is rich in crude oil yet has historically imported almost all its refined fuel, shipping crude abroad to be processed and buying the finished products back at a premium. Nigeria, Africa's largest crude producer, has been a prime example of this. The Dangote refinery is the most direct challenge to that paradox anywhere in the developing world, and its ripple effects reach the US Gulf Coast and Rotterdam.

Exhibit 2: The West African paradox, in one line

Nigeria produced roughly 1.6 mb/d of crude in 2025 and exported about 82% of it, yet as recently as 2024 spent a record N15.4 trillion importing petrol, buying back, at a premium, fuel made from its own oil.

Scope and Methods

This report proceeds from first principles. Sections 3 to 5 explain how a refinery works, how margins and crack spreads are constructed, and how refiners make (and lose) money. Sections 6 to 8 map the global system, profile the key hubs, and assess where we sit in the cycle. Sections 9 to 12 turn to West Africa: the structure of the Nigerian fuel market, the anatomy and impact of the Dangote refinery, and the pipeline of new projects. Sections 13 to 15 cover risks and the energy transition, the investment implications, and our outlook.

Section 3: Refining 101 – How a Refinery Actually Works

Start with what physically happens inside the plant. A refinery is an enormous, continuously running kitchen that takes one messy raw ingredient, crude oil, and separates and rebuilds it into a slate of precisely specified products.

From a barrel to a slate of products

Crude oil is not a single substance but a mixture of thousands of hydrocarbon molecules of different sizes. Refining exploits the fact that different molecules boil at different temperatures. A standard 42-US-gallon barrel of crude does not yield 42 gallons of a single fuel; it is split into many cuts, and because refining adds volume (a “processing gain”), US refineries typically produce around 45 gallons of product per 42-gallon crude barrel. A representative US yield is roughly 19–20 gallons of motor gasoline, 11–13 gallons of diesel and heating oil, about 4 gallons of jet fuel, and the remainder as heavier products, petrochemical feedstocks, and refinery gases.¹

Step 1 – Distillation: separating the barrel

The first process in every refinery is distillation. Crude is heated in a furnace and fed into a tall fractionating (distillation) column. As the vapours rise and cool, different fractions condense at different heights: the lightest gases (LPG) and naphtha at the top, then petrol (gasoline) blend stocks, then kerosene and jet fuel, then diesel and gasoil lower down, with the heaviest residue (fuel oil, bitumen) collecting at the bottom. Distillation alone, however, produces too much heavy, low-value material and not enough of the light products modern economies demand.

Step 2 – Conversion: rebuilding the heavy into the light

This is where sophisticated refineries earn their keep. Conversion units chemically break large, heavy molecules into smaller, more valuable ones. A fluid catalytic cracker (FCC) or residual fluid catalytic cracker (RFCC) “cracks” heavy gasoil and residue into petrol and other light products. A hydrocracker does similar work under hydrogen pressure to make high-quality diesel and jet. A coker breaks down the very bottom of the barrel into lighter streams and solid petroleum coke. Reformers and alkylation units rearrange molecules to raise petrol quality (octane).

Step 3 – Treating and blending: meeting the spec

Raw cuts must be cleaned and blended to meet product specifications. Hydrotreaters remove sulphur so that fuels comply with standards such as Euro V (very low sulphur) and the IMO 2020 marine-fuel rules. Finally, streams are blended to hit exact octane, cetane, vapour-pressure and sulphur targets before the product leaves the plant. The ability to make clean, high-specification fuels, rather than dirty, high-sulphur product that trades at a discount, is itself a source of margin.

Complexity: why two refineries earn different margins from the same crude

The industry measures sophistication with the Nelson Complexity Index (NCI). A plant that only distills crude scores about 1.0; each additional conversion or treating unit adds to the score in proportion to its cost and capacity relative to the distillation unit. A simple “topping” refinery might score around 1–2; a deep-conversion refinery with coking can score 9 or more; the most complex individual plants score higher still, India's Jamnagar is often cited at around 21, and Nigeria's Dangote at about 10.5.²

A higher-complexity refinery can run cheaper, heavier, higher-sulphur crudes and still turn out a light, clean product slate. It captures a wider margin as a result. That is why complexity, not size alone, decides profitability, and why a modern high-complexity plant can out-earn an older simple one processing the identical barrel.

Crude slates: choosing the feedstock

Crudes differ along two axes: density (light versus heavy) and sulphur content (sweet versus sour). Light, sweet crudes are easier to process and command a premium; heavy, sour crudes are cheaper but require more complex plants to handle. A refiner's choice of crude slate is therefore a profit lever in its own right: a complex refinery that can buy discounted heavy-sour crude and still make premium products enjoys a structural advantage.

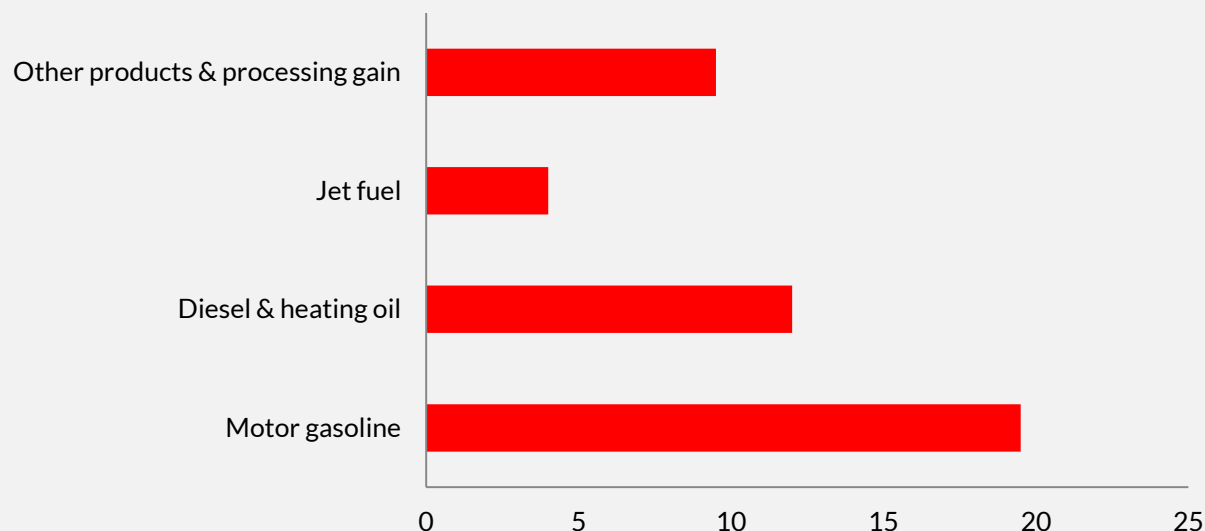
¹US Energy Information Administration (EIA), Energy Explained: refining crude oil inputs and outputs.

²Nelson Complexity Index methodology: EIA, 'Today in Energy' (complexity)

Section 3: Refining 101 – How a Refinery Actually Works

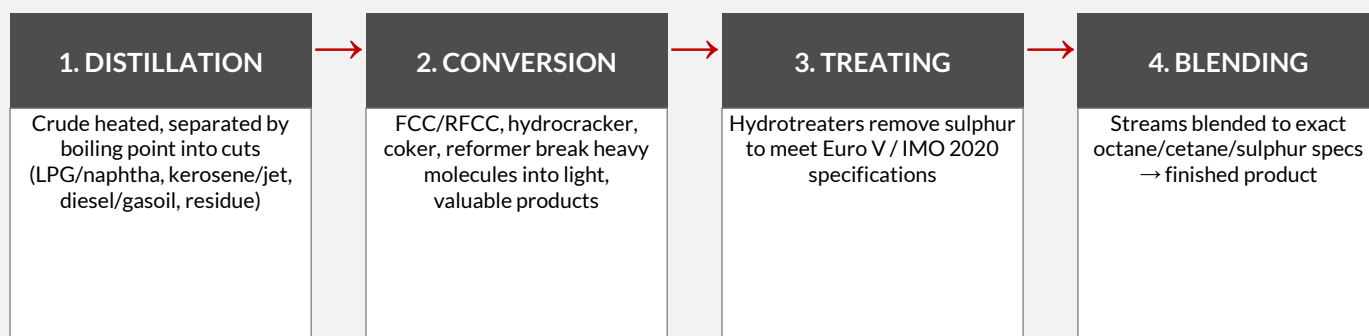
The differentials between light and heavy, and sweet and sour, are a second margin engine alongside the crack spread itself, a theme we return to in the next section.

Exhibit 3: Anatomy of a Barrel (Yield Waterfall)



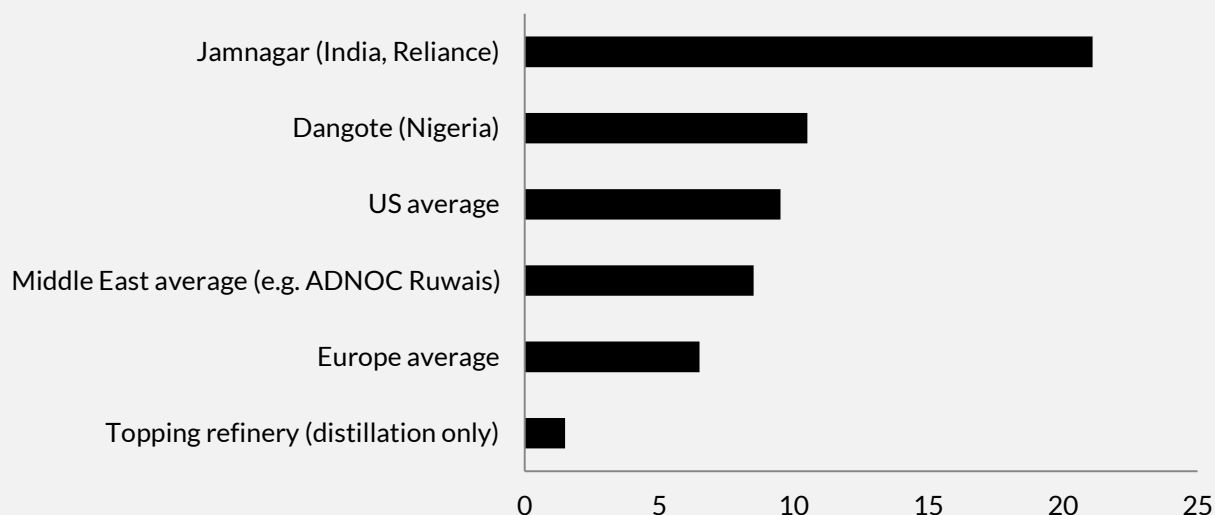
Source(s): U.S. Energy Information Administration (U.S. EIA), Coronation Research

Exhibit 4: Refinery Process Flow



Source(s): Coronation Research

Exhibit 5: Nelson Complexity Index by refinery/region



Source(s): Petroleum Refinery Process Economics (2000), U.S. EIA, & Coronation Research

Section 4: The Economics of Refining – Crack Spreads & Margins

Now to the number that matters most: the refining margin. Strip away the engineering and the business is simple. Buy crude, sell products, keep the difference.

The core idea

A refinery's gross margin is the value of the products it makes minus the cost of the crude it buys, expressed per barrel. Because products are worth more than crude most of the time, this spread is normally positive; when it turns negative, refineries lose money on every barrel and eventually cut runs or shut down. The market's shorthand for this spread is the “crack spread”, a reference to the cracking process that converts crude into lighter products.

The 3-2-1 crack spread

The most widely quoted proxy is the 3-2-1 crack spread. It assumes that three barrels of crude are refined into two barrels of gasoline and one barrel of distillate (diesel/heating oil), roughly the yield of a typical refinery. The 3-2-1 crack is the value of those two gasoline barrels plus one distillate barrel, minus the cost of three crude barrels, divided by three to give a per-barrel figure. It is a simplification: real refineries make many products and their yields vary. But it captures the direction and rough size of profitability, and it is the figure traders and analysts watch. It is also a US-yield construct: a European or Asian plant is better proxied by gasoil-weighted variants or the Singapore GRM. Regional variants exist (for example, 5-3-2), as do single-product cracks (the gasoline crack, the diesel/gasoil crack) that isolate one product against crude.

Exhibit 6: Worked example – building a 3-2-1 crack (illustrative)

- Suppose crude costs \$80/bbl, gasoline sells at \$95/bbl, and distillate at \$105/bbl.
- Product value for the 3-2-1 basket = $(2 \times \$95) + (1 \times \$105) = \$295$ for three barrels.
- Crude cost = $3 \times \$80 = \240 .
- **Gross crack** = $(\$295 - \$240) \div 3 = \$18.3/\text{bbl}$.

This is a gross figure. The refiner must still pay for energy, catalysts, hydrogen, labour, and freight before arriving at a net cash margin, see below. Numbers here are illustrative.

Source(s): Coronation Research

Gross versus net margin

The crack spread is a gross margin. Running a refinery is energy-intensive and costly: a plant consumes large amounts of its own fuel and power, buys hydrogen and catalysts, pays for maintenance and labour, and incurs freight costs to bring crude in and move product out. Subtracting these variable and fixed costs from the gross crack gives the net cash margin, the number that actually reaches the bottom line. The gap between the two can be several dollars a barrel. Analysts therefore track both the headline benchmark cracks and each plant's “capture rate”, how much of the theoretical crack it realises in practice.³

The benchmarks the market watches

Three regional benchmarks dominate. In Asia, the Singapore gross refining margin (GRM), built off Mean of Platts Singapore product assessments, sets the tone for the East. In Europe, the Northwest Europe / Rotterdam (ARA) margin is the Atlantic Basin reference. In the US, the Gulf Coast 3-2-1 crack is the headline. As a rough guide to “normal,” the Singapore GRM is expected to average around \$5.5–6.0/bbl over 2025–2027, close to its pre-COVID 2012–2019 average of roughly \$5.0–5.5/bbl. For the US 3-2-1, a healthy band is roughly \$10–20/bbl; sustained prints above \$30 indicate stress, and above \$40 acute stress, thresholds that matter for reading 2026 (Section 8).

Two further margin levers: differentials and location

Beyond the headline crack number, two forces move a refiner's realised margin. The first is crude differentials: a complex plant that buys discounted heavy-sour crude widens its margin versus one tied to premium light-sweet grades. The second, central to the West African story, is location. A crack spread is worth more in a region that is short of product and must import it, because the local price includes the cost of freight, insurance, and handling to bring a cargo in.⁴

³For an illustration of how weak benchmark cracks translate into cash losses, see EIA, 'Refining margins have fallen below their five-year average' (15 Oct 2024)

⁴Krungsri Research, Industry Outlook – Refinery 2025–2027

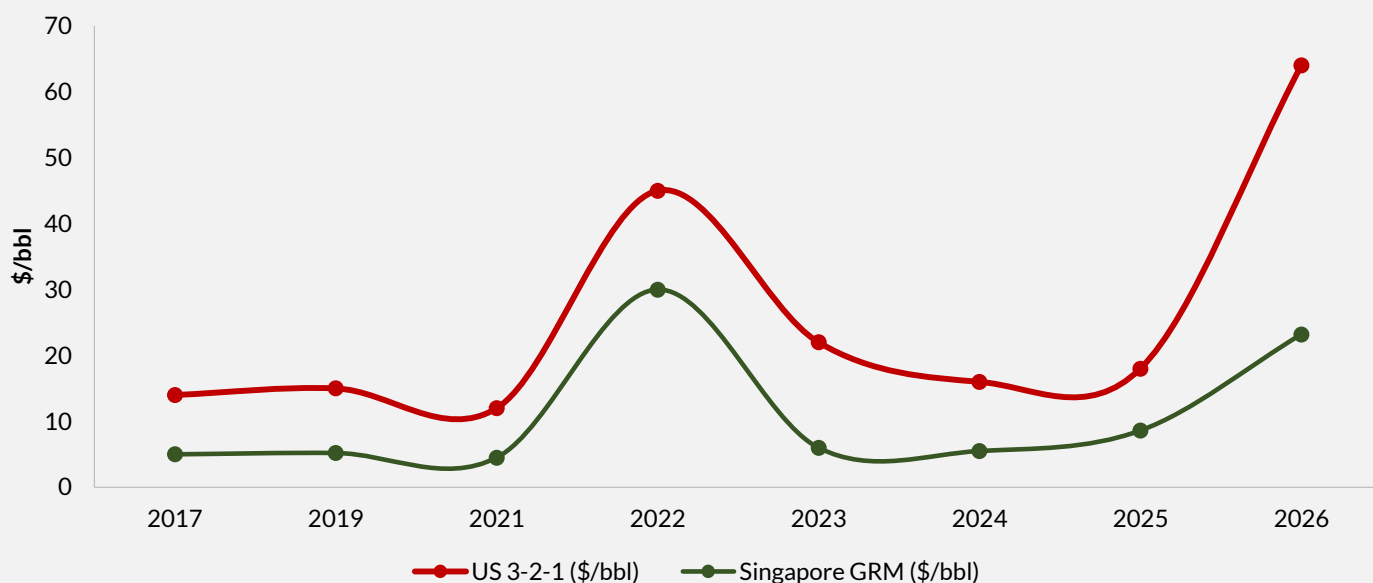
Section 4: The Economics of Refining – Crack Spreads & Margins

Fuel delivered into a deficit market such as West Africa has historically carried an import premium over the same product in a surplus hub like Rotterdam or the US Gulf. A domestic refiner that avoids those import costs captures that premium, a structural edge central to the Dangote story we discuss in the sections below.

Seasonality

Cracks also move with the calendar. Gasoline cracks typically strengthen ahead of the northern-hemisphere summer driving season; distillate and heating-oil cracks firm into winter. Refineries schedule maintenance (turnarounds) in the shoulder seasons, which tightens supply and can lift cracks. Understanding this seasonal rhythm helps distinguish a genuine change in the cycle from ordinary calendar effects.

Exhibit 7: US 3-2-1 vs Singapore Gross Refining Margins (GRMs), \$/bbl (2017-2026)**



Source(s): U.S. EIA, Krungsri Outlook, & Coronation Research

*The 2026 data in Exhibit 7 are not directly comparable in terms of reference dates. The US 3-2-1 spread is as of September 2026, while the Singapore GRM is based on data available as of April 2026.

Section 5: How Refineries Make Money (and How They Lose It)

A crack spread tells you the margin on a barrel; it does not tell you whether a refinery is a good business. For that, the margin must be scaled by volume and set against the plant's full cost base and capital intensity.

The refining P&L in plain terms

At its simplest, a refinery's gross profit is throughput (barrels processed per day) multiplied by net cash margin per barrel. From that, subtract fixed operating costs, labour, maintenance, insurance, overheads, to reach operating profit, and then maintenance capital expenditure to keep the plant running safely. Two refineries with the same margin can post very different profit numbers depending on how many barrels they run and how lean their cost base is.

Volume: utilisation is everything

Because a large share of a refinery's costs is fixed, profitability is highly sensitive to utilisation, the percentage of nameplate capacity run. A plant running at 95% spreads its fixed costs over far more barrels than one at 60%, and every incremental barrel at a positive margin drops almost entirely to profit. This is why operators prize high, steady run-rates and why unplanned outages are so damaging. Refineries also undergo periodic "turnarounds" during which they earn nothing, so the timing and length of turnarounds materially affect annual results. The hierarchy across Sections 3–5 is simple: complexity, crude access and location set a plant's margin capability; utilisation converts that capability into profit. Neither substitutes for the other.

As an illustration – using the Dangote refinery, profiled in Section 10, purely for scale – at 700,000 b/d (the plant's current rated nameplate capacity; see Section 10) and c.90% utilisation a plant runs c.214mn barrels a year, so every \$1/bbl of net cash margin is worth about US\$214m a year; a \$5/bbl mid-cycle margin implies c.US\$1.1bn and a \$10/bbl strong-cycle margin c.US\$2.1bn, all before fixed costs, financing and any petrochemical stream.

Capture: theory versus reality

Benchmark cracks assume an idealised yield and instant sale at reference prices. Real refineries capture only a portion of the theoretical crack, the "capture rate", because their actual product mix, crude slate, location and logistics differ from the benchmark. A well-configured plant in the right location can capture more than the benchmark; a poorly located or less complex one captures less. Tracking capture, not just the headline crack, is how analysts separate strong operators from weak ones.

The cost base

A refinery is one of the largest energy consumers in any industrial economy: it burns fuel and buys power to drive its own processes, so energy is both an input cost and a swing factor in margins. Add hydrogen (increasingly important for cleaning fuels), catalysts, water treatment, maintenance and a skilled workforce, and the cash cost of conversion can run to several dollars per barrel. Refiners with cheap local energy or gas, as in the Middle East and the US Gulf, enjoy a structural cost advantage over those buying expensive power, as many European plants do.

Working capital and the cash cycle

Refining is inventory heavy. A plant must finance a cargo of crude weeks before it is processed and sold as product, tying up large amounts of working capital. The scale is easily underestimated: a single 2-million-barrel VLCC crude cargo at \$70/bbl ties up roughly \$140mn from loading until the products clear, on every cargo, for weeks. When oil prices rise, that financing burden grows; when they fall, refiners can suffer inventory losses on crude bought at a higher price and sold into a lower market. The cash cycle is a real risk, and easy to underrate. It is one reason a new refiner needs extensive funding lines simply to keep crude flowing, a point that has been very visible in Dangote's search for crude-supply working capital.

Cyclical survival

Refining is famously a feast-or-famine business. Margins can be extraordinary in a tight market and deeply negative in a glut, and the swings can be violent from year to year. Survival through the trough depends on balance-sheet strength, a low-cost position and, ideally, integration. Weak, high-cost, standalone plants are the first to close in a downturn, precisely the pattern now playing out in Europe.

Section 5: How Refineries Make Money (and How They Lose It)

Integrated versus merchant refiners

Refiners come in two broad types. Merchant refiners simply buy crude and sell products, fully exposed to the crack. Integrated players attach refining to something else, upstream production, a retail fuel network, or a petrochemical complex, which smooths earnings and captures additional margin along the chain. Integration into petrochemicals looks increasingly like the survival strategy for the transition era: petrochemical demand is expected to keep growing even as transport-fuel demand plateaus. Dangote's design, fuels alongside a polypropylene plant, with upstream ambitions attached, sits squarely in that mould.

Returns reality check

Through the cycle, refining is a mid-return, capital-intensive business punctuated by windfalls. The market tends to reward free cash flow and balance-sheet resilience over headline margin, because it knows the good years do not last. For a new entrant, the investment case rests on being a low-cost, well-located, complex survivor that can earn through the cycle, not on any single year's spectacular crack.

Section 6: The Global Refining Landscape – Capacity, Balances & Trade Flows

How big is the system, and where is it?

Global refining capacity stood at roughly 103.7mn barrels per day in 2025, and the world processed about 86.9 mb/d of crude that year. Capacity is unevenly distributed. Asia-Pacific is the largest refining region, with China alone above 19 mb/d (with a policy cap of c.20 mb/d); the United States is the second-largest national refiner after China, at 18.4 mb/d of capacity, more than half of it on the Gulf Coast; Europe (including the UK, Norway and Türkiye) holds c.13 mb/d, of which the EU accounts for roughly 10.5–11 mb/d.⁵

The great migration East and South

The defining structural trend is a migration of refining away from the high-cost OECD West toward Asia, the Middle East and, newly, Africa. By 2023, the Middle East, China and India combined already held roughly a third of world capacity, matching the combined share of the US, Western Europe and Japan. Almost all new net capacity to 2030 is being built in Asia-Pacific, the Middle East and Africa, while Europe and parts of the US shut older plants. This is not just a shift of tonnage. It changes which refineries set the marginal price of product in the Atlantic Basin.⁶

Supply, demand and the physics of trade

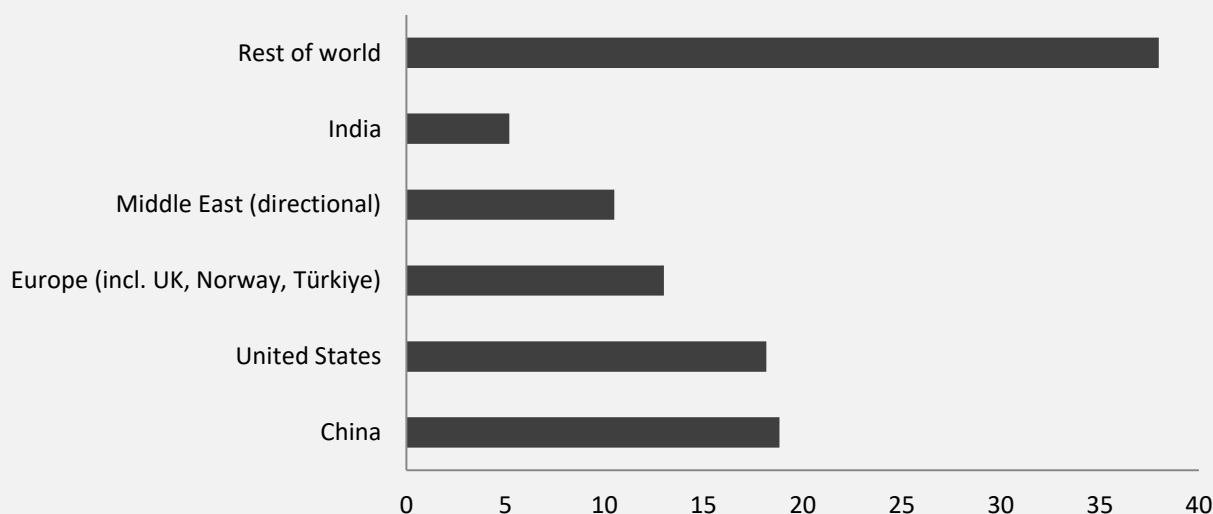
Refined-product markets clear regionally and then internationally. Some regions are structurally long product and export the surplus, the US Gulf Coast, the Middle East and India are the great exporters. Others are structurally short and import, much of Latin America, parts of Asia and, historically, all of West Africa. Trade closes the gap: cargoes move on tankers from surplus to deficit regions whenever the price difference exceeds the cost of freight, an activity intermediated by global trading houses that profit from the arbitrage. Freight rates and shipping availability therefore feed directly into delivered fuel prices in import-dependent markets.

The demand outlooks

Where product demand goes from here is contested, and that disagreement sits at the centre of any refining thesis. The International Energy Agency expects global oil demand to plateau around 105.5 mb/d by 2030, with refined-product demand peaking as early as 2027 at about 86.3 mb/d before gasoline and diesel declines set in. OPEC sees no peak at all, projecting demand to rise to roughly 113 mb/d by 2030 and well beyond 2050. The two views bracket the range of outcomes; crucially, both agree that essentially all near-term growth comes from the non-OECD world, India, other developing Asia, the Middle East and Africa, while OECD demand declines.

For a refiner located in or serving a growth region, this split is decisive. Demand is not disappearing; it is relocating, toward exactly the markets that West African refining is positioned to serve.⁷

Exhibit 8: Global refining capacity by region, 2025 (mb/d)



Source(s): OPEC Annual Statistical Bulletin (2026 edition), Coronation Research

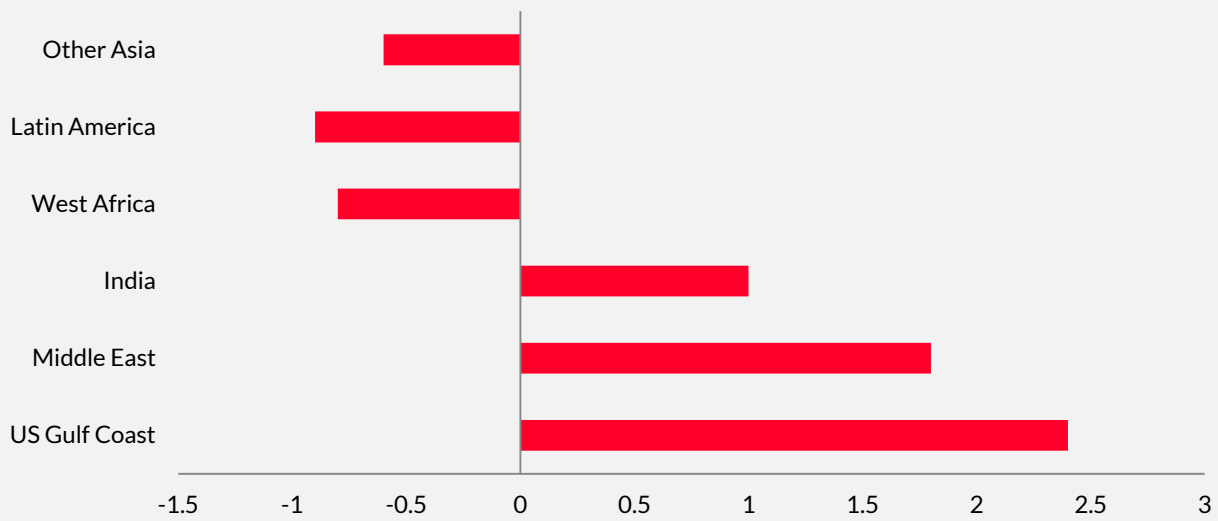
⁵OPEC Annual Statistical Bulletin (2026 edition)

⁶EIA Outlook on Global Refining to 2028 and OPEC World Oil Outlook 2025

⁷IEA Oil 2025

Section 6: The Global Refining Landscape – Capacity, Balances & Trade Flows

Exhibit 9: Net Product Trade Balances by Region (structural importers vs exporters)



Source(s): U.S. EIA, & Coronation Research

Section 7: Key Global Refining Hubs

A handful of hubs set global product prices, absorb the world's export flows and, in several cases, have historically supplied West Africa. They are also the competitive yardstick against which a new-build like Dangote must be measured.

US Gulf Coast – the export machine

The US Gulf Coast (PADD 3) holds roughly 9 mb/d of capacity, about 55% of US refining, and is one of the world's great export centres. In 2025 the US exported around 2.4 mb/d of gasoline, diesel and jet, with Latin America and Mexico the dominant destinations and West Africa a historically important secondary market for gasoline and diesel. Cheap domestic energy and deep complexity make the Gulf Coast a low-cost, high-flexibility competitor, and one of the incumbents most exposed to losing West African share to Dangote.⁸

Amsterdam-Rotterdam-Antwerp – the Atlantic Basin balancer

The ARA hub in Northwest Europe is the Atlantic Basin's storage, blending and price-discovery nexus and the traditional swing supplier of gasoline to West Africa. Its edge is eroding: a wave of European refinery closures is shrinking the blendstock pool, and weakening export arbitrage is trapping product in the basin. As Dangote displaces European cargoes into Nigeria, ARA loses its single most reliable gasoline outlet, quantified in Section 11.⁹

Singapore – the pricing hub of the East

Singapore, with around 1.3–1.4 mb/d of capacity following Shell's Bukom rationalisation and 2026 divestment, is Asia's trading, storage and price-discovery centre. Its Mean of Platts Singapore (MOPS) assessments are the benchmark for gasoline, gasoil, jet and fuel oil across the Asia-Pacific, and the Singapore GRM is the reference margin for the region's refiners.¹⁰

The Middle East mega-refineries

The Gulf has added enormous, state-of-the-art export capacity. Kuwait's Al-Zour reached its full 615,000 b/d in early 2024, the Middle East's largest new-build; Saudi Aramco's Jazan runs at 400,000 b/d; Oman's Duqm started up at 230,000 b/d with a ~10% debottlenecking to around 255,000 b/d under evaluation; and the UAE's ADNOC operates the vast Ruwais complex and is planning further expansion toward roughly 1.5 mb/d. Backed by cheap crude and gas as well as deep complexity, these plants are structurally low-cost exporters competing directly for the same Atlantic and Asian markets.¹¹

India – Jamnagar and the swing to Africa

Reliance's Jamnagar complex in Gujarat is the world's largest single refining site, installed capacity is cited between about 1.24 and 1.4 mb/d, and, with a Nelson complexity around 21, the most sophisticated. India is a major net product exporter and a swing supplier to Africa, Europe and Asia, giving it both scale and flexibility that a new West African refiner must reckon with.¹²

China – from importer toward exporter

China's huge refining base, including its independent “teapot” refiners, has been shifting from serving only the domestic market toward exporting clean products, subject to government export quotas. When Beijing loosens quotas, Chinese diesel and jet flow into the wider Asian market and beyond, tightening or loosening margins elsewhere. China is thus an increasingly important swing factor in global product balances.¹³

⁸EIA Refinery Capacity Report | ⁹ARA's eroding gasoline-blending role: Insights Global | ¹⁰S&P Global Commodity Insights pricing methodology

¹¹S&P Global - Al-Zour 615 kb/d full capacity Feb 2024 & Gulf News - Ruwais expansion | ¹²Reliance Industries – The Jamnagar Jewel

¹³Energy Intelligence - China teapot quotas and clean-product exports & Quantum Commodity Intelligence

Section 7: Key Global Refining Hubs

Exhibit 10: Hub Summary

Hub	Complexity	Scale (mb/d)	Crude access	Export focus	West Africa exposure
US Gulf Coast (USGC)	High	~9	Deep, flexible, cheap domestic energy	High: ~2.4 mb/d exports (2025)	Historically important secondary market for gasoline/diesel; losing share to Dangote
ARA/Northwest Europe	Medium-High	~13 (Europe)	Eroding closures shrink blendstock pool	Declining: weakening export arb	Traditional swing supplier of gasoline; among clearest losers as Dangote ramps
Singapore	High	~1.3-1.4	Trading/storage hub, not a producer per se	High: MOPS is the Asian benchmark	Limited direct WA exposure; sets Asian reference margin
Middle East (Al-Zour/Jazan/Duqm/Ruwais)	High	~1.5-2.0 combined (selected plants)	Cheap domestic crude/gas	High: structurally low-cost exporters	Competes for the same Atlantic/Asian markets Dangote is displacing into
India (Jamnagar)	Very high (NCI 21.1)	1.24-1.4	Flexible crude sourcing, deep conversion	High: major net exporter, swing supplier	Swing supplier to Africa historically; scale/flexibility Dangote must reckon with
China (incl. teapots)	Medium-High	>19	Domestic-first, quota-gated exports	Variable: subject to government quotas	Indirect: quota loosening tightens/loosens wider Asian balances

Source(s): Coronation Research

Section 8: The Current Refining Market – Where We Are in the Cycle

From super-spike to normalisation

The refining cycle of the 2020s has been extraordinary. The 2022 energy shock, the invasion of Ukraine and the dislocation of Russian product exports, drove margins to record highs; US refining margins reached an all-time peak in October 2022, and Singapore margins touched roughly \$30/bbl at the 2022 peak (complex GRM, Platts basis), with individual product cracks such as gasoil far higher.¹⁴ Those levels were never going to last.

By 2024, margins had not merely normalised but weakened: global 3-2-1 crack spreads fell below their five-year average from spring 2024, pressured by soft distillate demand and the start-up of major new plants including Al-Zour, Duqm and Dangote. Margins then firmed again through 2025, the Singapore GRM climbed to about \$8.61/bbl in October 2025, roughly double the second-quarter average, as global product supply tightened.¹⁵

The early-2026 spike

Military operations began on 28 February 2026, and the Strait of Hormuz was effectively closed from early March, shutting in Persian Gulf production and taking more than 3 mb/d of Persian Gulf refining capacity offline; crude shipping through the Strait fell by roughly 95%. Crude spiked to nearly \$120/bbl Brent in March, fell back toward pre-conflict levels (~\$72) during an April–June ceasefire, then surged again as that ceasefire broke down and hostilities reignited in July, Brent was back around \$84–91/bbl in mid-July.

Refining margins, meanwhile, have set successive records on a NYMEX CME settlements basis, though on the EIA New York Harbor spot basis, the May 2022 record of \$75.89/bbl was not exceeded, with the September print of ~\$64.34 sitting roughly 15% below it. On the report's own NYMEX basis, the US 3-2-1 crack reached a multi-decade high of roughly \$55/bbl in March, then broke to \$69.66/bbl on 16 July and on to a record of roughly \$72/bbl at the late-July/August peak. The diesel (ULSD) crack reached an intraday all-time high of \$102.20/bbl on 17 August, settling around \$101.86/bbl, which reflects the level the crack had eased back to by late August rather than the record itself. The gasoline crack also peaked near \$60/bbl on 17 July (last seen in June 2022), several times the normal \$10–20/bbl band.

The message is the same either way: the binding constraint is refining capacity, not crude alone. Persian Gulf export refineries remain shut, a large share of Russian capacity is offline, Russia suspended diesel exports (roughly a tenth of globally traded diesel), a run of refinery incidents (the Valero Port Arthur explosion, Australia's Geelong, strikes on Moscow refineries) has removed further capacity, and permanent US closures (Phillips 66 Wilmington, Valero Benicia) had already thinned the buffer, the classic set-up in which refiners capture record margins even when crude is also rising.

As of early September 2026, neither side of this has settled. The US 3-2-1 has eased from its July–August records to roughly \$63–65/bbl, still several times the normal band, while Brent has climbed further, to around \$97/bbl, up more than 46% year-on-year. The conflict has not been resolved: a further ceasefire agreed in June also broke down, fighting has continued into September, and Houthi forces have struck Saudi Arabia's Jazan refinery (400,000 b/d, profiled in Section 7) directly, rather than only disrupting shipping lanes.¹⁶

One notable caveat. The headline series is a WTI-based US 3-2-1, which runs hotter than Brent-based or USGC measures (the USGC 3-2-1 averaged ~\$42/bbl in April).¹⁶

The supply wave ahead

None of these repeals the medium-term arithmetic, the 2026 squeeze exists because outages have temporarily removed more capacity than the wave has added. The medium-term setup is defined by a wave of new capacity. The IEA expects about 4.2 mb/d of new refining capacity by 2030, offset by roughly 1.6 mb/d of closures, net additions that comfortably exceed projected product-demand growth, implying that still more high-cost capacity “will have to shut.”

The additions are front-loaded into 2024–2026 and concentrated in Asia, the Middle East and Africa; the closures fall on Europe and parts of the US. Whether this wave compresses margins depends on how quickly the high-cost plants rationalise.¹⁷

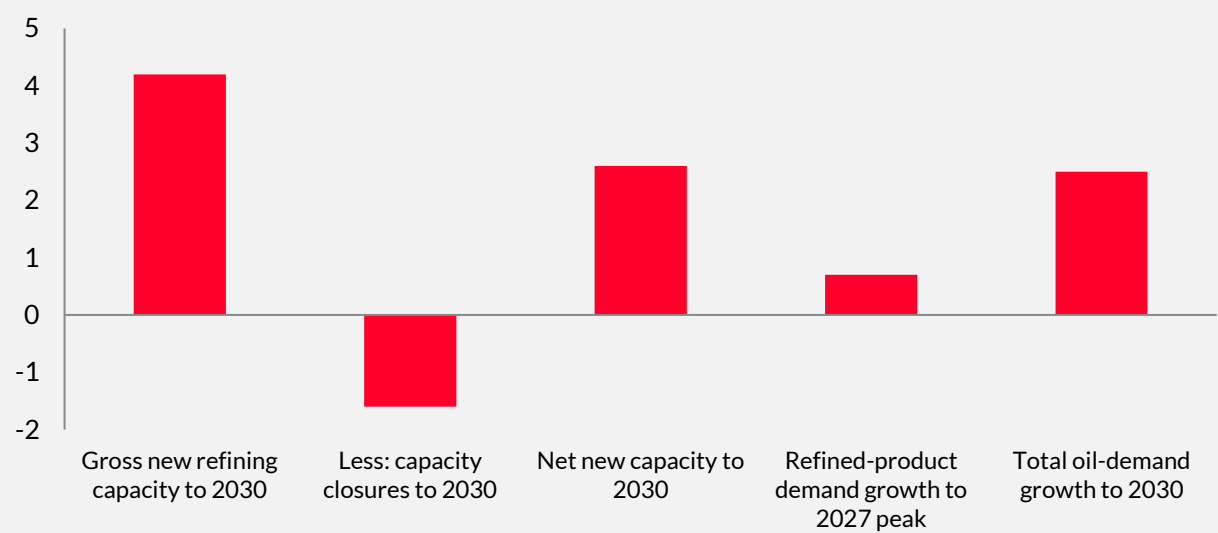
¹⁴AEGIS – US refining margins hit an all-time high in Oct 2022 & Statista - Singapore complex GRM peaked around in mid-2022 | ¹⁵EIA – 2024 sub-5-year-average cracks | ¹⁶Dow Jones (19 Aug 2026) - Record Crack Spreads Highlight Global Supply Tightness | ¹⁷IEA Oil 2025 – ~4.2 mb/d new capacity by 2030 vs ~1.6 mb/d closures; net additions exceed demand growth

Section 8: The Current Refining Market – Where We Are in the Cycle

Regional divergence

A key feature of the current market is that regional margins don't have to move together. A shock that tightens the Atlantic Basin need not lift Asian margins, and vice versa; the closure of European capacity can support NWE cracks even as new Gulf capacity pressures Asian ones. The IEA's June 2026 OMR quantifies the product-side squeeze: global crude runs contracting by 2 mb/d in 2026, to 82 mb/d, before a 3.1 mb/d rebound in 2027 as supplies normalise, a global run cut coexisting with record Atlantic Basin cracks. For an investor, this means the relevant question is not just "where are global margins?" but "where is each plant, and which regional balance does it sell into?", a question that plays directly to Dangote's position as a low-cost supplier into a structurally short West African market.

Exhibit 11: Net capacity additions vs demand growth to 2030 (mb/d)



Source(s): International Energy Agency (IEA), Coronation Research

Section 9: The West African Fuel Market – Structure

The Dangote story only makes sense against the system it disrupts. For decades, West Africa, and Nigeria above all, ran on an improbable arrangement: pump out crude, ship it abroad, and buy the finished fuel back at a premium.

The paradox in numbers

Nigeria is Africa's largest crude producer, averaging roughly 1.6 mb/d in 2025 and exporting about 82% of it. Yet for years it imported nearly all of its petrol. The import bill tells the story of the recent turnaround: petrol imports cost about ₦7.5trn in 2023, ballooned to a record ₦15.4trn in 2024, then fell to about ₦8.9trn in 2025 as domestic refining ramped up.¹⁸

The state refineries: a decade of failure

Nigeria owns four state refineries across three sites: Port Harcourt I & II (60,000 and 150,000 b/d respectively), Warri (125,000) and Kaduna (110,000) refineries with combined nameplate capacity of about 445,000 b/d. For more than a decade, they produced almost no fuel, crippled by underinvestment, poor maintenance, alleged sabotage, and mismanagement. Successive rehabilitation programmes have absorbed some \$3bn in contracts yet restarts at Port Harcourt (Nov 2024) and Warri (December 2024) proved short-lived, and by mid-2026 the plants were effectively non-operational, with the state oil company reviewing whether to repair, repurpose or sell them.¹⁹

Exhibit 12: Nigeria's State-Owned Refineries

Nigeria's state refineries	Nameplate (b/d)	Status, mid-2026
Port Harcourt I & II	210,000	• Old plant (60 kb/d, of the 210 kb/d complex) recommissioned 26 Nov 2024; • Shut 24 May 2025 and still suspended; under viability review. • Output contested, reported as largely naphtha-blending, not full refining.
Warri	125,000	• Reopened Dec 2024, shut Jan 2025 on safety grounds
Kaduna	110,000	• Idle for most of the past decade; rehabilitation ongoing
Combined	445,000	• Effectively non-operational; sale or partnership under study

Source(s): Local Media, Coronation Research

The subsidy and its removal

For years the government capped pump prices and paid the difference from market prices, a fuel subsidy that cost about ₦4.4trn in 2022 on NNPC's own data, roughly 2.2% of GDP on the IMF's estimate, under a 2022 appropriation that exceeded the federal allocations to health, education and social development combined. On his first day in office, on 29 May 2023, President Bola Tinubu famously declared "subsidy is gone." Pump prices, held near ₦190/litre, were raised almost immediately to about ₦488 in Lagos and to over ₦600 within two months; by late 2024 in many states they exceeded ₦1,000/litre. The removal was a genuine structural reform, though the IMF noted subsidies were partially reinstated in 2024 to cushion the effect of a weakening naira.²⁰

¹⁸NUPRC – Crude Oil and Condensate (2025), NBS foreign trade statistics & Local Media

¹⁹NNPC refineries 445 kb/d combined – Local Media

²⁰S&P Global – IMF Report

Section 9: The West African Fuel Market – Structure

The narrative continues past 2024. Dangote's gantry price for petrol fell to ₦1,075/litre in early July 2026, part of a series of cuts through the second and third quarters as the refinery worked through cheaper crude cargoes; the National Bureau of Statistics' March 2026 Price Watch put the national average retail price at ₦1,288.54/litre, itself a 22.55% jump in February.

The naira and the dollarised cost of fuel

Alongside the subsidy, the central bank floated the naira in June 2023. The currency fell from about ₦460 per US dollar to well over ₦1,300, and traded around ₦1,350–1,510 in 2025–26 (official NAFEM window; parallel-market rates ran higher for stretches of the period). Though the naira has since strengthened, trading near ₦1,320 officially and ₦1,400–1,410 in the parallel market in early September 2026, a two-year high for the official rate, alongside rising external reserves (~\$53.5bn) and record monthly remittance inflows. Because imported fuel is priced in dollars, naira weakness fed directly into pump prices. That dollarised cost structure is why deregulated prices more than tripled, and why a domestic refiner that can be paid in naira and source local crude is a structural hedge against both import costs and the exchange rate.²¹

Regulation: the PIA and deregulation

The Petroleum Industry Act of 2021 rewrote the sector's rulebook, deregulating the downstream and enshrining market-based pricing in law, the PIA removed the legal machinery of administered petrol pricing (s.205), though government retains commercial levers through NNPC and an import licensing regime. The Act created the NMDPRA as the midstream and downstream regulator; it cannot set prices but is charged with preventing anti-competitive conduct and profiteering. In practice, by 2026 marketers benchmark to Dangote's ex-depot (gantry) price and add their margin, a striking shift of pricing power toward the refinery.²²

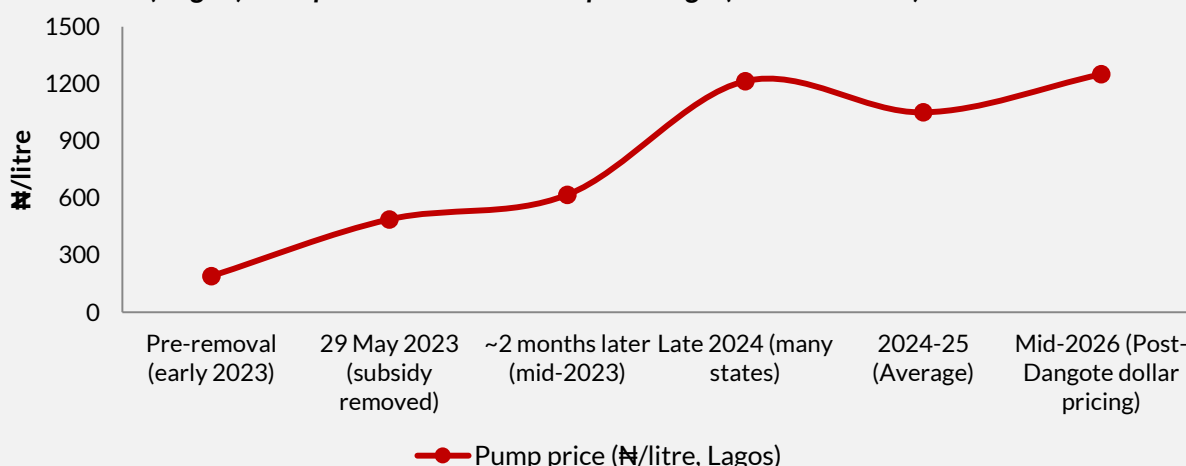
The wider regional market and the Lomé hub

West African refined-product demand grew from about 370,000 b/d in 2000 to just under 1mn b/d by 2023, and in 2023 regional demand exceeded regional supply by roughly 800,000 b/d, a gap filled by imports, historically from the European ARA hub and international traders. The physical clearing point for much of this trade is Lomé, Togo, where cargoes are discharged into anchored floating storage and broken into smaller parcels for regional (chiefly Nigerian) buyers. Ghana and Côte d'Ivoire are emerging as bunkering and re-export pivots. As Dangote ramps up, Lomé's role is shifting from primary import gateway to a marginal balancing point, a vivid marker of how quickly the regional supply chain is being rewired.²³

Demand after the subsidy

Higher prices reshaped demand. Official petrol consumption, reported near 66–67mn litres per day before May 2023, fell to the high-40smn litres per day afterwards and settled around 50mn litres per day, although analysts note that pre-2023 figures were inflated by cross-border smuggling of subsidised fuel, so the true underlying level was always lower than the headline. Either way, Nigeria remains one of Africa's largest fuel markets, and a domestic refiner sized at 700,000 b/d can supply the entire country and still have surplus to export.

Exhibit 13: (Lagos) Pump Price Estimate Step-Change (2023 – 2026)



Source(s): Coronation Research; NBS Price Watch; Dangote Refinery

²¹CBN – Official NAFEM range

²²PIA 2021 deregulation and NMDPRA role

²³S&P Global – West Africa demand & Lomé floating-storage hub

Section 10: The Dangote Refinery – Anatomy of a Disruption

The Dangote Petroleum Refinery is one of the most consequential downstream assets built anywhere this decade. What follows is what has actually been built, how it compares globally, and where the economic edge and the vulnerabilities lie.

Exhibit 14: Dangote Refinery at a Glance

Dangote Refinery at a Glance	
Location & scale	Lekki Free Trade Zone, Lagos; 700,000 b/d single-train (world's largest); rerated from 650,000 b/d original design; ~2,500 ha
Complexity	Nelson Complexity Index ~10.5; RFCC ~200,000 b/d
Capex & milestones	>\$19bn (~\$20bn); first crude Dec 2023; first petrol Sept 2024; full 650kb/d Feb 2026; rerated to 700kb/d Jun 2026.
Feedstock	Naira-for-crude / NNPC (Oct 2024), persistently under-supplied; supplemented by US WTI, Angola, Libya, Guyana, UAE
Financial Snapshot	The IPO prospectus has disclosed a FY2025 net loss of USD\$475.81mn (₦723.06bn), swinging to a net profit of USD\$1.82bn (N2.50trn) in H1 2026.
Ownership	Dangote Group; NNPC stake 7.2% (reduced from 20% agreed in 2021); Sept 2026 NGX listing targeted
Open questions	Crude supply security; and whether H1 2026 recovery holds and is sustained.

Source(s): Local Media, Coronation Research

The headline facts

The refinery sits in the Lekki Free Trade Zone on the Atlantic coast east of Lagos, on a site of roughly 2,500 hectares. Its nameplate capacity is 700,000 barrels per day (rerated from an original design capacity of 650,000 b/d following debottlenecking confirmed by June 2026 performance testing), maintaining its position as the world's largest single-train refinery, one integrated processing line rather than several smaller ones, and among the seven largest refineries of any configuration globally. Its Nelson complexity is about 10.5, above the European average and comparable to a sophisticated US plant, and it is designed to produce Euro-V-grade petrol and diesel plus jet fuel and polypropylene. Its residual fluid catalytic cracker (RFCC), rated around 200,000 b/d, is the key unit that upgrades heavy residue into petrol, and, as it turns out, the main throughput bottleneck.²⁴

The build: cost, delays and ambition

The project was announced in 2013 with an initial completion target of 2016; the site was moved to Lekki, and construction repeatedly slipped due to cost overruns, supply-chain issues and the pandemic. Total investment is put at in excess of \$19 billion and commonly cited at around \$20 billion. It was formally inaugurated in May 2023, without fuel production, received its first crude cargo in December 2023, produced its first diesel and jet fuel in January 2024, and its first petrol in September 2024, the first significant domestically refined petrol since the state refineries ceased effective operation around 2019. It is the flagship of the Dangote Group's vertically integrated ambition spanning crude, fuels, fertiliser and distribution.²⁵

The ramp-up

Bringing a plant this size to full output is a multi-year exercise. Utilisation ran near 60% (about 400,000 b/d) in early 2025 and rose through the year as gasoline output climbed. In February 2026, the refinery announced it had demonstrated 650,000 b/d nameplate capacity following optimisation of its distillation unit, and it averaged around 93.6% utilisation of nameplate capacity in March 2026 (a single-month peak, measured against the then-650,000 b/d nameplate); the H1 2026 average, per the IPO prospectus, was 83.6%. A nuance mattered through most of the ramp: crude throughput reached near-full rates while the conversion units, notably the RFCC/petrol unit, ran below design at times, so “full capacity” refers chiefly to crude runs. The prospectus indicates this eased in Q2 2026, when crude distillation reached full utilisation following RFCC improvements. The IPO prospectus further confirms this was resolved, not merely eased, following debottlenecking; the refinery’s nameplate capacity

²⁴Company disclosure(s) – Dangote Refinery & Local media – RFCC as bottleneck

²⁵Reuters – Capex >\$19bn (~\$20bn); inaugurated May 2023; first crude Dec 2023; first diesel/jet Jan 2024; first petrol Sept 2024

²⁶CNBC Africa – Nigeria's Dangote oil refinery running gasoline unit at 75 capacity & Kpler – US crude overtakes Nigerian barrels in Dangote import mix

21

Section 10: The Dangote Refinery – Anatomy of a Disruption

has been formally rerated from 650,000 b/d to 700,000 b/d, with performance testing confirming rates of up to 700,000 b/d in June 2026. By early 2026, petrol output had climbed toward 48 million litres per day.²⁶

Feedstock: the fight for crude

The refinery's central operating challenge has been securing enough of the right crude. Under a “naira-for-crude” arrangement introduced in October 2024, the national oil company, NNPC, sells domestic crude to Dangote in naira rather than dollars, removing FX risk. The two sides dispute the effective delivery of the required crude under this arrangement.

Dangote says it has received only some of the required crude it needs while NNPC states it has “allocated 100 per cent of all available naira crude cargoes” to the refinery in 2026 with “no withholding,” and attributes the shortfall to lower-than-target national production, pre-existing crude-backed loan commitments and cargo-nomination timing rather than to any refusal to supply.²⁷

To fill the gap, Dangote has leaned heavily on imported crude, US WTI overtook Nigerian grades in its import mix in mid-2025, and then diversified into Angolan, Libyan, Guyanese and, for the first time, UAE barrels. A Nigerian refinery importing US crude to run is a genuine vulnerability. That said, light, sweet WTI suits the plant's design and spreads supplier risk. Critically, the shortfall has already dented the naira-hedge thesis in practice: in July 2026 Dangote suspended naira-denominated fuel sales and moved to dollar pricing (petrol ~\$0.78/litre, diesel ~\$1.09/litre), citing the need to buy supplementary crude at open-market rates in dollars. The switch shows that, until domestic crude supply is sustainably secured, the FX advantage the plant is partially designed around is not yet fully realised.²⁷

The product slate and its edge

Dangote produces petrol, diesel, jet fuel and polypropylene. Its domestic advantage is straightforward. Fuel made at Lekki and sold into Nigeria avoids the freight, insurance, demurrage and financing costs buried in an imported cargo, and can, when domestic crude supply permits, be paid for in naira rather than dollars, an advantage suspended since July 2026 (see ‘Feedstock’ above). That landed-cost advantage, the import premium described in Section 4, is the heart of the investment case. Surplus product beyond domestic needs is exported, giving the plant a second, international revenue stream.

Ownership and governance

The refinery is controlled by the Dangote Group although NNPC has a 7.2% stake (reduced from the initially announced 20% in 2021), and its scale concentrates a strategic national asset, the effective price-setter for Nigerian fuel, in a single private owner. That concentration is central both to the bull case (a decisive, well-capitalised operator delivering where the state failed) and to the bear case (potential monopoly and pricing-power concerns). A listing on the Nigerian Exchange with its SEC-approved public subscription window running 14 September to 13 October 2026, an offer of 4.1 billion shares at ₦525 each, raising roughly ₦2.15 trillion (~\$1.6bn, before an over-allotment option of up to 30% subject to regulatory approval) at an implied valuation of around \$49bn, which would rank as Africa's largest-ever share sale if fully subscribed, with NGX trading expected to begin in November following allotment; a dollar-linked dividend has been proposed by the company but still requires formal regulatory approval. The listing would open the asset to outside investors.

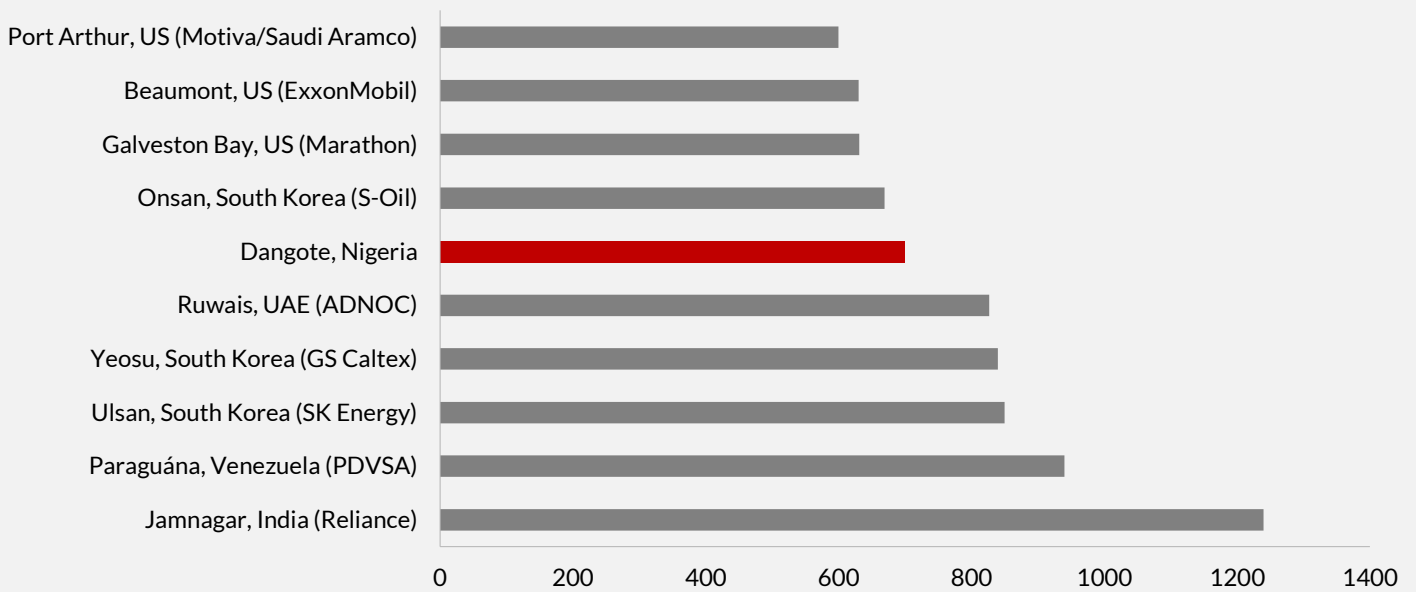
The IPO prospectus has since disclosed the refinery's first-ever public financial statements: a net loss of \$475.81 million for full-year 2025, swinging to net profit of \$1.82 billion in H1 2026 on revenue of \$13.91 billion and EBITDA of \$2.60 billion (an 18.69% margin). Gross refining margin rose from \$10.70/bbl (2024) to \$13.70/bbl (2025) to \$24.50/bbl in H1 2026, spiking to \$33.70/bbl in Q1 on the Middle East conflict before easing to around \$18/bbl in Q2 as the crude-supply squeeze that drove it partly relaxed. Average utilisation for H1 2026 was 83.6%, and the prospectus attributes the swing partly to crude distillation reaching full utilisation in the second quarter following improvements to the RFCC, the gasoline-making unit that had previously run below design (Section 10, above).²⁸

²⁷Kpler – US crude overtakes Nigerian barrels in Dangote import mix & International Finance - Nigeria Dangote import mix

²⁸Local Media – Note: treat all parameters as indicative until the offer documents.

Section 10: The Dangote Refinery – Anatomy of a Disruption

Exhibit 15: Dangote among the world's largest refineries



Source(s): Local Media, Coronation Research

²⁷Kpler – US crude overtakes Nigerian barrels in Dangote import mix & International Finance - Nigeria Dangote import mix

²⁸Local Media – Note: treat all parameters as indicative until the offer documents.

Section 11: The Impact of Dangote — Local, Regional & Global

A refinery this size does not operate in isolation. Its ramp-up is already reshaping Nigeria's economy, West Africa's supply chain, and Atlantic Basin trade flows that held steady for decades.

For Nigeria: import substitution and a rewired balance of payments

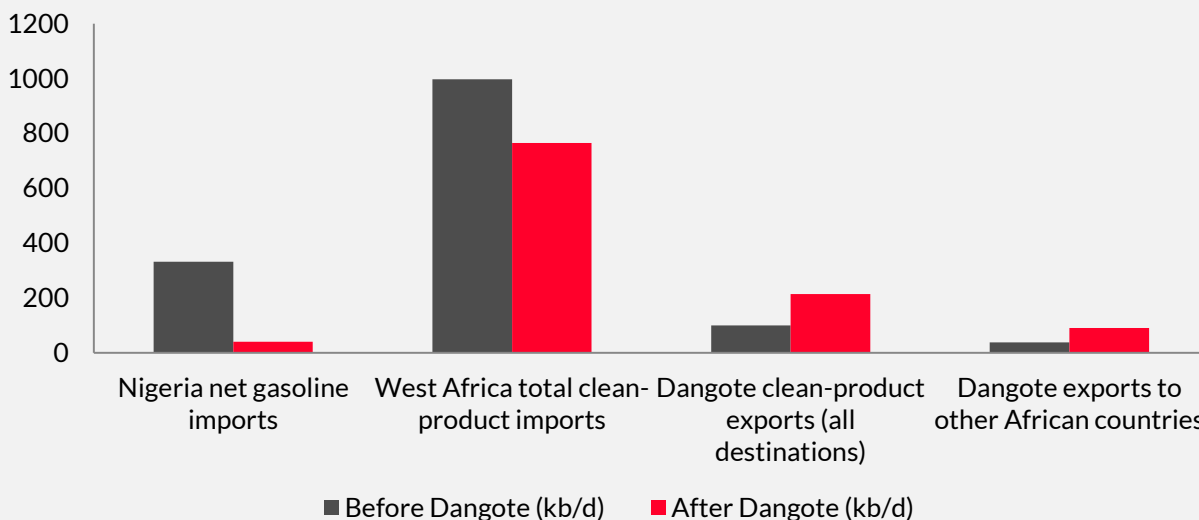
The most immediate effect is the collapse of fuel imports. Nigeria's petrol import bill fell about 96–97% year-on-year in the first quarter of 2026, and domestic refineries supplied more than three-quarters of the country's petrol, against under half a year earlier. By early 2026, Dangote alone was supplying most of the Nigerian petrol, figures ranged from 61% in January to above 80% by April as the government paused imports. In March 2026, Nigeria became a net petrol exporter for the first time in its modern history. The macro consequences are large. Lower fuel imports ease dollar demand and pressure on the naira, improve the trade balance, and move the country from exporting raw crude and buying back expensive products toward capturing refining value at home.²⁹

That trend is not yet a smooth, one-directional decline, however. Nigeria's petrol import bill rebounded sharply in the second quarter of 2026, to ₦952bn from ₦87bn in Q1, a roughly tenfold quarter-on-quarter jump, as Dangote shifted volumes toward exports to earn the foreign currency needed to buy supplementary crude, and as Nigeria's state refineries sat completely idle through July. The Q2 bill remained about two-thirds below the same quarter in 2025, so the multi-year import-substitution story is intact, but the path is proving lumpier, and more exposed to Dangote's own export incentives, than a single quarter's data can show.

For West Africa: a regional supplier displaces distant cargoes

Beyond Nigeria, Dangote is becoming a regional supplier, shipping petrol, diesel and jet to Ghana, Côte d'Ivoire, Cameroon, Togo, Tanzania, Angola and South Africa, with several countries seeking supply agreements. Because a cargo from Lekki reaches neighbouring West African ports far faster and more cheaply than one from Rotterdam or the US Gulf, Dangote is displacing the European and American product that historically filled the regional deficit, and Lomé's floating-storage hub is being repositioned from primary gateway to marginal balancer. West African clean-product imports fell sharply through H1 2026 as this substitution took hold.³⁰

Exhibit 16: Before vs after the Dangote Refinery: Key West Africa flows (kb/d)



Source(s): S&P Global, Reuters, & Coronation Research

For the Atlantic Basin and global flows

The disruption reaches the incumbents. West Africa was a premium outlet for European gasoline and US Gulf diesel. As Dangote fills that demand at home, those cargoes must find new buyers. The Rotterdam-to-Lagos and Gulf-to-West-Africa arbitrages compress, freight on the route softens, and the trading houses that intermediated it lose work. The flow has partly reversed: amid the 2026 Middle East supply crunch, Dangote shipped jet fuel to Europe, overtaking the United States as Europe's top jet supplier in June 2026 with some 466,000 tonnes, and delivered gasoline meeting US specifications to American buyers. A refinery built to end Nigeria's import dependence is now exporting product into the very markets that once supplied it.³¹

²⁹Local Media, NBS & NMDPRA statement (via local channel)

³⁰Regional exports – media channel

³¹Dangote overtakes US as Europe's top jet supplier – media channel

Section 11: The Impact of Dangote – Local, Regional & Global

Competitive response and the glut risk

Incumbents will not stand still. European and Gulf refiners can redirect cargoes to Latin America or Asia, and the ongoing closure of high-cost European capacity may cushion the blow to survivors. But there is a scenario in which West Africa tips from chronic deficit to local oversupply as Dangote runs full and other African projects advance, pressuring regional margins and forcing Dangote itself to export more into a competitive global market.

The arithmetic suggests that scenario is distant: regional demand of roughly 1 mb/d, compounding at c.4% a year since 2000 (Section 9), against one 700 kb/d plant that part-exports, tipping into oversupply would likely require the 1.4 mb/d expansion plus at least one other large regional project delivering. The plant's economics are strongest serving the structural landed-cost premium at home and weaker as a pure exporter competing with the Gulf and India.

Second-order effects

The refinery also substitutes for imported petrochemicals through its polypropylene unit, supports local employment and skills, and, most important of all, sets a demonstration effect for downstream value capture across Africa. That theme echoes in refinery plans from Angola to Kenya, and we return to it in the conclusion.

Exhibit 17: Qualitative Synthesis Matrix

Party	Impact	Direction	Notes
Dangote Group	High	Winner	Captures domestic import premium; new export revenue stream to Europe/US
Nigerian consumers	High	Mixed	End of import-driven fuel scarcity; but pricing power now moved from NNPC and concentrated in one private supplier
Nigerian sovereign / FX	High	Winner (structural)	Falling import bill eases dollar demand and naira pressure, a genuine credit positive
NNPC / state refineries	Low	Loser	Displaced as price-setter; state refineries remain non-operational
ARA / European refiners	High	Loser	Losing a premium gasoline export outlet to West Africa; among clearest losers
US Gulf Coast refiners/traders	Medium	Loser (partial)	Losing secondary WA diesel/gasoline outlet, though also a 2026 buyer of Dangote gasoline
Listed Nigerian downstream marketers	Medium	Loser (at risk)	Dangote's direct-sales/free-delivery/truck-fleet build-out could disintermediate them (Section 14)
Trading houses (Lomé intermediaries)	Medium	Loser	Lomé repositioning from primary gateway to marginal balancer
Regional WA neighbours (Ghana, Côte d'Ivoire, etc.)	Medium	Winner	New, closer, cheaper supply source displacing distant cargoes

Source(s): Coronation Research

Section 12: New Refinery Projects & the Global Capacity Pipeline

Dangote is the most prominent new refinery in the world, but not the only one. What gets built from here, and how much of the announced pipeline is real, will shape refining margins for the rest of the decade, and decide how crowded Dangote's export markets become.

The global pipeline

The IEA counts roughly 4.2 mb/d of gross new capacity to 2030 against about 1.6 mb/d of closures, net additions of roughly 2.6 mb/d that comfortably exceed refined-product demand growth to the 2027 peak (~0.7 mb/d on the IEA's numbers), even if they only modestly exceed total oil-demand growth (~2.5 mb/d), with additions front-loaded into 2024–2026 and concentrated in Asia-Pacific, the Middle East and Africa; new grassroots start-ups thin out after 2027. Some \$237 billion of refinery project spending is earmarked for 2025–2027, again skewed to those regions. The Gulf mega-projects profiled earlier, Al-Zour, Duqm, Jazan and the Ruwais expansion, anchor the Middle Eastern wave, while China and India dominate the Asian additions.³²

Africa's refining renaissance, and its credibility gap

Africa is building refineries again, for the first time in decades. But announced capacity and delivered capacity are very different things, and these projects span a wide credibility range:

- **Dangote itself.** At 700,000 b/d and running near full, it is the anchor. In October 2025 the group announced plans to more than double capacity toward 1.4 mb/d, which would rival Jamnagar as the world's largest, with Honeywell selected as a technology provider. Credible but multi-year, and dependent on resolving crude supply difficulties.
- **Nigeria's state refineries.** The 445,000 b/d of NNPC capacity is the subject of yet another rehabilitation push, including a 2026 memorandum with Chinese firms and a target to select technical partners. Low credibility given the decade-long record of failure.
- **Nigerian modular refineries.** Smaller plants (Waltersmith, OPAC, NDPR and others) are operating at 5,000–10,000 b/d scale, mostly making diesel and naphtha, and add up to a useful but marginal contribution. BUA Group's proposed 200,000 b/d Akwa Ibom refinery was announced, but significant construction activity does not seem to have started.
- **Angola.** Cabinda (30,000 b/d, expandable to 60,000) was inaugurated in September 2025, the country's first new refinery since 1975, and moved into commercial operations around May 2026, now supplying diesel domestically and exporting naphtha and heavy fuel oil; a final investment decision on the second-phase expansion to 60,000 b/d is targeted by the operator, Gemcorp, before the end of 2026. The larger Lobito (200,000 b/d) faces a multi-billion-dollar funding shortfall, and Soyo (100,000 b/d) is on hold; Angola's wider refining ambitions have largely stalled.
- **Uganda and Kenya.** Uganda's 60,000 b/d Kabaale project, with a UAE partner, targets operations around 2029–2030. A Dangote-linked plan for a new Mombasa refinery in Kenya surfaced in 2026 but is at an early stage.

The pattern is clear: a genuine African refining wave is underway, but it is dominated by Dangote, with most other projects either small, delayed, or financing-constrained. For the medium term, Dangote will remain the overwhelmingly dominant new African refiner.³³

³²IEA Oil 2025 – Oil report

³³Bloomberg – Nigeria's Dangote to more than double refinery capacity

Section 12: New Refinery Projects & the Global Capacity Pipeline

Exhibit 18: African Refining Projects (Upcoming & Operational)

Project	Capacity	Status	Credibility	Key constraint
Dangote (existing, 700kb/d)	700 kb/d	Operating; ~93.6% utilisation of the then-650 kb/d nameplate (Mar 2026)	High	Domestic crude-supply security (see the dispute with NNPC)
Dangote expansion to 1.4mb/d	+700 kb/d	Announced 2025 Oct	Medium	Funding, timeline and potential long lead times for specialised equipment
Nigeria state refineries (Port Harcourt/Warri/Kaduna)	445 kb/d nameplate	Effectively non-operational	Low	Decade-long record of failure; active corruption probe of past rehabilitation funds; 2026 Chinese MoU unproven
Nigerian modular refineries (Waltersmith, OPAC, NDPR)	5-10 kb/d each	Operating, marginal	Medium	Small scale; useful but not material to national balance
BUA Akwa Ibom, Nigeria	200 kb/d	Announced, not operating	Low-Medium	Not yet under construction per public reporting
Cabinda, Angola	30 kb/d (exp. 60)	Commercial operations ~May 2026	Medium-High	Angola's first new refinery since 1975: credible, small scale
Lobito, Angola	200 kb/d	Funding shortfall	Low	Multi-billion-dollar funding gap
Soyo, Angola	100 kb/d	On hold	Low	Wider Angolan refining ambitions largely stalled
Kabaale, Uganda	60 kb/d	UAE partner, targeting ~2029-30	Medium	Early-stage but named partner and timeline
Mombasa, Kenya (Dangote-linked)	Not yet specified	Surfaced 2026, early stage	Low	Too early to assess

Source(s): Bloomberg, Coronation Research

The counter-current: closures

Against the additions runs a wave of closures. Around 400,000 b/d of European capacity was slated to shut in 2025 alone, including Scotland's Grangemouth (150,000 b/d), converting to an import terminal, and Germany's Shell Wesseling (147,000 b/d). Some 30 European refineries have closed since 2009, and analysts see 40–50 more potentially closing by 2035. Parts of the US West Coast and Gulf are also rationalising. This is the “creative destruction” of the transition: high-cost plants exit, concentrating margin in low-cost survivors, a group to which Dangote, if it secures sufficient domestic crude, belongs.³⁴

Net balance

Whether the pipeline overwhelms demand depends on the interplay of additions, closures, and the demand path. On the IEA's view, modest demand growth then plateau, the net additions imply margin pressure and further forced closures later in the decade. On OPEC's view - continued demand growth is absorbed. Either way, a well-located, low-cost plant serving a growth region should be substantially insulated from most of the global pressure. Dangote's position in the merit order is therefore more comfortable than a high-cost European standalone facing the same wave.

³⁴Argus Media - European closures ~400 kb/d in 2025 incl. Grangemouth (150 kb/d) and Wesseling (147 kb/d)

Section 13: Risks, Headwinds & the Energy Transition

The threats to refining returns look different through a global lens than an African one. Both are weighed here.

The transition question

The long-run worry for refining is that the energy transition erodes demand for its core products. Electric vehicles are the clearest channel: the IEA expects EVs to displace more than 5 mb/d of oil demand by 2030, and under its Stated Policies Scenario, demand growth for key transport fuels is expected to moderate significantly toward the end of the decade, although the timing of any peak varies across scenarios. Yet the picture is uneven. The agency cut its 2030 US EV sales-share forecast after expected rollbacks of subsidies and standards, and under a current-policies scenario, it sees demand rising to 2050 – while OPEC sees no peak at all. For refining, the transition is less an on/off switch than a slow, contested squeeze concentrated on gasoline in the wealthy world.³⁵

Why Africa's demand curve is different

As Section 6 showed, demand is relocating rather than disappearing, and it is relocating toward regions like Africa. The IEA itself identifies India, other developing Asian countries, the Middle East and Africa as the sources of essentially all long-term demand growth, driven by population increase, urbanisation, a growing vehicle fleet and very low EV penetration. Where an OECD refiner faces a shrinking home market, a Nigerian refiner faces a growing one. The demand risk that most threatens European plants is, for Dangote, a distant rather than a present threat, a fundamental asymmetry that underpins the structural case for African refining.³⁶

Decarbonisation and the 'last man standing'

Refineries face rising decarbonisation pressure, carbon pricing, emissions rules, and competition from renewable diesel and sustainable aviation fuel, with several European plants converting to biofuels or closing outright. But the same forces support a “last man standing” thesis: as high-cost, high-carbon plants exit, the low-cost, complex survivors capture concentrated margin. The investment question is less whether refining survives than which refineries survive, and the answer favours scale, complexity, cheap feedstock and a growing local market.

Cyclical and Africa-specific risks

Nearer-term risks sit on top of the structural picture. Cyclically, the capacity wave and any demand shock could compress margins and pull them back from any spike. For Dangote and its African peers specifically, the risks are more acute: crude-supply and feedstock security (the binding constraint, as we have seen); FX, capital controls and the ability to repatriate returns; regulation and the temptation of political price intervention despite deregulation; security and infrastructure; and governance and concentration risk around a single dominant, family-controlled national asset.

Single Train as an operational risk

The “world's largest single-train” title carries two distinct risks. The first is a unit constraint: the RFCC, the gasoline-making heart of the plant, has at times run below design, capping petrol yield even at full crude rates. The second is concentration: in a single-train configuration, a major unit trip, fire, or unplanned turnaround removes most or all output at once, where multi-train peers (Jamnagar, Ruwais) carry built-in redundancy. For a plant that now supplies most of the national petrol demand, this is simultaneously a company risk and a national energy-security risk, and an insurance and inventory-policy question.

What could break the thesis?

The Dangote thesis breaks if domestic crude supply stays chronically short (forcing expensive imports and sub-optimal runs), if regulatory or pricing intervention caps the domestic premium the plant is designed to capture, or if a faster-than-expected regional capacity build tips West Africa into oversupply. Each is plausible; none is yet decisive. The global refining thesis, meanwhile, breaks if the capacity wave arrives faster than demand and closures can absorb it.

³⁵S&P Global – IEA current policies to 2050

³⁶IEA Oil 2025

Section 14: Investment Implications & Ways to Play

This section translates the analysis into a framework for positioning. It is not a set of recommendations. The instruments named below are illustrative of the opportunity set; whether any is appropriate depends entirely on an investor's mandate, constraints, and independent due diligence, and several key assets (Dangote foremost) are not yet publicly listed.

Framing the opportunity set

Exposure to the refining and West African fuel theme can be taken at several points along the chain. Listed pure-play refiners give the most direct exposure to crack spreads. Integrated oil majors blend refining with upstream and marketing, diluting the margin signal but adding resilience. Trading houses monetise the arbitrage and dislocation that Dangote is creating, though most are privately held. Midstream and storage assets, terminals, floating storage such as Lomé, benefit from shifting flows. And equipment and engineering contractors capture the capex wave of new builds and rehabilitations.

Exhibit 19: Framing the opportunity set (not a recommendation)

Instrument	Thesis exposure	Liquidity	Key risk (not a recommendation)
Listed pure-play refiners]	Direct crack-spread exposure	High	• Cyclical margin risk; capacity-wave headwind
Integrated oil majors	Diluted margin signal, added resilience	High	• Upstream/marketing noise obscures refining signal.
Trading houses	Arbitrage/dislocation monetisation	Low (mostly private)	• Limited public vehicles
Midstream/storage (incl. Lomé-type assets)	Benefits from shifting flows	Medium	• Asset-specific, illiquid, illustrative
Equipment/EPC contractors	Captures capex wave	Medium-High	• Order-book lumpiness
Dangote direct (NGX listing, targeted Sept 2026)	Direct Dangote/WA exposure	TBD – not yet listed	• Crude supply, monopoly dispute, naira/repatriation
Listed Nigerian downstream marketers	Indirect Dangote exposure	Medium	• At risk of disintermediation by Dangote's own distribution build-out.

Source(s): Coronation Research

Proxies for the Dangote / West Africa theme

Direct exposure to Dangote itself would come via its Nigerian Exchange listing, with subscription open 14 September – 13 October 2026 and NGX trading expected in November, a base offer of ~3.3% of enlarged capital (4.1bn new shares against 120.13bn existing, before a 30% over-allotment option) at an implied valuation of around \$49bn, which would rank as Africa's largest-ever share sale if fully subscribed, with a proposed dollar-linked dividend pending regulatory approval, an event that will crystallise the crude-supply and monopoly questions for public investors. Indirect exposure runs through listed Nigerian downstream marketers and logistics names that distribute the refinery's product, a two-sided exposure, because Dangote has announced its own distribution build-out (direct sales, free-delivery schemes extended to additional states in July 2026, and a proprietary truck fleet) that could disintermediate these very names and compresses their margins. Cleaner indirect exposure runs through pan-African energy and infrastructure vehicles, and through global refiners and traders with Atlantic Basin exposure whose flows are being reshaped. Each proxy carries its own idiosyncratic and currency risk.

Positioning for the cycle

The central tension for a refining investor today is structural survivor value versus cyclical margin risk. The capacity wave argues for caution on broad, high-cost refining exposure and for a down-leg in margins later in the decade. The "last man standing" dynamic argues for owning the low-cost, complex, well-located survivors that inherit concentrated margin as others close.

Section 14: Investment Implications & Ways to Play

A balanced expression favours quality and location over broad beta, precisely the attributes that make a low-cost plant serving a growing, import-short market interesting, provided its idiosyncratic risks are acceptable.

Credit and debt angles

Beyond equity, the theme has credit dimensions: refinery project finance and corporate debt tied to new builds; and Nigerian sovereign and corporate credit, whose external balance improves as the fuel-import bill falls and FX demand eases. The first hard evidence is mixed rather than one-directional: the ~96–97% collapse in the Q1 2026 petrol import bill (Section 11) partly reversed in Q2, when the bill rebounded roughly tenfold quarter-on-quarter as Dangote prioritised export sales. The macro improvement from import substitution is a genuine, if second-order, positive for Nigerian hard-currency credit, one worth monitoring as the import data confirms the shift.

Signposts to monitor

- Benchmark crack spreads (Singapore, NWE, USGC) versus their historical ranges, the pulse of the cycle.
- Global capacity start-ups and closures, the supply wave that governs the medium-term margin path.
- Dangote domestic crude-supply data (naira-for-crude fulfilment, import mix) and utilisation/run-rates.
- Resolution of the Dangote–NNPC pricing and import-licence dispute, and the terms and timing of the listing.
- Nigerian fuel-import and export data, pump prices, and the naira, the transmission of the whole thesis.
- African project milestones (state refinery rehabilitation, BUA, Angola) that could add regional supply.

A scenario framework

Rather than a single call, we frame the theme in three states. In the base case, underlying margins hold near mid-cycle, Dangote secures adequate domestic crude and runs at high utilisation while the domestic premium is broadly preserved, and Nigeria's external position improves. In the bull case, the capacity wave underwhelms, margins stay firm, Dangote resolves its crude and pricing constraints and the expansion toward 1.4 mb/d advances, making it a dominant low-cost Atlantic supplier. In the bear case, the capacity wave compresses global margins, crude shortfalls and price intervention cap Dangote's premium, and regional oversupply emerges. The swing variables are the same three we have flagged throughout: crude supply, pricing/regulation, and the demand-versus-capacity balance.

Exhibit 20: Scenario Table

Swing variable	Base case	Bull case	Bear case
Capacity wave / global margins	Margins hold near mid-cycle	Capacity wave underwhelms; margins stay firm	Capacity wave compresses global margins
Dangote crude supply & pricing dispute	Adequate crude secured; high utilisation; domestic premium broadly preserved	Crude and pricing constraints resolved; 1.4mb/d expansion advances	Crude shortfalls and price intervention cap Dangote's premium
Regional demand vs capacity balance	Nigeria's external position improves	Dangote becomes dominant low-cost Atlantic supplier	Regional oversupply emerges as other African projects advance

Source(s): Coronation Research

Section 15: Conclusion & Outlook

Refining is the indispensable, under-appreciated middle of the oil industry, the business of turning crude into the fuels an economy runs on, and of earning the spread between them. It is a margin business, not a volume business; a business where complexity, cost, and location decide who prospers; and a business that swings violently through the cycle, rewarding the survivors who can earn through the troughs.

The industry today sits past its 2022 structural peak, but 2026 has shown how violently the cycle can reassert itself: cracks have broken to all-time records – with the US 3-2-1 to ~\$70/bbl in mid-July and ~\$72/bbl at the late-July/August peak (NYMEX basis) – because the tightness now lives in refining capacity, not barrels, and remains at acute-stress levels into September (~\$63–65/bbl) even as crude itself has climbed further rather than settling, consistent with a structural, rather than merely crude-driven, squeeze. The defining medium-term force is a wave of new capacity concentrated in the East and South, set against closures in the high-cost West, a rationalisation that will pressure margins but concentrate them in the low-cost survivors. With it, the identity of the marginal Atlantic Basin supplier changes: increasingly a Gulf or African export plant, not a European one.

Into this market steps the Dangote refinery: a 700,000 b/d, high-complexity, well-located plant that has, in under two years, turned Africa's largest crude exporter from a fuel importer into a net exporter, collapsed Nigeria's import bill, and begun exporting jet fuel to Europe and gasoline to the United States. It is the clearest embodiment of the report's central themes, the value of complexity and location, the power of the import premium, and the structural asymmetry between a shrinking OECD market and a growing African one.

Our view

On a 12-to-36-month horizon, we still see underlying global refining margins as more likely to soften than to firm as the capacity wave arrives, but the starting point is an acute product-side squeeze, with the US 3-2-1 at an all-time high in mid-July and a further record in early August; crude, having briefly round-tripped during the spring ceasefire, has since re-spiked with the July escalation. The path down therefore depends less on demand than on how quickly offline Gulf and Russian refining capacity returns; while it stays out, margins can hold far above mid-cycle regardless of where crude trades.

On the West African and Dangote opportunity, we are constructive on the structural logic, a low-cost plant capturing a domestic premium in a growth market is a genuinely advantaged asset, while explicit that the case hinges on three Dangote-specific variables (distinct from the four global swing factors in earlier sections). These factors are namely (i) crude-supply security; (ii) the pricing and monopoly dispute; and (iii) execution of the ramp and expansion. We would become more constructive on evidence that domestic crude supply is secured, and the pricing framework stabilised; more cautious on signs of chronic domestic crude shortfall, punitive price intervention, or a faster-than-expected regional supply build.

The bigger picture

Beyond the numbers, Dangote is a signal. It suggests that African economies can capture more of their own resource value downstream rather than exporting raw crude and importing finished goods, a demonstration effect whose influence may ultimately exceed the refinery's own barrels. That is why a report on the global refining business is now best told through a West African lens.

Section 16: Appendices

Appendix A – Glossary of Refining & Trading Terms

- **Crack spread.** The margin between the value of refined products and the cost of crude, per barrel; the core measure of refining profitability.
- **3-2-1 crack.** A standard proxy assuming 3 barrels of crude yield 2 of gasoline and 1 of distillate.
- **Gross refining margin (GRM).** Product value minus crude cost before operating costs; the headline benchmark (e.g., Singapore GRM).
- **Net cash margin.** GRM minus variable and cash operating costs (energy, hydrogen, catalysts, freight, labour).
- **Capture rate.** How much of the theoretical benchmark crack a specific refinery actually realises.
- **Nelson Complexity Index (NCI).** A measure of a refinery's upgrading/conversion sophistication relative to simple distillation (baseline 1.0).
- **FCC / RFCC.** Fluid (or residual) catalytic cracker – converts heavy gasoil/residue into petrol and lighter products.
- **Hydrocracker/coker/reformer/hydrotreater.** Conversion and treating units that upgrade heavy streams, raise octane, and remove sulphur.
- **Utilisation/turnaround.** The share of capacity actually run; a turnaround is a planned maintenance shutdown.
- **Light-heavy & sweet-sour differentials.** Price gaps between crude grades by density and sulphur: a margin lever for complex plants.
- **PMS / AGO / DPK.** Nigerian shorthand for petrol (Premium Motor Spirit), diesel (Automotive Gas Oil), and kerosene/jet (Dual Purpose Kerosene).
- **Euro V / IMO 2020.** Low-sulphur fuel specifications for road and marine fuels, respectively.
- **ARA / MOPS / USGC.** Amsterdam-Rotterdam-Antwerp hub; Mean of Platts Singapore; US Gulf Coast, the main regional pricing references.
- **Naira-for-crude.** The arrangement under which NNPC sells domestic crude to Dangote in naira rather than dollars.
- **Backwardation/contango.** A forward curve is in backwardation when nearer-dated prices sit above later-dated prices (typical of a tight, undersupplied market); it is in contango when the reverse holds. The shape of the curve signals whether a market is pricing near-term scarcity or an eventual surplus.
- **Demurrage.** A charge payable to a vessel owner when loading or discharging takes longer than the agreed laytime; part of the freight and logistics cost embedded in a delivered cargo, and therefore part of the import premium discussed in Sections 4 and 10.

Section 16: Appendices

Appendix B – Refinery Configuration Types

Refineries are broadly classified by how far they upgrade the barrel, which drives their complexity, product slate and margin capability:

- **Topping.** Distillation only; makes mostly naphtha, kerosene and heavy fuel oil; NCI ~1–2; lowest value.
- **Hydroskimming.** Adds reforming and hydrotreating for on-spec fuels but limited conversion; modest complexity.
- **Conversion (cracking).** Adds FCC/hydrocracking to turn heavy gasoil into light products; NCI mid-to-high; the workhorse configuration.
- **Deep conversion (coking).** Adds a coker to destroy the bottom of the barrel; highest complexity and margin capability. Dangote (NCI ~10.5) and the Gulf mega-refineries sit at the complex end; Nigeria's older state refineries are far simpler.

Appendix B – Refinery Configuration Types

Reference figures cited in the report, for quick access (see footnotes for full sourcing):

Global refining – reference figures	Value	Period / source
Global refining capacity	~103.66 mb/d	2025 (OPEC Annual Statistical Bulletin, 2026 ed.)
Global crude throughput	~86.9 mb/d	2025 (OPEC Annual Statistical Bulletin, 2026 ed.)
Singapore GRM (mid-cycle)	~\$5.5–6.0/bbl	2025–27 est. (Krungsri)
Singapore GRM (2022 peak)	~\$30 /bbl	2022 (Platts basis; Statista secondary)
New refining capacity to 2030 (gross)	~4.2 mb/d	IEA Oil 2025
Capacity closures to 2030	~1.6 mb/d	IEA Oil 2025
Net additions after closures	~2.6 mb/d	IEA Oil 2025
Refined-product demand peak (IEA)	~86.3 mb/d in 2027	IEA Oil 2025
Oil demand 2030 (OPEC, no peak)	~113 mb/d	OPEC WOO 2025
US 3-2-1 crack (WTI-based, NYMEX settle)	\$69.66/bbl	• 16 Jul 2026, record close; ~\$72/bbl at the late-Jul/Aug peak, NYMEX basis (vs ~\$55 March peak; normal band \$10–20; diesel (ULSD) crack \$102.20/bbl intraday record, 17 Aug, settling ~\$101.86; EIA NY-Harbor spot basis May 2022 record \$75.89 not exceeded) • As of early Sept 2026: ~\$63–65/bbl (still acute-stress levels; Brent ~\$97/bbl).

Section 16: Appendices

Nigeria / Dangote — reference figures	Value	Period / source
Nigeria's crude production	~1.6 mb/d	2025 (NUPRC/Nairametrix)
Petrol import bill	₦15.4tn → ₦8.9tn	2024 → 2025 (NBS)
Q1 2026 petrol import decline	~96–97% y/y	Q1 2026 (NMDPRA via The Cable)
Dangote nameplate capacity	700,000 b/d (rerated from 650,000 b/d)	Full rate reached Feb 2026
Dangote utilisation	~93.6%	March 2026
Dangote capex	>\$19bn (~\$20bn)	Cumulative
Fuel subsidy (pre-removal)	~₦4.4tn (~2.2% GDP)	2022 (NEITI)
Naira / USD	~₦1,350–1,510	2025–26 (CBN NAFEM window)

Appendix D — Dangote Reference Pack

- **Location.** Lekki Free Trade Zone, Lagos State, Nigeria (~2,500 ha).
- **Configuration.** Single-train, ~700,000 b/d (rerated from 650,000 in the original design), Nelson complexity ~10.5, RFCC ~200,000 b/d, Euro-V fuels plus jet and polypropylene.
- **Milestones.** Announced 2013; inaugurated May 2023; first crude Dec 2023; first diesel/jet Jan 2024; first petrol Sept 2024; full 650 kb/d Feb 2026; rerated to 700 kb/d following June 2026 performance testing; expansion to ~1.4 mb/d announced Oct 2025.
- **Feedstock.** Naira-for-crude with NNPC (Oct 2024), persistently under-supplied; supplemented by US WTI and Angolan/Libyan/Guyanese/UAE grades.
- **Products & markets.** Domestic petrol/diesel/jet supply plus exports to West Africa, and jet fuel to Europe and gasoline to the US in 2026.
- **Open questions.** Crude-supply security; the NNPC pricing/monopoly dispute; pricing and allocation of the September 2026 NGX listing (base offer ~3.3% of enlarged capital at ₦525/share; implied ~\$49bn valuation; subscription 14 Sept – 13 Oct 2026).

Appendix E — Sources, Methodology & Disclaimer

The report deliberately issues no investment rating or price target and is framed as thematic analysis rather than a recommendation. This report synthesises public data as of July 2026, with a 9 September 2026 update pass covering the items flagged above, from agencies and market sources, including the IEA (Oil 2025; Global EV Outlook 2025), OPEC (World Oil Outlook 2025; monthly releases), the US EIA (global refining outlook and Energy Explained), S&P Global Commodity Insights (Platts), Argus, Kpler, Reuters, Bloomberg, the Financial Times, and Nigerian regulators and local media outlets

Methodology: where sources disagree — notably the IEA-versus-OPEC demand outlook, Dangote's capacity and utilisation figures, and Nigerian consumption data distorted by historical smuggling — we present the range and flag the discrepancy rather than assert a single number. Several 2026 operational and margin figures rest on secondary commentary and should be verified against primary regulator and price-assessment data before any decision. Following review, the 2026 margin narrative has been anchored to primary price references — NYMEX/CME 3-2-1 settlements (to 16 July 2026, the all-time-high print) and EIA Today in Energy (7 April 2026) — with IEA Oil Market Reports (March and June 2026) for the supply-balance context. Commentary and analytics houses (RBN, MUFG, JPMorgan) are cited as commentary only, not as primary price assessments, superseding the sources flagged in the first draft.

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