

THE HIDDEN FINANCING BEHIND HARDWARE STARTUPS

Who finances the assets, who owns them, and who absorbs the loss when utilization or technology fails?

Central finding

Waymo is publicly evidenced as a parent-funded platform, not as a conventional leased-fleet, asset-backed or project-financed operator. Alphabet and outside equity absorb the disclosed capital burden. That removes visible debt-service and refinancing pressure, but it does not make the business asset-light. It leaves operating losses, technology obsolescence and much of the residual-value exposure with Waymo equity and, economically, Alphabet.

Prepared from the supplied Waymo evidence package

Report date: 22 July 2026 | Latest source date in package: 17 June 2026

No additional external evidence was added. All unreported amounts are stated as modeled ranges or unknowns.

Scope, evidence discipline and answer

The supplied package contains one principal company dossier: Waymo. It includes an executive memo, a financing ledger, quantitative tables, an entity map, a timeline, regulatory evidence and a research-gap report. It does not contain parallel dossiers for a leased robot fleet, a customer-financed manufacturer or a government-supported battery factory. This report therefore treats Waymo as the factual case and uses the other financing models as counterfactual archetypes. It does not fill missing company rows with unsupported facts. **[Confirmed]** Evidence package: executive memo, master ledger, quantitative tables and research gaps.

The accounting perimeter is equally important. Alphabet reports Waymo inside Other Bets and identifies it as a consolidated variable-interest entity. Other Bets contains several businesses; its revenue, operating loss, capex and cash flow cannot be assigned to Waymo. The 2024 and 2025 segment results are context, not a Waymo income statement. The \$2.1 billion 2025 Waymo-related employee-compensation charge is a valuation-based accounting expense, not funding cash. **[Confirmed]** W-007; sources [15], [23], [24], [25], [48].

The answer to the main question is direct. Public evidence shows that equity and parent capital finance Waymo. It does not establish a material Waymo-level debt facility, quantified fleet or property leases, an asset-holding SPV, customer prepayments, supplier-finance facility, government loan, grant or tax-credit monetization. A documented amount of zero is a disclosure lower bound, not proof that no such obligation exists. Legal title to vehicles, depots, charging assets, production lines and compute remains unresolved by asset class. **[Strongly supported]** Funding sources [10]-[14], [23]-[25]; model assumptions A048-A052; research gaps [86], [89], [90].

\$27.1B-\$27.35B	>\$10.8B	\$0.38B-\$1.35B	26%-39%
Cumulative disclosed funded rounds	Strict minimum Alphabet funding in 2024 + 2026 rounds	Modeled current physical asset capital	Modeled paid-hour fleet utilization
\$0.23B-\$0.54B	\$185M-\$941M	0.94x	\$18M
Modeled annualized recognized ride revenue	Modeled residual-value exposure	Base illustrative asset-debt DSCR	Base annual loss after 25% utilization shock

Executive findings

1	The visible capital stack is equity-heavy.	Waymo raised an initial \$2.25 billion in 2020, a disputed follow-on that takes the round to roughly \$3.0-\$3.25 billion, \$2.5 billion in 2021, \$5.6 billion in 2024 and \$16.0 billion in 2026. Cumulative disclosed funded capital is \$27.1-\$27.35 billion. The July 2024 commitment of up to \$5.0 billion is excluded because the evidence does not prove it was additive to the 2024 round.
2	Alphabet is the economic backstop.	Alphabet supplied the majority of the 2024 round and the significant majority of the 2026 round. A strict reading puts its minimum contribution to those two rounds above \$10.8 billion. A stated assumption set puts cumulative Alphabet funding at \$13.1-\$22.0 billion. Repeated support is not the same as an asset-level legal guarantee, but it places the practical downside with the parent.

3	Fundraising totals do not reveal the asset bill.	The model places current physical asset capital at \$0.38-\$1.35 billion, including vehicles, allocated charging/depot capital and central integration/facility assets. The range is wide because Waymo has not published vehicle BOMs, title records, lease schedules or depot capex. The gap between physical assets and cumulative funding points to the much larger burden of R&D, mapping, compute, market launch and operating losses.
4	Waymo has not publicly demonstrated self-financing scale.	At 400,000-500,000 weekly paid trips and 3,000-plus vehicles, modeled annual recognized ride revenue is \$0.23-\$0.54 billion. The base fleet case produces about \$33 million of contribution after depreciation before corporate R&D, mapping, market launch and shared services. A 25% utilization shock turns that into an \$18 million annual loss. These are not company guidance; they show the narrowness of fleet economics under plausible operating assumptions.
5	The assets remain specialized collateral.	The integrated robotaxi is not a normal used EV. Sensor fitment, redundant controls, compute, wiring, battery wear, software dependence and de-integration costs reduce recovery value. Modeled current residual-value exposure is \$185-\$941 million. The legal loss holder is unknown because vehicle title and residual guarantees are not public.
6	Partner participation does not prove risk transfer.	Uber books rides in Austin and Atlanta; Moove supports selected fleet operations; Magna integrates vehicles; OEMs provide base platforms. None of those facts establishes who owns the vehicle, who funds charging, who guarantees residual value or who pays the operator after a weak month. Contracts, not logos, determine the financing model.
7	The parent-funded model scales only while parent willingness persists.	It avoids visible fixed debt service, borrowing-base tests and refinancing cliffs. It also requires repeated discretionary funding. A 2,000-vehicle deployment uses an estimated \$220-\$550 million of additional vehicle and charging capital, plus working capital that ranges from a small release to \$173 million of cash use. That is not automatic financing capacity.

Evidence labels used in this report

Label	Meaning	Treatment
Confirmed	Directly documented in a primary or high-reliability source in the package.	Carried as fact within the source date and stated scope.
Strongly supported	Supported by multiple sources or by a direct financing pattern plus corroborating operational evidence.	Used for conclusions, with legal or accounting limits named.
Modeled	Formula output dependent on the assumption book.	Shown as low/base/high; not represented as Waymo guidance.
Plausible but unproven	Consistent with observed partnerships or normal practice, but not contractually established.	Used only to frame diligence questions and recourse tests.
Unknown	Material fact absent from public evidence.	Not imputed. A documented zero is described as a lower bound.

Report map

Section	Question answered
1. Visible round / invisible asset bill	How much capital was raised, and what can be tied to physical deployment?
2. Hardware financing mechanics	How each instrument shifts cash cost, collateral and failure risk.
3. Parent-funded model	Why Alphabet funding changes Waymo's solvency and common-equity exposure.
4. Leased-fleet model	What a lease would save upfront and impose annually.
5. SPV and asset-backed model	What lenders would require before financing the fleet.
6. Customer-financed model	Why ride payments are revenue, not fleet capital.
7. Government-supported factory	What is and is not evidenced as public support.
8. Residual value	Which assets can be recovered, and who owns the shortfall.
9. Utilization downside	How weaker volume moves cash flow, working capital and creditor outcomes.
10. Scalable structures	Which financing forms genuinely reduce equity needs and which defer them.

01 The visible venture round and the invisible asset bill

Waymo has disclosed a large funding history. It has not disclosed a standalone sources-and-uses statement, asset register or financing schedule.

Waymo's disclosed funding history is large enough to obscure the question this report is trying to answer. The visible events are straightforward: an initial \$2.25 billion external close in March 2020; a later addition that secondary reporting places at roughly \$750 million, although the resulting round total is disputed between about \$3.0 billion and \$3.25 billion; a \$2.5 billion round in June 2021; a \$5.6 billion round in October 2024; and a \$16.0 billion round in February 2026 at a \$126 billion post-money valuation. Adding funded rounds, and carrying the disputed 2020 total as a range, produces \$27.1-\$27.35 billion of cumulative disclosed capital. **[Confirmed]** W-002-W-006; sources [10]-[14], [23], [24].

The \$5.0 billion Alphabet commitment disclosed in July 2024 is not added to that total. A commitment is not a draw, and the evidence package does not establish that it sat outside the \$5.6 billion round completed later that year. Treating both as cash received would risk double counting exactly the way an announced debt facility can be mistaken for drawn debt. The model records the commitment separately as \$5.0 billion committed, then excludes it from cumulative funded capital. **[Confirmed]** Source [25]; assumption A042; financing lineage L001.

The funding mix is more important than the headline. Alphabet led the 2024 round, supplied the majority of that year's \$5.6 billion funding, and supplied the significant majority of the 2026 round. "Majority" gives a strict floor, not an exact amount. More than half of \$5.6 billion plus more than half of \$16.0 billion means Alphabet supplied more than \$10.8 billion to those two rounds alone. The assumption book applies explicit parent-share ranges to every round and produces cumulative Alphabet funding of \$13.1-\$22.0 billion. That range is a model, but the direction is not: Waymo's capital structure is parent-backed. **[Strongly supported]** W-005, W-006; sources [13], [14], [23], [24]; assumptions A005-A008; lineage L002-L003.

A sources-and-uses statement with an intentional gap

Public evidence permits a partial sources statement. Equity funding is measurable within a narrow range. Alphabet's exact share is not. Quantified Waymo-level debt, leases, customer financing, supplier financing and government support are all zero on a documented basis because the evidence package did not establish an amount. Operating cash flow is unknown because Waymo has no standalone public cash-flow statement. The resulting total capital available is therefore not a balance sheet; it is a disclosure map with a large parent-equity line and several unknown lines. **[Strongly supported]** Assumptions A048-A052; source-class checklist and research gaps.

Capital source	Documented / modeled amount	Cash status	Treatment
Disclosed funded rounds	\$27.1B-\$27.35B	Funded / announced closes	Cumulative proceeds; 2024 commitment excluded.
Modeled Alphabet portion	\$13.1B-\$22.0B	Funded capital estimate	Based on stated parent-share assumptions; strict later-round floor >\$10.8B.
July 2024 Alphabet commitment	Up to \$5.0B	Committed, not separately proven funded	Shown separately; not added to funded rounds.
Waymo-level debt	\$0 documented	Unknown true amount	No facility identified; Alphabet debt is not attributed to Waymo.
Leases	\$0 documented	Unknown true amount	No fleet, depot or equipment lease schedule quantified.
Customer / supplier financing	\$0 documented	Unknown true amount	Rider transactions are not deposits; ordinary payables may exist.
Government support	\$0 documented	Unknown true amount	Permits and policy access are not recorded as cash incentives.
Operating cash flow	Unknown	Not disclosed	Standalone Waymo revenue, margin and cash flow unavailable.

Uses are less observable. The asset base includes the vehicle, battery, custom sensor and compute stack, redundant steering and braking, charging equipment, depots, integration lines, central operations, recovery equipment, mapping and cloud infrastructure. Cash also funds research, simulation, software, safety validation, regulatory work, insurance, rider support, remote assistance, roadside response and market launch. Only some of those uses become physical assets. Others are expensed or embedded in Alphabet and Waymo cost centers. **[Confirmed]** Sources [3]-[5], [16], [18], [19], [37]-[41], [75], [82], [83].

The model therefore does not force sources and uses to balance. That would create false precision. Current physical asset capital is estimated at \$380 million in the low case, \$777 million in the base case and \$1.345 billion in the high case. The calculation is deployed fleet multiplied by fully installed vehicle cost, plus allocated depot and charging capital, plus central

integration, production-line and facility capital. It is an economic asset view: the assets may be legally owned by Waymo, a partner, a landlord or another affiliate. **[Modeled]** Assumptions A009, A017-A019; capital-intensity sheet; lineage L004.

The physical asset estimate is far below cumulative funding. That does not mean the estimate is too low or the funding excessive by itself. It means a robotaxi company is financing a long technology-development path and an operating system around each vehicle, not just buying cars. Other Bets reported an operating loss of \$4.444 billion in 2024 and \$7.515 billion in 2025, but those losses include other businesses and the 2025 figure includes a \$2.1 billion Waymo-related employee-compensation charge. The segment data confirms a high-loss environment without giving a Waymo burn rate. **[Confirmed]** Sources [15], [23], [24], [26].

The deployment bill appears when scale is stated in units

Waymo reported more than 3,000 vehicles in February 2026 and has described Mesa integration capacity moving toward tens of thousands of units per year. The capital consequence is nonlinear. A 2,000-vehicle addition uses \$220-\$550 million for installed vehicles and allocated charging capital under the model. At 20,000 units, the same per-unit assumptions imply \$2.2-\$5.5 billion before central facilities, launch costs and working capital. A 20% cost overrun on that 20,000-unit program adds \$440 million-\$1.1 billion. **[Modeled]** Sources [16], [19], [27]; assumptions A017-A019, A035, A046.

This is the first distinction between a parent-funded platform and an asset-financed operator. Waymo can build before lenders can underwrite a borrowing base. The parent can fund prototypes, software iterations, low-utilization launch fleets and assets with no liquid secondary market. A fleet lender would ask what the vehicle is worth after repossession, whether fare receivables are eligible, whether the service area can be interrupted by regulation or recall, and whether a parent will cure a shortfall. Parent equity can ignore those tests for a time. It cannot make the underlying economics disappear. **[Strongly supported]**

Waymo public financing and operating structure

Publicly evidenced capital flows, operating relationships and unresolved ownership terms.

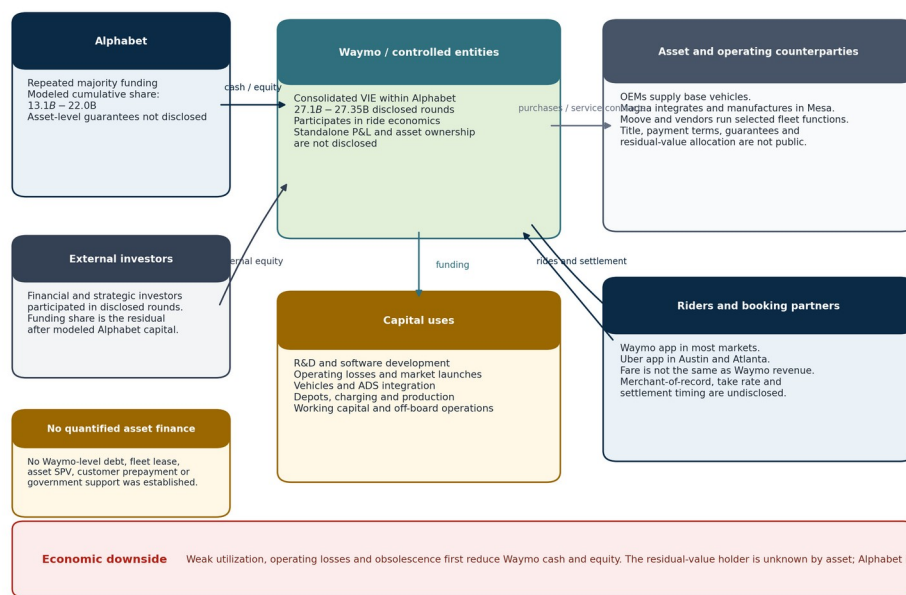


Figure 1. Publicly evidenced Waymo capital and operating structure. Dashed or qualified relationships reflect missing contracts, title records or legal guarantees.

What the funding total does not tell an investor

It does not identify the owner of a Jaguar or Zeekr vehicle, the holder of a depot lease, the amount of charging capex, the depreciation schedule, the gross-to-net revenue bridge, the insurer and retention stack, the amount of empty mileage, or the cash cost of off-board labor. Those ratios determine whether scale creates operating leverage or merely increases the next funding requirement.

02 How hardware financing works

Every financing instrument answers the same questions differently: who advances cash, what stands behind it, what cash repays it, and who owns the loss after default.

Hardware financing is not a menu of “dilutive” and “non-dilutive” capital. Each instrument moves risk among common equity, lenders, lessors, suppliers, customers, governments and strategic partners. Debt may reduce dilution while increasing fixed claims. A lease may transfer legal title while leaving maintenance and residual guarantees with the operator. A grant may reduce capex while imposing location, employment and clawback conditions. Customer advances fund production by creating a delivery liability. The financing has to be traced through legal entities and contracts rather than classified by its marketing label. **[Strongly supported]**

Equipment lease, finance lease and operating lease

An equipment lessor or bank buys an asset and collects fixed rentals. Title and the lease receivable secure the capital. A finance lease resembles financed ownership: the lessee controls the asset for most of its life and records a right-of-use asset and lease liability, with interest and amortization economics. An operating lease also creates a right-of-use asset and liability under current accounting, although expense recognition differs. Typical covenants cover permitted use, maintenance, insurance, liens, return condition and cross-default. The upfront cash saving is real; so are the fixed payment, early-termination charge and possible residual guarantee. On failure, the lessor repossesses and may pursue a deficiency or guarantor. No quantified Waymo fleet lease has been identified. Depot/property leases are plausible and likely in practice, but the package provides no schedule. **[Unknown]** *Workbook: Leases and Financing Toolkit sheets; property research gap [74], charging gap [89].*

Sale-leaseback

A sale-leaseback converts an owned asset into cash by selling it to a lessor and immediately leasing it back. The asset and contractual rent support the buyer. The repayment source is operating cash flow. The advantage is liquidity after an asset has been installed; the hidden cost is surrendering residual upside while accepting future fixed rent. Accounting depends on whether a true sale occurred and whether repurchase or control terms defeat sale treatment. A specialized robotaxi is a poor sale-leaseback candidate without a strong residual guarantee because the buyer may be financing Waymo credit rather than a liquid vehicle. No Waymo sale-leaseback is evidenced. **[Strongly supported]**

Venture debt

Venture-debt banks and funds lend against enterprise value, cash runway, IP and the prospect of another equity round. Security often covers substantially all company assets; warrants add equity participation. Minimum-cash tests, fundraising milestones, material-adverse-change clauses and lien restrictions are common. The repayment source is usually future equity or eventual operating cash flow, not liquidation of specialized hardware. Its advantage is delayed dilution. Its hidden costs are high effective yield, fees, warrants and refinancing risk. After default, the lender may accelerate and enforce against cash or IP. No Waymo venture-debt facility is identified, and Alphabet's corporate debt should not be allocated to Waymo without evidence. **[Confirmed]**

Asset-backed facility

An asset-backed lender advances against eligible vehicles, equipment or receivables. The borrowing base applies advance rates and haircuts; collateral tests can tighten when assets age, utilization falls or residual values weaken. Repayment comes from fleet cash flow, receivable collections and asset liquidation. Covenants commonly include DSCR, concentration, delinquency, residual-value and eligibility tests, plus cash traps and accelerated amortization. The advantage is growth-linked capacity: each new eligible asset can support a draw. The hidden cost is procyclicality. Weak utilization reduces cash flow at the same time that collateral eligibility and advance rates may fall. Waymo has no disclosed facility; the report models one only to test bankability. **[Modeled]**

SPV and project finance

An SPV holds the asset, contracts and secured accounts. Sponsor equity absorbs the first loss; senior debt has first claim on project cash and collateral. Project finance adds completion covenants, reserve accounts, offtake or availability contracts and strict cash waterfalls. The structure can be genuinely non-recourse only if the parent has no completion guarantee, minimum-payment duty, repurchase obligation, residual guarantee, service shortfall support, cross-default or equity cure. Waymo's status as a consolidated VIE does not prove an asset-finance SPV. A VIE is a consolidation conclusion. The package identifies no ring-fenced fleet entity, SPV debt, borrowing base or project-level cash waterfall. **[Confirmed]** *Sources [25], [48]; financing lineage L013.*

Supplier financing

OEMs, contract manufacturers and component suppliers finance working capital when they grant payment terms, retain title until payment or accept milestone settlement after delivery. The collateral may be inventory, receivables or title retention.

Purchase-volume, credit-limit and termination provisions can be as restrictive as a bank covenant. Supplier credit reduces cash tied up in inventory, but it concentrates dependency and can disappear precisely when credit quality weakens. No Waymo supplier-finance facility is disclosed. Ordinary accounts payable almost certainly exist, but amounts, deposits, WIP days and title terms are unknown. The model therefore separates documented supplier financing, recorded at zero, from modeled payable support. **[Unknown]**

Customer deposits and prepayments

Customers can finance a manufacturer through deposits, milestone payments, capacity reservations or prepaid service. The capital is secured by a contractual delivery or availability claim rather than a traditional lien. It remains a contract liability until earned. The economic cost appears in discounts, refund exposure, priority delivery, capacity constraints and customer concentration. On failure, customers may have refund or unsecured claims. Waymo riders pay transactionally for completed or booked rides; the evidence does not show fleet-funding deposits or capacity prepayments. Uber settlement mechanics are unknown, but a booking partner is not customer capital unless it advances cash before service. **[Confirmed]** Sources [29], [50], [88]; assumptions A050.

Government loans, guarantees, grants and tax-credit financing

A government loan or guarantee supplies lower-cost or longer-tenor capital against project assets and policy conditions. A grant reduces private capital needs if milestones, jobs, domestic content, location and reporting obligations are met. Tax-credit financing monetizes future credits through a tax investor or transfer buyer, usually at a discount and with recapture indemnities. None is free: matching investment, compliance costs, prevailing-wage or sourcing rules, clawbacks and political review can return value to the public sector. The evidence package identifies no quantified Waymo loan, grant, guarantee or tax-credit financing. Public permits and regulatory access matter economically, but they are not treated as funded capital. **[Confirmed]**

Parent guarantee and parent support

A legal parent guarantee gives a creditor a contractual claim on the parent balance sheet. A keepwell, equity-cure covenant or residual guarantee may be narrower. Repeated equity funding is different: it signals willingness but does not automatically create a creditor right. Waymo has strong economic parent support and no disclosed asset-level legal guarantee. The advantage is access to parent capital and lower failure risk. The hidden cost is that the parent absorbs losses that a standalone company would be forced to expose to lenders, lessors or public markets. This support can also postpone hard tests of asset-level returns. **[Strongly supported]**

Strategic-investor and partner capital

An OEM, fleet operator, distributor or corporate investor can provide equity, assets, engineering, procurement scale or distribution. The security is often a combination of equity rights and commercial contracts rather than a simple lien. The repayment source may be enterprise value, product purchases, revenue share or strategic benefit. Governance, exclusivity, pricing and information rights are the hidden price. Waymo's investors and partners include Alphabet, outside financial investors, OEMs, Magna, Uber and Moove. Their operational roles are documented; their asset ownership, settlement and recourse economics are not. Strategic participation should therefore be recorded as capability, not presumed financing. **[Confirmed]** Sources [10]-[14], [19], [34], [50]-[53], [69].

Failure behavior is the real classification test

Ask what happens after a 25% demand miss, a recall, an obsolete sensor generation or a failed refinancing. If rent still must be paid, the lease is fixed leverage. If the parent must repurchase assets, the SPV is economically recourse. If a customer can demand a refund, the prepayment is a liability. If a grant can be clawed back, public support sits above common equity in the downside case.

03 The parent-funded model

Alphabet's balance sheet changes Waymo's survival risk. It does not establish that the fleet earns an adequate return on all capital supporting it.

Waymo fits the parent-funded platform archetype. Alphabet provides the dominant funding channel, consolidates the entity and can absorb losses across a much larger corporate balance sheet. Outside investors participate, but the 2024 and 2026 rounds were led or overwhelmingly funded by the parent. The result is a capital stack with no publicly visible fleet lender ahead of equity and no project-finance cash waterfall restricting operating cash. That is a meaningful financing advantage. **[Confirmed]** *W-005-W-007; sources [13]-[15], [23]-[25], [48].*

The advantage first appears in timing. Autonomous-vehicle development requires long periods in which technology risk, regulatory risk and asset risk cannot be separated. Sensors and compute change before a normal lender has a resale history. Market launches begin with low utilization. Depots and charging may be built before route density is proven. A parent can fund these stages with common equity or intercompany capital, where the only mandatory payment is none. A standalone startup would either issue equity repeatedly or accept expensive debt with covenants and warrants. **[Strongly supported]**

The second advantage is loss absorption. If a vehicle generation underperforms, the parent can write down assets without triggering a borrowing-base breach. If a recall removes vehicles from service, there is no disclosed fleet debt payment that becomes immediately unaffordable. If a market takes longer to ramp, the parent can extend runway. This is why the parent-funded model may survive scenarios that would break a leased or highly levered operator even when their unit economics are identical. **[Strongly supported]**

Explicit cash, non-cash support and unpriced services

Parent subsidy should be split into four buckets. First is explicit cash: the modeled Alphabet-funded portion of disclosed rounds is \$13.1-\$22.0 billion, with a strict later-round minimum above \$10.8 billion. Second is non-cash compensation support: Alphabet recorded a \$2.1 billion Waymo-related employee-compensation charge in 2025. That charge may help recruit and retain employees, but it is not cash available for vehicles or payroll. Third is shared service support: compute, legal, insurance procurement, tax capacity, real estate, security, brand and central procurement may be priced internally or absorbed elsewhere. The package does not quantify it. Fourth is willingness to absorb future losses, which has value before any contractual guarantee exists. **[Strongly supported]** *Sources [13], [14], [23], [24], [68]; assumptions A028, A041.*

The model gives unpriced shared services a wide \$250 million-\$1.5 billion annual range. It is intentionally low-confidence. More useful is the shadow cost of parent capital: applying an 8%-12% opportunity cost to modeled cumulative Alphabet funding yields \$1.05-\$2.64 billion per year. This is not interest expense and should never be inserted into GAAP earnings. It is an investor-return benchmark. Capital supplied without a coupon still has an opportunity cost and still competes with buybacks, core investments and other uses of Alphabet cash. **[Modeled]** *Assumptions A027-A028; Parent Subsidy sheet; lineage L003.*

Who owns and operates the assets

Waymo's operating perimeter is clearer than its legal ownership perimeter. Waymo operates the autonomous-driving system and commercial service. Riders book through the Waymo app in most cities; Austin and Atlanta use Uber. Moove handles fleet operations, maintenance and charging groundwork in selected markets. Magna provides integration and contract-manufacturing capability. Jaguar Land Rover, Zeekr/Geely and Hyundai provide or plan base vehicle platforms. Waymo also says it operates charging infrastructure. Those facts identify roles. They do not identify title, lease liabilities, liens, residual guarantees or the party that books gross and net revenue in each market. **[Confirmed]** *Sources [19], [29], [34], [50]-[53], [75], [88], [89].*

This distinction matters in a failure case. If Waymo owns a vehicle, Waymo equity bears depreciation and recovery loss. If Moove or another partner owns it without a residual guarantee, that partner may bear asset loss while Waymo bears service interruption and replacement cost. If a partner owns the asset but Waymo guarantees minimum payments or repurchase, legal title has moved while economic exposure has not. The evidence package cannot classify these structures because the contracts are absent. **[Unknown]**

Revenue recipient and first claim on cash

The rider pays a fare. That does not settle who recognizes revenue. Waymo may be merchant of record in its own app, subject to refunds, taxes, airport fees and payment processing. Uber-booked rides may produce a net payment to Waymo, a revenue share or a service fee. Moove may receive operating fees or reimbursement. None of those settlement terms is disclosed. For analytical purposes, the model starts with gross rider fare and applies a 70%-95% recognized-revenue capture rate. The resulting \$0.23-\$0.54 billion annualized revenue is a modeled bridge, not reported Waymo revenue. **[Modeled]** *Sources [29]-[31], [50], [51], [88]; assumptions A010-A012; lineage L005.*

In the publicly evidenced capital structure, operating cash would first pay ordinary operating claims: energy, maintenance, insurance, employees, partners, suppliers and landlords. There is no disclosed asset lender sweeping collections. Equity receives the residual, which is negative if costs exceed revenue. In bankruptcy, however, common equity is last, not first.

Secured or priority claims would rank ahead if they exist. The absence of a public debt schedule cannot be converted into a legal opinion that no such claims exist. **[Strongly supported]**

The return problem

A parent-funded model can look financially safer than a debt-funded model while generating a worse return on total capital. Waymo's standalone NOPAT and net operating assets are not disclosed, so company-level ROIC cannot be calculated. Other Bets is an invalid denominator and numerator because it aggregates several businesses. The report instead calculates an illustrative fleet-level after-tax ROIC using modeled contribution after depreciation and economic physical assets. It is 23.6% in the favorable low-cost case, 3.4% in the base case and zero in the high-cost loss case. The low case depends on unusually favorable installed cost, fare capture and operating-cost assumptions. All three exclude corporate R&D and market-launch costs, so none is a Waymo company return. **[Modeled]** Sources [15], [23], [24]; Utilization sheet; lineage L016.

The base case is the useful signal. A fleet can appear contribution-positive and still fail to cover the economic cost of parent capital, shared services and continuing software development. If the parent's shadow cost is measured in the billions while the modeled fleet contribution is tens of millions, the equity story depends on future scale, cost compression and market density rather than current asset returns. Parent funding gives Waymo time to pursue that operating leverage. It also places the burden of proving it on future periods. **[Strongly supported]**

Standalone startup comparison

A standalone company with the same vehicles and trip volume would have to disclose or negotiate the terms Alphabet currently absorbs: cash interest, lease rent, minimum liquidity, collateral eligibility, residual guarantees, insurance collateral and equity cures. Its failure risk would be higher. Its capital discipline would also be visible sooner.

04 The leased-fleet model

A lease can lower the cash paid on day one while making every week month more expensive. Waymo has no quantified fleet lease in the supplied record.

The leased-fleet archetype separates legal ownership from operation. A bank, leasing company or OEM captive owns the vehicle and earns a fixed return. The startup operates the fleet, collects revenue and pays rent. This can reduce equity-funded capex and allow additions to track fleet growth. It does not automatically transfer utilization risk. Unless rent varies with rides, the operator owes the same payment when demand is weak. **[Strongly supported]**

Specialized hardware changes the bargain. A normal fleet vehicle has an observable used market. A robotaxi with custom sensors, compute, redundant controls and integration work may be worth little more than the base EV after de-installation. A rational lessor either lowers its advance rate, raises its yield, shortens the term, requires a residual-value guarantee or asks the parent to repurchase the asset. Any of those terms returns economic risk to the operator or parent even though title sits with the lessor. **[Strongly supported]**

The workbook models a hypothetical leaseable basis of \$330 million, \$627 million and \$1.045 billion for vehicles and allocated charging capital. At required yields of 9%, 12% and 16%, with capital recovery over the modeled asset life net of residual value, annual fixed capital-recovery payments are \$58 million, \$169 million and \$402 million. Adding modeled maintenance and insurance produces a total annual lease burden of \$105 million, \$286 million and \$662 million. These are counterfactual amounts, not Waymo obligations. **[Modeled]** Assumptions A017-A023, A055; Leases sheet.

In the base case, the \$286 million lease burden equals roughly 76% of modeled recognized ride revenue before electricity, off-board labor, depot overhead, partner fees, R&D and corporate expense. That is why a lease can be more fragile than parent equity even when it saves hundreds of millions upfront. A 25% utilization miss reduces revenue faster than fixed rent. The operator must inject equity, renegotiate, return assets or default. The lessor then faces repossession cost and a thin resale market. **[Modeled]**

What would make a Waymo partner fleet genuinely asset-financed

- The partner or lessor holds legal title and funded the purchase with its own capital or asset debt.
- Waymo has no minimum-rent, take-or-pay, repurchase or residual-value guarantee beyond ordinary service fees.
- Maintenance, insurance and charging obligations are allocated clearly and do not recreate fixed fleet cost at Waymo.
- The partner can redeploy or sell the vehicle without a Waymo software license that disappears after termination.
- There is no Alphabet guarantee, keepwell, equity cure or side letter that protects the partner from utilization or residual loss.

The Moove relationship could contain some of those features, but the package establishes only operating roles in selected markets. Without title records and agreements, it is classified as limited evidence of partner-capital participation, not proof of a non-recourse leased fleet. **[Unknown]** Sources [51], [64]; financing lineage L014.

05 The SPV and asset-backed model

Asset debt becomes scalable only after the collateral, cash flow and legal separation are financeable. Waymo's VIE status does not answer those questions.

An asset-holding SPV could buy vehicles, charging equipment and depot assets, then borrow against them. Equity investors would fund the first-loss layer. Senior lenders would lend against eligible collateral and a controlled cash waterfall. Fare receivables or partner payments could be pledged. The operator would service the fleet under contract. In principle, this structure could move deployment capital away from Waymo's corporate balance sheet and make financing capacity grow with eligible assets. **[Strongly supported]**

In practice, the lender needs a stable repayment source and a credible recovery value. Waymo's public disclosures leave both incomplete. Trip volumes are disclosed, but standalone recognized revenue, gross-to-net settlement, contribution margin and market-level cash flow are not. Vehicle counts are disclosed, but title, age, installed cost, depreciation, residual value and lien status are not. The service depends on software, mapping, permits, charging, remote operations and partner performance. That is a difficult borrowing base before parent support. **[Confirmed]**

Illustrative debt capacity and coverage

The debt model applies loan-to-value ratios of 40%, 55% and 65% to economic physical assets, effective rates of 7%, 9% and 12%, and straight-line amortization over five, four and three years. It produces illustrative drawn balances of \$152 million, \$427 million and \$874 million, with annual debt service of \$41 million, \$145 million and \$396 million. These terms are not quotations and are not attributed to Waymo. **[Modeled]** Assumptions A032-A034; Debt sheet.

Fleet cash flow available for debt service is modeled at \$147 million, \$137 million and negative \$28 million before corporate R&D and overhead. The corresponding DSCR is 3.59x, 0.94x and negative. After a 25% utilization shock, DSCR is 2.55x, 0.59x and negative. The base case fails an ordinary 1.0x threshold even before a lender asks for a minimum cushion. To become bankable, the structure would need lower leverage, longer amortization, a higher revenue capture, lower operating cost, a reserve account, parent recourse or some combination. **[Modeled]** Debt Service sheet; lineage L010.

Borrowing-base fragility

A utilization decline hits an asset-backed facility twice. Cash collections fall, weakening DSCR. At the same time, lenders may reduce the advance rate if idle vehicles age faster, software support changes, recalls restrict service or secondary-market values weaken. A covenant breach can trap cash inside the SPV, stop new draws and force amortization. The parent then chooses between an equity cure and surrendering assets. That makes asset debt procyclical: financing capacity contracts when the operator needs liquidity most. **[Strongly supported]**

The same logic applies to factory or depot project finance. A lender can finance a completed, permitted facility with contracted throughput more easily than a speculative integration plant. Completion guarantees, minimum production volumes, site leases, utility interconnection, insurance and environmental obligations matter. The Mesa operation is described as scaling toward tens of thousands of units per year, but the evidence package does not establish building ownership, tenant status, capex, project debt, utility contracts or guaranteed throughput. **[Unknown]** Sources [19], [74], [89].

Hidden recourse test

No SPV should be called non-recourse until the following have been tested: parent guarantee; minimum payment; asset repurchase; residual guarantee; completion support; operating-cost support; service-level damages; take-or-pay commitment; cross-default; equity cure; insurance shortfall support; and reputational willingness to rescue the structure. Waymo's repeated parent funding makes economic rescue plausible. The absence of contracts prevents a legal classification. The appropriate label is "no asset SPV evidenced; recourse unknown," not "non-recourse." **[Confirmed]**

VIE is an accounting perimeter, not a financing answer

Alphabet consolidates Waymo because of control and economic exposure under the VIE rules. That says nothing by itself about whether a separate vehicle SPV owns assets, whether debt is non-recourse, or whether Alphabet has guaranteed a lease. Those questions require entity-level contracts and balance sheets.

06 The customer-financed model

Customer money finances hardware only when cash arrives before delivery or capacity is reserved. A fare paid for a ride is operating revenue, not deployment capital.

A customer-financed manufacturer uses deposits, milestone payments, capacity reservations, prepayments or procurement advances to fund inventory and production before revenue is earned. The customer accepts delivery risk in exchange for priority, a discount or tailored capacity. The company records a contract liability until the obligation is satisfied. This financing can materially reduce equity and working-capital needs, but it creates refund, performance and concentration exposure.

[Strongly supported]

Waymo does not fit that pattern on the supplied evidence. Riders book trips and pay transactionally. The fare may be collected by Waymo or Uber, but it is consideration for a current service. No rider deposit finances the next vehicle. No disclosed enterprise customer prepays for a block of autonomous capacity. No OEM or city is shown advancing production cash. The documented customer-financing amount is therefore zero, while the true amount remains subject to undisclosed contracts.

[Confirmed] Sources [29], [50], [88]; assumptions A050.

The distinction between financing and revenue is especially important in Uber markets. A settlement delay may create a receivable. An advance could create customer financing. A minimum-volume guarantee could support debt. A revenue share could reduce Waymo's recognized revenue while leaving gross rider fares unchanged. The package does not reveal which applies. The model uses a revenue-capture assumption and receivable days rather than assuming the passenger fare is Waymo revenue. **[Modeled]**

What customer capital would change

A prepaid enterprise or municipal contract could support vehicle deployment if the customer committed to a minimum number of rides, service hours or reserved capacity and paid before availability. That would reduce equity needs and might support an SPV borrowing base. It would also impose service-level, refund and capacity obligations. A customer cancellation would then be both a revenue shock and a financing withdrawal. No such structure is established for Waymo, so the downside model does not treat customers as a material capital provider. **[Plausible but unproven]**

07 The government-supported factory

Public support can reduce private capital per unit of capacity. The Waymo package identifies regulatory access, not a quantified subsidy stack.

Government-supported industrial companies often layer grants, subsidized loans, loan guarantees, transferable tax credits, local abatements, site work, utility support and procurement commitments on top of private capital. The economic value should be measured only when conditions, timing and cash receipt are known. An announced award is not a draw. An expected credit is not cash. A local incentive can be offset by required matching investment, employment obligations, domestic-content rules and clawback risk. **[Strongly supported]**

For Waymo, the evidence package documents permits, passenger-service regulation, safety oversight and public-road access. Those are necessary commercial rights. It does not quantify a grant, government loan, tax credit, local abatement, subsidized site or procurement commitment. The public-support-per-private-capital and public-support-per-unit-of-capacity ratios are therefore not measurable. They should be shown as “not measurable from supplied evidence,” not calculated as an economic zero. **[Confirmed]** Sources [54]-[56], [59], [70], [71]; assumption A052; lineage L015.

The same discipline applies to Mesa. A factory can be government-supported through land, tax abatements, utility interconnection or workforce programs even when no cash grant appears in a press release. The evidence package did not pull assessor, permit, utility or incentive records. Until those records are obtained, the factory is not classified as government-dependent and no support is netted against private capital. **[Unknown]** Research gaps [74], [89].

Before-and-after public support economics

The correct model would start with gross factory and production-line capex, operating subsidies and tax attributes before public support. It would then add cash and tax value actually received, subtract compliance cost and required matching investment, and probability-weight clawback exposure. Capacity ratios would use annual qualified units, not announced nameplate capacity if ramp is delayed. Waymo lacks the data needed for that calculation. The workbook therefore carries \$0 documented support and no modeled benefit. **[Confirmed]**

08 Who bears residual-value risk

The loss belongs to the party that owns the asset or guarantees its value after the software, battery and operating network stop supporting it.

Residual value is the most important hidden financing variable in a specialized fleet. A conventional passenger vehicle can be sold into a deep market with known age, mileage and condition adjustments. A Waymo vehicle is an integrated system. The base EV may be recoverable, but custom sensors, compute, wiring, cooling, redundant controls, structural changes and validation effort may have little value outside Waymo. De-installation can damage components or leave a vehicle that is expensive to recertify. The software license and operational support network may be inseparable from the hardware's commercial use. **[Strongly supported]** Sources [3], [5], [18], [32], [33], [58], [60], [86].

Battery degradation adds a second residual curve. Robotaxi duty cycles can produce high annual mileage, frequent fast charging, thermal load and urban stop-start use. Consumer range data implies roughly 0.37 kWh per mile for the Jaguar I-PACE and 0.28 kWh per mile for an IONIQ 5 under official test assumptions, but Waymo duty-cycle energy and battery health are not disclosed. The battery may retain stationary or vehicle value, but removal, diagnostics and warranty status matter. **[Strongly supported]** Sources [35], [36].

Technology obsolescence can arrive before mechanical end of life. Waymo's sixth-generation stack uses fewer cameras and is described as significantly lower cost. That is strategically positive and financially adverse for older collateral: a cheaper, more capable generation can reduce the economic value of fifth-generation equipment even when it remains operational. Recall remediation and regulatory restrictions can also create temporary or permanent impairment if software fixes do not restore the intended operating domain. **[Strongly supported]** Sources [5], [19], [21], [46], [47], [60].

Modeled exposure

The residual model values the current installed vehicle fleet at \$285 million, \$528 million and \$855 million. It assumes recoverable secondary value of 40%, 25% and 10% of gross cost and adds removal, de-integration and transport costs of 5%, 10% and 20%. The resulting exposure is \$185 million, \$449 million and \$941 million, or roughly \$61,750, \$136,000 and \$247,500 per vehicle. The high case exceeds gross value because disposal costs are added after a very low recovery. These amounts are not book-value estimates; they are economic loss scenarios. **[Modeled]** Assumptions A017, A020, A040; Residual Value sheet; lineage L011.

Risk holder by asset class

Asset	Likely economic issue	Legal owner	Residual holder under evidence
Base vehicles and batteries	High mileage, battery wear, model change, title and resale.	Unknown by market.	Owner or residual guarantor; economically Waymo/Alphabet in an owned-fleet case.
ADS sensors and compute	Rapid cost compression, limited independent use, software dependence.	Unknown.	Owner; lessor protected only if guarantee or parent support exists.
Charging equipment	Site-specific installation, interconnection and removal cost.	Unknown; Waymo says it operates charging infrastructure.	Owner/tenant depending lease and utility terms.
Depots and tenant improvements	Location-specific fit-out; stranded value after market exit.	Landlord/tenant split unknown.	Tenant for improvements unless landlord funded or reimbursed.
Mesa integration lines	Specialized tooling, throughput and facility lease risk.	Unknown.	Owner or guarantor; supplier may retain title under contract.
Servers / GPUs / data infrastructure	Faster technical depreciation; possible broader secondary market.	Unknown within Alphabet/Waymo.	Owner; allocation to Waymo not public.
Operations centers / recovery equipment	Human-workflow and location dependence.	Unknown.	Owner or tenant; service provider may bear some capex.

Insurance is not residual protection

Insurance may cover collision, liability, property damage, cyber events or other defined losses. It does not normally guarantee that an obsolete vehicle can be sold at book value. The evidence that Waymo and Swiss Re used claims data for safety research does not establish that Swiss Re writes Waymo's operating tower. Carriers, limits, self-insured retentions and excess layers remain unknown. Residual value should therefore be assigned to the owner or guarantor, not to an assumed insurer. **[Confirmed]** Sources [22], [73], [90].

Failure and bankruptcy

If Waymo fails while assets are owned outright, common equity is wiped before any recovery reaches investors. Secured creditors, if any, take pledged collateral. Lessors take leased assets and may file deficiency claims. Landlords assert lease claims; suppliers may enforce title-retention or liens; employees and tax authorities receive statutory priority; customers generally hold unsecured refund or service claims. Alphabet has no obligation to contribute more unless it has signed a guarantee or chooses to protect its reputation and investment. The public record establishes economic willingness, not a legal duty. **[Strongly supported]**

09 What happens when utilization disappoints

A robotaxi fleet has variable ride costs, semi-fixed human and insurance costs, and fixed asset cost. Lower utilization attacks all three at different speeds.

Waymo's public scale metrics are sufficient to estimate one narrow utilization measure. At 400,000-500,000 weekly paid trips, 3,000-3,800 modeled average vehicles and 20-30 minutes per paid trip, productive paid time is 26%-39% of calendar fleet hours. This is not total vehicle utilization. Empty repositioning, charging, cleaning, testing, maintenance and standby time can be operationally necessary while producing no paid ride. The 2 million operational miles per week cited by NHTSA and the trip snapshots imply roughly five operational miles per paid trip in the model, but the evidence dates are not perfectly matched.

[Modeled] Sources [16], [20], [28], [91]; assumptions A009-A014; lineage L007.

At the base assumptions, each vehicle supports about 19.5 paid rides per day and \$114,500 of annual modeled recognized revenue. Per paid trip, the model records \$16.15 of revenue; \$0.27 of electricity; \$3.00 of maintenance, tires and cleaning; \$2.00 of insurance and retained claims; \$2.00 of remote operations, support and recovery; \$1.50 of depot overhead; \$1.52 of booking and partner fees; and \$4.45 of vehicle and infrastructure depreciation. Contribution after depreciation is \$1.41 per trip, or about \$33 million annually for the fleet. It excludes R&D, mapping, market launch, central corporate expense and most legal/regulatory cost. **[Modeled]** Assumptions A011-A026; Utilization sheet; lineage L008.

The margin is vulnerable because several costs do not fall with ride count. Insurance programs, operations centers, depot leases, charging capacity, management, vendor minimums and depreciation remain largely fixed over a short shock. Remote-assistance agents may handle fewer events, but staffing cannot be cut in perfect proportion if response time and geographic redundancy must be preserved. Maintenance may decline with miles, yet time-based inspections, cleaning and readiness remain. The model retains 90% of insurance, 85% of human-operations cost and 90% of depot overhead after a 25% utilization shock. **[Modeled]** Sources [16], [37]-[41], [87], [89], [90]; assumptions A037-A039.

Required downside cases

Scenario	Base modeled effect	First economic loss holder	Financing consequence
Utilization 25% below plan	Fleet contribution moves from +\$33M to -\$18M per year.	Waymo equity; Alphabet if it funds the shortfall.	Lease affordability and DSCR weaken; asset draws may stop.
Revenue 25% below plan, same volume	Fleet contribution falls to -\$62M.	Waymo equity / parent.	No cost relief; gross-to-net or fare pressure is especially severe.
Asset costs 20% above plan	Adds \$76M of capital and \$15M annual depreciation on 2,000-vehicle base case.	Asset owner / equity unless supplier absorbs.	Higher equity need; lower borrowing-base headroom.
Factory ramp delayed 12 months	Defers about \$229M of modeled annual revenue from incremental vehicles.	Waymo equity / parent.	Capital sits idle; supplier and facility costs continue.
Equipment obsolescence	Base residual-value exposure about \$449M.	Vehicle owner / residual guarantor.	Collateral haircut; impairment and possible equity cure.
Customer cancellation	No material prepaid customer capital modeled.	Revenue/equity impact, not deposit-refund stack.	Could reduce partner receivables; terms unknown.
Lost government incentive	\$0 documented exposure.	No modeled loss from documented support.	Unknown local incentive risk remains.
Covenant breach / failed refinancing	No actual Waymo facility evidenced. Illustrative base DSCR 0.94x, 0.59x after utilization shock.	Equity cure, then lender/lessor if facility exists.	Cash trap, draw stop, acceleration, repossession.
Bankruptcy	Equity impaired after secured and priority claims.	Waymo/Alphabet and external equity.	Asset ownership and guarantees determine creditor recovery.

Working-capital burden

Hardware growth can consume cash before a vehicle earns its first fare. The base 2,000-vehicle deployment uses \$380 million of modeled hardware and charging procurement. With 75 days of inventory and WIP, 10 receivable days and 45 payable days, the cash conversion cycle is 40 days and net working capital uses about \$42 million. The low case produces a 28-day negative cycle and a \$17 million cash release because payable support exceeds inventory and receivables. The high case produces a 115-day cycle and \$173 million of cash use. No supplier facility is disclosed; these amounts model ordinary terms. **[Modeled]** Assumptions A029-A031, A035; Supplier Financing sheet.

Supplier support can therefore lower the asset bill without appearing as formal debt. It also creates a rollover risk. If suppliers shorten terms, demand deposits or stop shipment after a credit concern, the operator must replace working capital immediately.

Customer prepayments could offset that burden, but none are evidenced. Parent equity is again the practical buffer. **[Strongly supported]**

Downside waterfall

Waymo downside transmission and loss absorption

Economic sequence under the publicly evidenced parent-equity model. Legal bankruptcy priority is different.

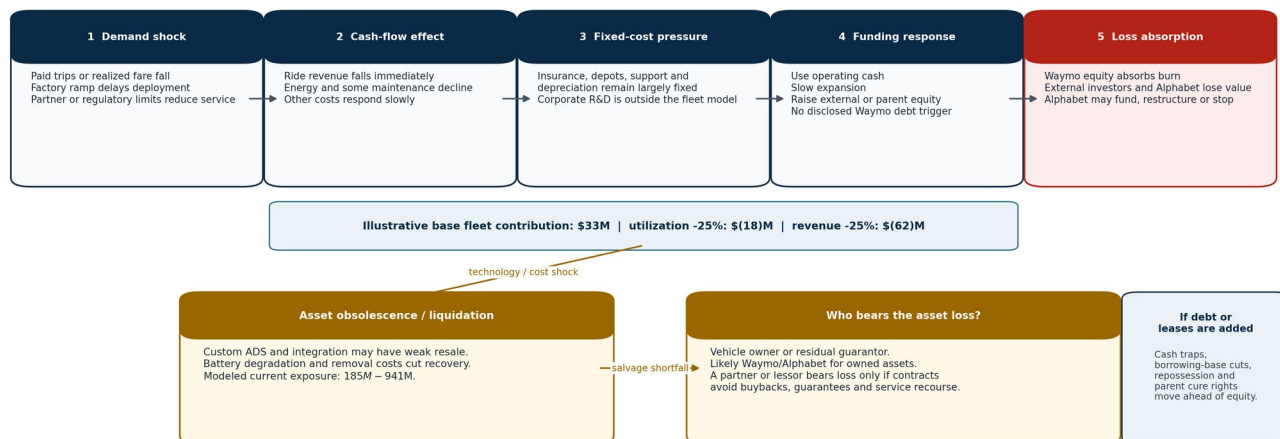


Figure 2. Economic downside sequence under the publicly evidenced parent-equity model. Legal bankruptcy priority differs and any undisclosed secured claims would move ahead of equity.

During normal operation, losses consume Waymo cash and then additional equity support. That is an economic funding sequence. In a legal insolvency, cash belongs to the estate and is distributed under contractual and statutory priority. Restricted insurance collateral stays restricted. Secured lenders or lessors, if any, enforce ahead of common equity. Suppliers, landlords, employees, tax authorities and customers rank according to contract and law. The parent contributes after filing only if obligated or if it chooses to finance a restructuring. This distinction prevents the common analytical error of placing equity ahead of creditors in a bankruptcy waterfall. **[Strongly supported]**

The utilization test for a parent-funded fleet

Low utilization does not create an immediate covenant event when there is no disclosed fleet debt. It creates a funding event. More parent cash is needed to cover operating losses, replace obsolete assets and fund the next deployment. That can be less abrupt than default and more expensive in cumulative equity.

10 Which financing structures actually scale

A structure scales when new assets bring their own credible funding source and when downside is held by a party that priced it, not merely moved to another legal entity.

Waymo's model scales operationally through technology, manufacturing partners, fleet operators and a parent willing to fund growth. It does not yet show automatic financing capacity tied to each new vehicle. Every disclosed major funding step is an equity event. The parent can write another check, but that is discretionary capital allocation, not a committed borrowing base. A 2,000-vehicle addition requires \$220-\$550 million of modeled asset capital, supports \$155-\$286 million of modeled annual revenue, and has incremental gross capital intensity of 1.42x-1.92x. Working capital can add up to \$173 million. Repeated equity issuance remains the default evidenced funding route. **[Modeled]** *Capital Intensity and Supplier Financing sheets; lineage L004-L006, L012-L013.*

Parent-funded platform

This model genuinely reduces bankruptcy and refinancing risk at the operating company because it replaces fixed claims with common equity. It does not reduce total capital need. It transfers the downside to the parent and external shareholders. Scalability depends on parent willingness, strategic value and evidence of future operating leverage. Accounting opacity is high when shared services and assets are not priced or disclosed at the subsidiary. **[Strongly supported]**

Leased-fleet operator

Leasing genuinely reduces upfront equity if the lessor funds the asset and accepts residual risk without a parent guarantee. It merely defers equity if the operator owes fixed rent, maintenance, insurance and a residual shortfall. Capacity can expand with deliveries, but fixed payments track the fleet and make low utilization dangerous. The structure works best for standardized assets with deep secondary markets and predictable operating cash flow. **[Strongly supported]**

SPV and asset-backed platform

An SPV can match asset cash flow with asset capital and protect corporate equity after the sponsor's first-loss investment. It scales when receivables are observable, collateral is eligible, recovery values are credible and the operator can be replaced. It breaks when software support, permits, service contracts or parent reputation are essential to asset value. Guarantees and equity cures can make a legally separate SPV economically recourse. **[Strongly supported]**

Customer-financed manufacturer

Customer deposits and milestone payments can reduce both working capital and equity-funded capex. The cost is delivery priority, discounts, refund exposure and concentration. The structure scales with a credible order book and customer willingness to fund before delivery. It breaks when cancellations coincide with inventory commitments. Waymo's transactional ride model does not supply this capital. **[Strongly supported]**

Government-supported industrial company

Public capital can reduce private investment per unit of capacity and extend debt tenor. It does not cure weak utilization or obsolete equipment. Grants and tax credits transfer part of the cost to taxpayers in exchange for policy conditions. Loans and guarantees transfer some credit risk but retain repayment and compliance obligations. Conditional future incentives should not be counted as cash. No quantified Waymo support permits a company-specific conclusion. **[Strongly supported]**

Partner-capital model

OEMs, fleet operators, landlords and strategic investors can own assets that the startup uses. This can be the cleanest risk transfer if the partner earns its return from asset ownership and has no recourse to the startup beyond ordinary service terms. It can also be the least transparent model when minimum payments, repurchase duties or guarantees sit in private agreements. Waymo's partner network is operationally real and financially unresolved. **[Strongly supported]**

Investment conclusion

Waymo is less exposed to near-term creditor pressure than a standalone hardware startup because Alphabet funds the platform with equity and can absorb long development cycles. That is the strongest feature of the financing model. The weakest feature is that the parent support masks the cost and ownership of the operating asset base. Public evidence does not show that the vehicles, depots and integration assets finance themselves, that third parties accept residual loss, or that current fleet contribution covers the full technology and corporate cost stack. **[Strongly supported]**

The model that would most improve common-equity returns is not simply "more debt." It is one in which standardized lower-cost vehicles generate stable market-level cash flow, partner contracts make gross-to-net revenue observable, title and residual risk are allocated explicitly, and asset lenders finance a growing borrowing base without broad parent recourse. Until those

conditions are visible, Waymo's scalability should be described as parent-financed operational scale rather than self-financing asset scale. **[Strongly supported]**

The broader answer is that "hardware startup" is not one financing category. Two companies can deploy similar physical assets while presenting opposite common-equity risks. Parent equity absorbs volatility but demands patience and large capital allocation. Leases conserve cash but create fixed claims. SPVs protect the parent only if recourse is genuinely limited. Customer advances exchange funding for delivery liabilities. Government support reduces private capital while adding policy conditions. The location of the asset on a balance sheet is only the first question. The decisive question is where the contract sends the loss. **[Strongly supported]**

Appendix A. Required company framework: Waymo

#	Question	Waymo answer	Evidence status
1	What physical assets are required?	Base EVs and batteries; custom cameras, lidar, radar, audio and compute; redundant controls; charging; depots; integration lines; operations centers; recovery equipment; servers/GPUs and data infrastructure.	Confirmed asset categories; exact quantities/costs incomplete.
2	How much capital before revenue begins?	Not disclosed. Current economic physical assets modeled at \$0.38B-\$1.35B; 2,000 incremental vehicles at \$0.22B-\$0.55B before launch and working capital.	Modeled.
3	Who owns the assets?	Not publicly established by asset class or market. Waymo, partners, landlords and affiliates may each own portions.	Unknown.
4	What instruments fund them?	Disclosed rounds and parent capital. No quantified Waymo debt, lease, asset SPV, customer financing or public support established.	Strongly supported.
5	What collateral supports financing?	No Waymo facility disclosed. Hypothetical asset debt would rely on vehicles, equipment, receivables and controlled accounts.	Unknown / counterfactual.
6	What guarantees exist?	Repeated Alphabet support; no asset-level legal guarantee disclosed. Partner recourse terms unavailable.	Economically high, legally unclear.
7	Who receives operating revenue?	Waymo likely in app-direct markets; settlement with Uber in Austin/Atlanta is unknown. Fare is not necessarily Waymo revenue.	Partially confirmed / unknown.
8	Who pays maintenance and operating costs?	Waymo and partners such as Moove perform operations. Allocation for maintenance, charging, insurance and recovery is not public.	Partially confirmed / unknown.
9	Who bears residual-value risk?	Vehicle/asset owner or residual guarantor. Legal holder unknown; economically Waymo/Alphabet in an owned-fleet case.	Unknown legal / modeled economic.
10	What happens if utilization is weak?	Operating contribution falls; parent equity covers the shortfall under the evidenced model. Debt/lease stress would arise if undisclosed or added.	Modeled / strongly supported.
11	What if technology becomes obsolete?	Older hardware may be impaired; de-integration and low resale create loss. Modeled exposure \$0.19B-\$0.94B.	Modeled.
12	What if the company fails?	Secured/priority claims rank ahead; equity is impaired; asset title and guarantees determine recovery. Alphabet support is voluntary unless guaranteed.	Strongly supported.
13	How much capacity expands automatically?	No disclosed borrowing base or customer pre-funding. Capacity expands when Alphabet or investors provide new equity and partners add assets.	Strongly supported.
14	How much requires repeated equity?	Documented asset-financing ratio is 0%; true ratio unknown. Under the disclosed lower bound, essentially all new physical investment relies on equity/parent or undisclosed partner capital.	Modeled / disclosure lower bound.
15	What depends on government or strategic support?	No quantified government support. Strategic partners are material to vehicles, manufacturing, booking and operations; economic terms unknown.	Confirmed roles / unknown economics.

Appendix B. Comparative company table and archetype benchmarks

Only Waymo has a supplied company dossier. The remaining rows are analytical benchmarks, not researched company cases. Amounts are intentionally left unpopulated where no evidence package was supplied. [\[Confirmed\]](#)

Company / benchmark	Sector	Physical assets	Asset owner	Operating company	Equity raised	Debt	Leases	SPVs	Customer finance	Supplier finance	Government support	Parent guarantees/sup port	Capital intensity	Principal downside holder
Waymo	Autonomous ride-hailing	Vehicles, ADS, batteries, charging, depots, lines, compute	Unknown by asset class	Waymo; partners in selected markets	\$27.1B-\$27.35B rounds	\$0 documented	\$0 quantified	Consolidated VIE; no asset SPV evidenced	\$0 documented	\$0 documented	\$0 documented	Repeated Alphabet support; no legal asset guarantee disclosed	1.6x-2.5x economic asset capital / modeled annual revenue	Waymo equity / Alphabet; owner in partner structures
Leased-fleet benchmark	Vehicles/robots	Deployable equipment	Lessor	Startup operator	Not supplied	Lease-like economics	Core instrument	Optional	Low	Ordinary terms	Limited	Residual/ maintenance guarantees common	Scales with deliveries; fixed burden rises	Operator first; lessor on residual shortfall
SPV/ABS benchmark	Fleet/ infrastructure	Ring-fenced assets and receivables	Asset SPV	Service/ operator	Not supplied	Senior asset debt	May coexist	Core structure	Receivables may support	Vendor terms	Possible	Completion, service or equity-cure support	Scales after cash flow/collateral bankable	SPV equity, then lender/guarantor
Customer-financed benchmark	Manufacturing/ defense	Inventory, lines, customer hardware	Manufacturer / customer varies	Manufacturer	Not supplied	Optional	Optional	Optional	Deposits/ milestones	Supplier terms	Procurement may matter	Delivery/refund obligations	Scales with order quality	Company equity, customer claims, supplier
Government-supported benchmark	Battery/energy/ industrial	Factory, lines, utilities, inventory	Project/company	Company / contractor	Not supplied	Government/ private loans	Possible	Project entities common	Offtake may support	Supplier terms	Grants, credits, guarantees	Completion/ clawback conditions	Scales with eligible capacity	Sponsor, lenders, public sector under terms
Partner-capital benchmark	Mobility/ automation	Partner-owned vehicles/sites/equipment	OEM/fleet operator/landlord	Startup or partner	Not supplied	At partner or asset entity	Common	Possible	Low unless prepaid	Partner procurement	Optional	Minimum payments/repurchase determine recourse	Scales if partners fund and bear residual	Partner if genuine; startup if recourse returns

Appendix C. Asset ownership map

Asset	Legal owner	Operator / user	Financier	Guarantor	Revenue recipient	Residual-value holder	Maintenance responsibility
Jaguar I-PACE / fifth-gen vehicles	Unknown	Waymo / fleet partners	Alphabet/equity or partner capital; exact source unknown	No legal guarantee disclosed	Waymo or partner settlement unknown	Owner/residual guarantor	Waymo/Moove/other partner split unknown
Zeekr RT/Ojai sixth-gen vehicles	Unknown	Waymo	Alphabet/equity or partner capital; imported base vehicles integrated in Arizona	Unknown	Waymo/partner settlement unknown	Owner/residual guarantor	Operator/partner allocation unknown
Future Hyundai IONIQ 5 vehicles	Unknown	Waymo planned	Strategic/OEM and Waymo funding terms unknown	Unknown	Future service entity	Owner/residual guarantor	Unknown
ADS sensors, compute and redundant controls	Unknown	Waymo	Parent/equity; supplier terms unknown	Unknown	Embedded in ride economics	Owner; low independent resale	Waymo/partner per contract
Batteries	Vehicle owner	Fleet operator	Embedded in base vehicle financing	Vehicle guarantee unknown	Embedded in ride economics	Vehicle owner; warranty may share defect risk	Operator maintenance split unknown
Charging equipment and interconnection	Unknown	Waymo says it operates charging infrastructure; partners may operate selected sites	Parent/equity, landlord, utility or partner unknown	Unknown	No separate revenue identified	Owner/tenant; site-specific value	Waymo/partner/landlord allocation unknown

Asset	Legal owner	Operator / user	Financier	Guarantor	Revenue recipient	Residual-value holder	Maintenance responsibility
Depots and tenant improvements	Landlord/tenant split unknown	Waymo / fleet partner	Lease or parent/equity unknown	Unknown	Supports ride revenue	Landlord for shell; tenant for improvements under typical terms	Waymo/partner split unknown
Mesa building and production lines	Unknown; Magna/Waymo roles documented, title not	Waymo/Magna	Parent/equity, landlord or supplier terms unknown	Unknown	No separate revenue; enables deployments	Owner or guarantor	Waymo/Magna split unknown
Servers, GPUs and cloud/data infrastructure	Unknown within Alphabet/Waymo	Alphabet/Waymo	Parent capital/shared services	No Waymo-specific guarantee disclosed	Supports service; no separate revenue	Owner; broader resale possible	Alphabet/Waymo allocation unknown
Operations centers / remote assistance	Unknown	Waymo and contractors	Parent/equity / leases unknown	Unknown	Supports ride service	Owner/tenant	Waymo/contractor allocation unknown

Appendix D. Assumption book: key variables

ID	Variable	Low	Base	High	Unit	Source IDs	Reasoning	Confidence
A009	Average deployed fleet	3,000	3,300	3,800	vehicles	[16], [21], [46]	Company snapshot / fleet range	Medium
A010	Paid trips per week	400,000	450,000	500,000	trips/week	[16], [28]	Dated company snapshots	High
A011	Average gross rider fare	\$16	\$19	\$22	\$/trip	[30], [31]	Third-party pricing bounds	Medium
A012	Recognized-revenue capture	70%	85%	95%	gross fare	[29], [50], [88]	Gross/net bridge unknown	Low
A013	Average paid-trip duration	20	25	30	minutes	Gap [91]	Required for paid-hour utilization	Low
A017	Fully installed vehicle cost	\$95k	\$160k	\$225k	\$/vehicle	[5], [86]	Wide external and directional evidence	Low
A018	Depot/charging capital	\$15k	\$30k	\$50k	\$/vehicle	[75], [89]	Site and charger data missing	Low
A019	Central factory/facility capital	\$50M	\$150M	\$300M	\$mm	[19], [74], [89]	Ownership and capex missing	Low
A020	Recoverable secondary value	40%	25%	10%	gross cost	Gap [86]	Specialized collateral recovery	Low
A021	Vehicle economic life	7	5	4	years	Gap [86]	Technology and duty-cycle risk	Low
A022	Maintenance/tires/cleaning	\$1.50	\$3.00	\$5.00	\$/trip	Gaps [87], [89]	Fleet operations evidence, no unit cost	Low
A023	Insurance/retained claims	\$0.75	\$2.00	\$5.00	\$/trip	Gap [90]	Carrier and retention data missing	Low
A024	Remote ops/support/recovery	\$0.50	\$2.00	\$4.50	\$/trip	[16], [37]-[41], [87]	Human layer confirmed, ratio missing	Low
A026	Booking/payment/partner fees	3%	8%	18%	gross bookings	[29], [50], [51], [88]	Settlement terms missing	Low
A027	Parent capital opportunity cost	8%	10%	12%	per year	Analytical	Investor-return benchmark	Medium

ID	Variable	Low	Base	High	Unit	Source IDs	Reasoning	Confidence
A029-A031	Cash conversion cycle	-28	40	115	days	Research gaps	Inventory + receivable - payable days	Low
A032-A034	Illustrative debt terms	40% LTV / 7% / 5yr	55% / 9% / 4yr	65% / 12% / 3yr	facility terms	No Waymo facility	Counterfactual bankability test	Low
A055	Hypothetical lessor yield	9%	12%	16%	per year	No Waymo lease	Specialized residual risk	Low

Appendix E. Financing lineage

ID	Metric / conclusion	Source inputs	Formula / derivation	Entity scope	Accounting treatment	Principal sensitivity
L001	Cumulative funded capital \$27.1B-\$27.35B	[10]-[14], [23], [24]	2020 range + 2021 + 2024 + 2026	Waymo rounds	Commitment excluded	2020 add-on
L002	Strict minimum Alphabet funding >\$10.8B in later rounds	[13], [14], [23], [24]	>50% x \$5.6B + >50% x \$16B	Alphabet-to-Waymo	Funding, not guarantee	Exact shares
L003	Modeled Alphabet funding \$13.1B-\$22.0B	Funding rounds + A005-A008	Each round x parent share	Waymo/Alphabet	Equity/intercompany	2026 share
L004	Physical assets \$0.38B-\$1.35B	[16], [19], [75] + A017-A019	Fleet x installed cost + infrastructure	Economic operation	May sit with partner	Installed cost/title
L005	Annualized recognized ride revenue \$0.23B-\$0.54B	[16], [28], [30] + A012	Trips x 52 x fare x capture	Service operations	Not reported revenue	Revenue capture
L006	Asset capital / revenue 1.6x-2.5x	L004 / L005	Economic physical assets / modeled revenue	Economic operation	Non-GAAP	Cost and capture
L007	Paid-hour utilization 26%-39%	Trip snapshots + duration	Paid trip hours / fleet calendar hours	Fleet	Operational metric	Duration/denominator
L008	Base fleet contribution about \$33M	Unit-cost assumptions	Revenue less cash cost and depreciation	Fleet only	Excludes corporate R&D	Insurance/human ops
L009	25% utilization shock erases base contribution	L008 + fixed-cost retention	Shock volume and variable cost	Fleet only	Scenario	Cost variability
L010	Illustrative 55% LTV DSCR below 1.0x	Debt/DSCR sheets	CFADS / debt service	Hypothetical borrower	Not actual debt	Amortization/CFADS
L011	Residual exposure \$0.19B-\$0.94B	A020, A040	Gross - recovery + removal	Asset owner	Economic loss	Recovery value
L012	Documented asset-financing ratio 0%; true ratio unknown	Package review	Documented debt+leases+customer+governm ent / assets	Waymo/entities	Disclosure lower bound	Undisclosed obligations
L013	Waymo is parent-funded, not publicly evidenced ABS fleet	[25], [48] + finance review	Qualitative classification	Waymo/Alphabet	VIE not asset SPV	Private contracts
L014	Uber/Moove roles do not prove risk transfer	[29], [50], [51], [64]	Separate title and recourse tests	Market operations	Revenue/contract terms unknown	Title/guarantees
L015	Government dependence not measurable	Checklist + A052	No quantified value / capital or capacity	Waymo/local entities	N/M, not economic zero	Local records
L016	Company ROIC unavailable	[15], [23], [24]	Standalone NOPAT/assets absent	Other Bets vs Waymo	Segment aggregation	Future disclosure

Appendix F. Asset-light scorecard

Dimension	Assessment	Evidence / economic effect	Evidence needed
Assets legally owned	Unknown / likely material	Fleet and infrastructure exist; title records absent.	Vehicle titles, partner contracts
Lease liabilities	Unknown	No quantified lease schedule.	Lease schedules/property records
Purchase commitments	Unknown	Production scale public; executed minimum purchases not.	OEM/Magna contracts
Guarantees and recourse	Economically high; legally unclear	Repeated parent funding; no asset guarantee disclosed.	Guarantee/keepwell/equity-cure terms
Customer obligations	Low financing value	Transactional riders; no capacity deposits identified.	Prepaid enterprise contracts
Maintenance burden	High	Charging, recovery, rider support, roadside and QA documented.	Unit cost and labor minutes
Residual-value exposure	High; holder unknown	Custom ADS, batteries and integration weaken resale.	Title/residual guarantees/market data
Working-capital burden	Medium-high	Inventory and WIP precede deployment.	Supplier deposits and terms
Required equity support	Very high	Large rounds; later rounds majority Alphabet-funded.	Standalone cash burn and asset financing
Off-balance-sheet structures	Unclear	Partners operate and manufacture; ownership/guarantees private.	Partner/SPV financial statements

Appendix G. Findings hierarchy

Classification	Findings
Confirmed	Waymo's disclosed funding rounds total \$27.1B-\$27.35B; Alphabet funded the majority of 2024 and significant majority of 2026; Waymo is a consolidated VIE; 400K+ paid weekly trips and 3,000+ vehicles were reported in February 2026; off-board operations, charging and partner roles exist; no standalone Waymo P&L is disclosed.
Strongly supported	The financing model is parent-funded equity rather than a publicly evidenced fleet-debt or lease structure; Alphabet is the practical economic backstop; partner participation does not by itself transfer title or residual risk; legal ownership remains material to the loss analysis.
Modeled	Physical asset capital \$0.38B-\$1.35B; annualized recognized ride revenue \$0.23B-\$0.54B; paid-hour utilization 26%-39%; base fleet contribution \$33M; residual exposure \$0.19B-\$0.94B; hypothetical base DSCR 0.94x; 25% utilization shock produces an \$18M annual fleet loss.
Plausible but unproven	Some vehicles, depots or charging assets may sit with partners or landlords; Alphabet may provide substantial unpriced shared services; market-specific settlement could include minimums or advances; local incentives may exist.
Unknown	Vehicle title by market; lease and lien schedules; exact Alphabet ownership and funding share; standalone revenue, capex, cash burn and margin; Uber/Moove economics; depot terms; insurance tower; charging tariffs; supplier terms; residual guarantees; any asset SPV or debt; government incentive value.

Appendix H. Selected source register

ID	Source	URL
[10]	Waymo, "Waymo raises first external investment round," 2 Mar. 2020	https://waymo.com/blog/2020/03/waymo-raises-first-external-investment-round
[12]	Waymo, "Transforming mobility with the confidence of world-class investors," 16 Jun. 2021	https://waymo.com/blog/2021/06/transforming-mobility-with-confidence-of-world-class-investors
[13]	Waymo, "Investing to bring the Waymo Driver to more riders," 25 Oct. 2024	https://waymo.com/blog/2024/10/investing-to-bring-the-waymo-driver-to-more-riders
[14]	Waymo, "Accelerating our global growth: Waymo raises \$16 billion," 2 Feb. 2026	https://waymo.com/blog/2026/02/waymo-raises-usd16-billion-investment-round
[15]/[23]	Alphabet 2024 Form 10-K	https://www.sec.gov/Archives/edgar/data/1652044/000165204425000014/goog-20241231.htm
[24]	Alphabet 2025 Form 10-K	https://www.sec.gov/Archives/edgar/data/1652044/000165204426000018/goog-20251231.htm
[25]	Alphabet Q2 2024 Form 10-Q	https://www.sec.gov/Archives/edgar/data/1652044/000165204424000079/goog-20240630.htm
[16]	Waymo response to Sen. Markey on remote assistance, 17 Feb. 2026	https://storage.googleapis.com/waymo-prod-cdn/uploads/680a27f89a3aae48977db655a5f45005-Sen._Markey_RA_Letter_Waymo_Response.pdf
[18]	Waymo Driver hardware page	https://waymo.com/waymo-driver/
[5]/[60]	Waymo, sixth-generation Waymo Driver, 19 Aug. 2024	https://waymo.com/blog/2024/08/meet-the-6th-generation-waymo-driver
[19]/[66]	Waymo, sixth-generation operations / Mesa integration, 12 Feb. 2026	https://waymo.com/blog/2026/02/ro-on-6th-gen-waymo-driver

ID	Source	URL
[20]	NHTSA investigation PE25013	https://static.nhtsa.gov/odi/inv/2025/INOA-PE25013-23069.pdf
[21]	NHTSA recall 25E084	https://static.nhtsa.gov/odi/rc/2025/RCLRPT-25E084-7732.pdf
[29]	Waymo FAQ	https://waymo.com/faq/
[30]	Obi pricing study, 2025	https://rideobi.com/wp-content/uploads/2025/10/Obi-Report-Pricing-Insights-On-Waymo-Uber-and-Lyft.pdf
[32]/[52]	Jaguar Land Rover-Waymo partnership, 27 Mar. 2018	https://media.jaguar.com/news/2018/03/waymo-and-jaguar-land-rover-announce-long-term-partnership-beginning-self-driving
[51]/[64]	Reuters, Waymo/Moove London operating partnership, 15 Oct. 2025	https://www.reuters.com/business/autos-transportation/waymo-launch-autonomous-ride-hailing-service-london-next-year-2025-10-15/
[54]/[70]	California Public Utilities Commission autonomous vehicle program	https://www.cpuc.ca.gov/regulatory-services/licensing/transportation-licensing-and-analysis-branch/autonomous-vehicle-programs
[73]/[90]	CPUC Waymo passenger-carrier filing / insurance evidence	https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/consumer-protection-and-enforcement-division/documents/tlab/av-programs/waymo-tcp-a-20250627.pdf
[75]	Waymo, charging infrastructure / green transportation, Aug. 2023	https://waymo.com/blog/2023/08/making-green-transportation-accessible

Workbook companion

The separate calculation workbook contains the full source inputs, equity financing, parent subsidy, debt, leases, customer and supplier financing, government support, physical assets, capital intensity, utilization, debt service, residual value, downside scenarios, stakeholder loss waterfall, financing lineage, comparative table and asset-light scorecard. All formula outputs are linked to the assumption book.