

BREATHLINE · INDEPENDENT RESEARCH

# The Capture Ledger

United States Edition — the accounting, footed and de-duplicated

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Evidence-graded research · double-counts subtracted and shown · gross flow — the work itself stays paid

# The Capture Ledger — United States Edition

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## Executive summary

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**The priced total: \$1,810 billion to \$2,620 billion a year.**

That is roughly **\$1.8 to \$2.6 trillion** flowing every year, in the United States, through the points in the economy where value tends to leak away from the people and firms who created it — late-payment penalties, swipe fees, take-rates, administrative churn, compliance repeated because a valid answer could not be carried forward, and a handful of environmental damages that no one currently pays for.

Read the headline correctly, because the honest framing is the whole point:

This is **gross flow through capture-shaped stages — not extractable rent**. Real work lives inside these pools: logistics, underwriting, claims adjudication, matching buyers to sellers, genuine auditing judgment. That work is legitimate and stays paid. The number measures the size of the stages where capture happens, not a pot of money anyone can simply take back. When you apply each item's own estimate of how much is actually addressable (typically 20-70%), the verification-addressable slice is on the order of **one-third** of the gross.

**What a ledger is, here.** This document is an accounting — an honest tally of where value leaves the work that made it, footed like a balance sheet. It adds up eleven sectors of the US economy, item by item, with a named public source behind every figure. Then it does the thing that separates an accounting from an argument: it **subtracts the double counts** — the places where the same dollar was counted in two sectors — and shows you each subtraction. The result is a floor built from evidence, not a ceiling built from enthusiasm. Everything too speculative to defend was left out entirely and listed openly, so the total is conservative in coverage even as its gross pools run large.

**Two things the number is not.** It is not adjusted for inflation — the underlying studies span 2011 to 2025 and are left in their original years. And roughly **\$46-145 billion of it is environmental damage** (leaked methane, health-sector emissions, packaging waste, the carbon of returns) priced at the government's social-cost benchmarks. Verification can make that damage visible and priceable; it does not, by itself, turn it into cash.

## How to read this ledger

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**The evidence key — in plain words.** Every figure carries a grade for how solid it is:

- **Measured** — a named survey, regulatory filing, or peer-reviewed study reports this number directly, for the United States. The strongest grade.
- **Derived** — a measured base multiplied by a stated, disclosed assumption: a share, a rate, or a fraction. Solid, but the assumption is shown so you can judge it.
- **Directional** — an order-of-magnitude estimate. The mechanism is documented, but a key input is unmeasured. **Directional figures are never added into any total.** They appear only in the "what we did not count" notes.
- **Not priceable** — real, documented, and often large, but no defensible national number exists. Kept visible and named, never counted.

Only **measured** and **derived** figures enter the totals. That is the discipline behind the word floor.

**Why every number is a range, never a point.** A single-point estimate would be false precision. Each figure is a low-to-high band that absorbs the age of the source, the width of the assumption, and honest uncertainty. When two credible studies measure the same thing differently, the range simply spans them both.

**Why we subtract double counts.** The economy does not respect sector lines. The same leaked methane feeds both the oil-and-gas sector and the electric utility that burns the gas. The same late construction payment shows up in "industrials" and again in "homebuilding." If you add sectors up naively, you count those dollars twice. So after adding, we find every place the same measured dollar appears in two sectors and we **remove one copy** — and we show you all five removals, with their arithmetic, in the section titled How the headline is built. That register is the credibility centerpiece of this document: we subtracted the double counts, and here they are.

**A note on what "addressable" means.** Where a figure notes an addressable fraction, it means the share of that pool that better verification could plausibly reach — not revenue anyone will capture, and not on any particular timeline. Adoption, resistance, and second-order effects are not modeled here at all.

|                                                            |    |
|------------------------------------------------------------|----|
| The Capture Ledger — United States Edition .....           | 2  |
| Executive summary .....                                    | 2  |
| How to read this ledger .....                              | 3  |
| The eleven sector ledgers .....                            | 6  |
| Energy — \$13.8B to \$29.9B a year .....                   | 6  |
| Materials — \$4.7B to \$15.7B a year .....                 | 8  |
| Industrials — \$234.0B to \$328.0B a year .....            | 10 |
| Consumer Discretionary — \$389.0B to \$491.0B a year ..... | 12 |
| Consumer Staples — \$36.0B to \$83.0B a year .....         | 14 |
| Health Care — \$480.0B to \$734.0B a year .....            | 16 |
| Financials — \$595.0B to \$760.0B a year .....             | 18 |
| Information Technology — \$94.0B to \$135.0B a year .....  | 20 |
| Communication Services — \$64.1B to \$146.7B a year .....  | 22 |
| Utilities — \$14.7B to \$34.2B a year .....                | 24 |
| Real Estate — \$40.9B to \$72.5B a year .....              | 25 |
| How the headline is built .....                            | 27 |
| Methodology and sources .....                              | 30 |



## The eleven sector ledgers

Each sector below follows the same shape: one plain sentence describing where its capture lives, a table of the priced items (with a plain description, the annual US range, the evidence grade, and the source), and an honest note on what we did not count and why. Only measured and derived items appear in the tables and the totals; directional and not-priceable items live in the closing note.

### Energy — \$13.8B to \$29.9B a year

Oil and gas: almost none of what you pay at the pump is capture — the sector's measured total is dominated not by extractable rent but by the climate damage of leaked methane, which no segment of the pump price reflects at all.

| Item                                      | What it is, in plain words                                                                                                                                                                   | Annual US range | Grade             | Source                                                                                          |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|-------------------------------------------------------------------------------------------------|
| Working-supply-chain methane damage       | The unpriced climate damage from methane leaking across the active oil-and-gas supply chain, valued at the government's social cost of methane. Damage to society, not a fee anyone charges. | \$13B–\$26B     | Derived (damages) | EPA Greenhouse Gas Inventory + Alvarez et al., Science (2018) × EPA 2023 Social Cost of Methane |
| Royalty underpayment drift                | Money quietly lost when the volume, price, and deductions printed on a mineral owner's royalty check cannot be checked against what was actually produced and sold.                          | \$0.3B–\$1.7B   | Derived           | Brown/Fitzgerald/Weber, Choices (2012) + GAO oil-and-gas royalty reports                        |
| Orphan-well plugging shifted to taxpayers | The cost of plugging abandoned wells whose owners walked away, shifted onto taxpayers instead of the operators.                                                                              | \$0.4B–\$0.9B   | Derived           | Federal orphan-well program (DOI); Raimi et al., Resources for the Future (2021)                |
| Abandoned-well methane damage             | The unpriced climate damage from methane seeping out of already-abandoned wells — a separate category from the working supply chain above.                                                   | \$0.1B–\$1.3B   | Derived (damages) | EPA Greenhouse Gas Inventory (abandoned-wells category) × EPA 2023 Social Cost of Methane       |

**What we did not count, and why.** The opaque "index-minus" spreads taken from small producers' netbacks, measurement leakage in midstream gathering, opacity in reserve-based lending, the rent on subsurface data, field-labor record rent, and methane/certification diligence fees are all real but have no defensible national figure — so they are named, not counted. The stock of suspended and unclaimed royalties (part of the \$70B+ held in state unclaimed-property funds) is a standing pile, not an annual flow, and is kept out of the total. Note that ~90% of this sector's measured total is environmental damage that verification can make visible but does not itself monetize.

## Materials — \$4.7B to \$15.7B a year

Chemicals, metals, mining, packaging, and forest products: the capture here is the cost of re-proving the same facts about a shipment at each change of hands, plus the pricing power distributors hold over small accounts whose own records live in the distributor's system.

| Item                                             | What it is, in plain words                                                                                                                                                                                | Annual US range | Grade    | Source                                                                                |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|---------------------------------------------------------------------------------------|
| Distribution opacity spread (metals + chemicals) | The share of distributor margin that comes from individually re-pricing small accounts — possible only because the buyer's own demand and price history sit in the distributor's system, not the buyer's. | \$3.2B–\$9.4B   | Derived  | Reliance Inc. FY2024 10-K; Grand View Research US Chemical Distribution               |
| Re-testing and re-certification                  | The cost of re-assaying and re-inspecting the same lot at each handoff, when the previous valid result cannot be carried forward as portable proof.                                                       | \$1.1B–\$5.2B   | Derived  | Mordor Intelligence / MarketsandMarkets US Testing, Inspection & Certification market |
| Conflict-minerals compliance                     | The recurring cost, borne by US companies and their suppliers, of answering the same mineral-origin questionnaire year after year under the Dodd-Frank Section 1502 rule.                                 | \$0.21B–\$0.61B | Measured | SEC Conflict Minerals Final Rule (2012); GAO-13-579R                                  |
| Price-index licensing rent                       | The premium small metals, chemical, and forest-products sellers pay for price indexes whose inputs and method they cannot audit.                                                                          | \$0.2B–\$0.45B  | Derived  | S&P Global 2024 10-K (Commodity Insights segment)                                     |

**What we did not count, and why.** The larger harm — regional "index-minus" spreads and quality discounts absorbed by small miners, quarries, and scrap dealers against assessments they cannot audit — has no public measurement. Financing and collateral-verification friction (roughly \$1–5B, directional), carbon-claim documentation labor (directional), European chemical-registration access fees, and the value destroyed when

family yards, quarries, and timberland change generations are all real and all left uncounted for lack of a defensible number.

## Industrials — \$234.0B to \$328.0B a year

Freight, manufacturing, and construction: one item dominates — what late payment costs the construction industry — and it is a survey estimate, so the sector total leans heavily on it.

| Item                              | What it is, in plain words                                                                                                                                                                                                                                 | Annual US range | Grade                           | Source                                                                                        |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------|-----------------------------------------------------------------------------------------------|
| Construction late-payment cost    | What late payment costs US construction: financing charges on floated payments, savings drawn down to cover gaps, and the padding subcontractors add to bids for the risk. It is ~89% of this sector's total, and only an estimated 30-50% is addressable. | \$208B-\$280B   | Measured (survey extrapolation) | Rabbet Annual Construction Payments Report, 2022-2024                                         |
| Freight broker spread             | The margin freight brokers keep between what a shipper pays and what the trucker receives — shown as a gross flow that still includes real matching and vetting work.                                                                                      | \$19B-\$24B     | Derived                         | Armstrong & Associates brokerage data; C.H. Robinson 10-K margins                             |
| Truck detention                   | The cost to truckers of waiting, often unpaid, at loading docks — measured two ways, from a narrow wage-loss figure to a full economic-loss figure.                                                                                                        | \$1.4B-\$15.1B  | Measured                        | US DOT Inspector General (2018, low); American Transportation Research Institute (2023, high) |
| Agricultural-equipment downtime   | Lost farm output when repair delays hit at season-critical windows because independent repair is blocked.                                                                                                                                                  | \$2.5B-\$3B     | Measured                        | US PIRG, Deere in the Headlights (2021-2023)                                                  |
| Transportation factoring discount | The discount truckers accept to get paid early on delivery invoices that cannot self-verify.                                                                                                                                                               | \$1.8B-\$3.6B   | Derived                         | Secured Finance Network transportation-factoring data                                         |

| Item                                  | What it is, in plain words                                                                                                                                    | Annual US range | Grade    | Source                                                        |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|---------------------------------------------------------------|
| Agricultural-equipment repair premium | The extra farmers pay for dealer-only repairs when the manufacturer holds the diagnostic tools and service records.                                           | \$1B-\$1.2B     | Measured | US PIRG, Deere in the Headlights (2021-2023)                  |
| Double-brokering fraud                | Freight lost when a load is illegally re-brokered — a fraud that lives entirely on the fact that the chain of who tendered a load to whom cannot be verified. | \$0.5B-\$1B     | Measured | Transportation Intermediaries Association / TriumphPay (2023) |
| Contractor prequalification fees      | Subscription fees contractors pay to re-submit the same insurance, safety, and financial records to each client's compliance portal.                          | \$0.1B-\$0.3B   | Derived  | Published ISNetworld and Avetta pricing                       |

**What we did not count, and why.** Surety-bond premiums (~\$9B) are deliberately excluded as payment for real risk transfer, and base certification audits as real verification work. Duplicate supplier-qualification audits (directional ~\$0.5-2B), supplier environmental-disclosure questionnaire labor (directional ~\$2-3B economy-wide), the price opacity buried in industrial-distributor margins, the value lost when family industrial firms change hands, and construction-equipment lock-in (the priced figure covers farm equipment only) are all named but uncounted.

## Consumer Discretionary — \$389.0B to \$491.0B a year

Retail, marketplaces, autos, travel, and homebuilding: the best-evidenced capture in the economy sits here, in platform take-rates and returns fraud, alongside repair barriers and the residential share of construction late-pay.

| Item                            | What it is, in plain words                                                                                                                                                            | Annual US range | Grade                 | Source                                                             |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|--------------------------------------------------------------------|
| Residential late-payment drag   | The residential slice (~43%) of construction late-payment cost, carried by homebuilding trades and subcontractors.                                                                    | \$100B–\$125B   | Derived               | Rabbet 2024 report × Census residential-construction share         |
| Retail returns fraud            | Retailer losses to fraudulent returns and claims — wardrobing, receipt fraud, empty-box claims — possible because an item's identity and condition cannot be verified at the counter. | \$95B–\$105B    | Measured              | NRF / Appriss Retail, 2024 Consumer Returns in the Retail Industry |
| Marketplace referral fees       | Referral commissions third-party sellers pay Amazon on each sale (warehouse/fulfillment fees are excluded as real logistics).                                                         | \$55B–\$70B     | Derived               | Amazon 2024 10-K; Marketplace Pulse                                |
| Repair restrictions             | Extra household spending forced by repair barriers — replacing devices that could be fixed if diagnostics, parts, and service history were not withheld.                              | \$40B–\$50B     | Measured              | US PIRG, Repair Saves Families Big (2021, updated 2023)            |
| Seller-funded marketplace ads   | "Pay-to-be-found" ad spending sellers must buy to stay visible in rankings — much of it defensive bidding on their own brand names.                                                   | \$34B–\$45B     | Derived               | Amazon 2024 10-K advertising revenue; Marketplace Pulse            |
| Hotel travel-agency commissions | Commissions US hotels pay online travel agencies to acquire guests — roughly 13–17% of room revenue versus 3–8% for direct bookings.                                                  | \$25B–\$30B     | Measured              | Kalibri Labs US hotel guest-acquisition studies (2017–2019)        |
| Auto dealer finance markup      | Hidden interest-rate markup dealers add to auto loans — the sector's oldest figure, from 2011, widened for age.                                                                       | \$20B–\$30B     | Measured (2011 basis) | Center for Responsible Lending, Under the Hood (2011)              |

| Item                               | What it is, in plain words                                                             | Annual US range | Grade             | Source                                          |
|------------------------------------|----------------------------------------------------------------------------------------|-----------------|-------------------|-------------------------------------------------|
| Meal-delivery merchant commissions | Commissions restaurants pay third-party meal-delivery apps (merchant side only).       | \$15B-\$25B     | Derived           | DoorDash FY2024 8-K; published commission tiers |
| Short-term-rental hosting fees     | The US share of Airbnb host-and-guest service fees.                                    | \$4B-\$6B       | Derived           | Airbnb 2024 10-K                                |
| Returns carbon damage              | The unpriced carbon damage of the returns pipeline — transport, liquidation, landfill. | \$1.2B-\$4.6B   | Derived (damages) | Optoro Impact Report; EPA social cost of carbon |

**What we did not count, and why.** Duplicate factory social audits, franchise record capture, the labor of appealing marketplace suspensions, gig-worker income lost to account deactivation, vehicle-history-report rent, and the dollar value of goods destroyed in returns liquidation (9.5 billion pounds landfilled a year — tonnage measured, dollars not) are all named but uncounted. The repair-restrictions figure overlaps the technology sector's electronics figure; that double count is removed in How the headline is built.

## Consumer Staples — \$36.0B to \$83.0B a year

Food, beverages, and household goods: the capture concentrates where a small supplier's records live in someone else's system — shelf-slotting fees, unrecoverable deductions, and the data-rent layer of retail-media advertising.

| Item                             | What it is, in plain words                                                                                                                                       | Annual US range | Grade    | Source                                                                  |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|-------------------------------------------------------------------------|
| Shopper-data / retail-media rent | The data-rent share of retail-media advertising — the premium charged for exclusive purchase records a brand cannot obtain or verify anywhere else.              | \$16B–\$31B     | Derived  | eMarketer US retail-media spend                                         |
| Shelf-access slotting fees       | Pay-to-stock and pay-to-stay fees brands pay retailers for shelf position.                                                                                       | \$9B–\$18B      | Measured | FTC Slotting Allowances study (2003); CBS News aggregate (2016)         |
| Unrecovered deductions           | Invalid retailer deductions from supplier payments that small brands never recover, because delivery and promotion evidence lives only in the retailer's system. | \$5B–\$21B      | Derived  | Industry trade reporting (Infosys BPM; Inmar via CPGVision)             |
| Packaging-waste damage           | Packaging disposal costs shifted onto towns and ratepayers rather than producers, across the states without producer-responsibility laws (most of the US).       | \$4B–\$8B       | Derived  | EPA Sustainable Materials Management (2018); EREF landfill tipping fees |
| Trade-finance / factoring drag   | Financing costs and holdbacks small food suppliers absorb, priced on the unverifiability of "this delivery happened and was accepted."                           | \$0.7B–\$3B     | Derived  | Secured Finance Network factoring survey                                |
| Label-claim certification        | Recurring organic and similar certification fees, dominated by re-confirming that nothing has changed.                                                           | \$0.05B–\$0.15B | Derived  | USDA Census of Agriculture; USDA Organic database                       |

| Item                         | What it is, in plain words                                                                                                                                                                      | Annual US range | Grade   | Source                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|------------------------------------|
| Crop-insurance delivery cost | The verification-and-servicing slice of federal crop-insurance delivery paid to insurers — the part re-checking production and quality facts that a signed intake receipt would settle cheaply. | \$1B-\$2.2B     | Derived | GAO-24-106086 (2024, on 2022 data) |

**What we did not count, and why.** The core capture at farm and elevator intake — grade called on the buyer's own instrument, identity-preserved premiums blended away — has no public measurement. The staff and recovery-firm labor of fighting one-sided deduction records, brand buyback of its own sell-through data, broadline distributor hub margins, dilution-reserve holdbacks, on-farm recordkeeping labor, distributor-route repricing losses, and deposit-return fraud are all real and all uncounted.

## Health Care — \$480.0B to \$734.0B a year

The largest sector total, and the one where administrative churn and pricing opacity — not clinical care — carry the weight. The clinical work itself is never the target here.

| Item                                       | What it is, in plain words                                                                                                                                                                    | Annual US range | Grade             | Source                                                              |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|---------------------------------------------------------------------|
| Pricing failure (net of drug-benefit rent) | Prices above what a well-functioning market would charge, across facilities, services, and labs — after subtracting the drug-pricing share counted separately below.                          | \$203B–\$230.5B | Derived           | Shrank et al., JAMA (2019), pricing-failure category minus PBM rent |
| Claims and administrative complexity (net) | The billing, coding, eligibility, and reconciliation cost that piles up at the insurance-claims chokepoint — after carving out prior authorization and credentialing, counted separately.     | \$150B–\$238B   | Derived           | Shrank et al., JAMA (2019) minus carve-outs; CAQH Index 2024        |
| Fraud and abuse                            | The cost of health-care fraud plus the cost of policing it — persisting because a claim's submission and delivery are asserted, not receipted.                                                | \$58.5B–\$83.9B | Measured          | Shrank et al., JAMA (2019)                                          |
| Health-sector emissions damage             | The unpriced climate and public-health damage from the health sector's own emissions (about 8.5% of the US total).                                                                            | \$28B–\$105B    | Derived (damages) | Eckelman et al., Health Affairs (2020) × social cost of carbon      |
| Prior-authorization cost                   | The staff-and-physician cost of getting an insurer's approval before care — re-answering the payer's own published criteria from scratch, case by case.                                       | \$26.7B–\$40B   | Derived           | Health Affairs / American Medical Association; CAQH Index 2024      |
| Drug-benefit-manager rent                  | Spread pricing, retained rebates, and affiliated-pharmacy markups by pharmacy-benefit managers, which survive because no one can verify the net price at each step of the drug-payment chain. | \$10B–\$28B     | Derived           | Nephron Research; FTC Second Interim Staff Report on PBMs (2025)    |

| Item                            | What it is, in plain words                                                                                                                                                    | Annual US range | Grade   | Source                         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|--------------------------------|
| Group-purchasing fees           | Supplier-paid administrative fees on hospital purchasing that flow to the large systems owning the purchasing hubs, not to the small buyers whose pooled demand created them. | \$2.3B-\$4B     | Derived | GAO-15-13 (2014, on 2012 data) |
| Credentialing and provider data | The cost of repeatedly re-verifying already-settled facts about a clinician — license, school, board — across institutions.                                                   | \$2.1B-\$4.8B   | Derived | CAQH provider-data studies     |

**What we did not count, and why.** Every one of these is real and none has a defensible national annual figure: the capture inside electronic health records (subscription rent, five-figure exit fees, quiet resale of patient data); the exposure when a single claims clearinghouse goes dark (the 2024 Change Healthcare attack left hospitals unpaid for weeks); wholesaler oligopoly margin; and care delayed or abandoned because of prior authorization — the American Medical Association reports 29% of physicians citing a resulting serious adverse event. The ~\$220B of medical debt held by US adults is a standing pile, not an annual flow, and is kept out of the total.

## Financials — \$595.0B to \$760.0B a year

Banking, payments, markets, asset management, and insurance: twelve priced pools, each denominated in its own end-payer dollar. These are gross cost pools of captured stages, not extractable rent — specialists doing real work stay paid.

| Item                               | What it is, in plain words                                                                                                                                     | Annual US range | Grade    | Source                                                     |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|------------------------------------------------------------|
| Card swipe fees                    | Interchange, network, and processor fees merchants pay on card sales — one fee pool, tallied two ways.                                                         | \$187B–\$236B   | Measured | Nilson Report 2024 / Merchants Payments Coalition          |
| Fund fees                          | Annual expense-ratio fees on US mutual funds and ETFs — the fund layer only; advisory and custody layers are not included.                                     | \$100B–\$135B   | Derived  | Morningstar US Fund Fee Study 2024 × ICI fund-asset totals |
| Insurance distribution commissions | Property-and-casualty broker and agent commissions — the placement and volume portion paid for chain position, not risk analysis.                              | \$90B–\$105B    | Derived  | NAIC 2024 statutory exhibits × net written premiums        |
| Insurance claims-adjudication cost | The cost of adjudicating property-and-casualty insurance claims — the priced form of checking assertions at claim time, plus repeated loss-control inspection. | \$85B–\$105B    | Derived  | NAIC 2024 loss-adjustment ratio × net written premiums     |
| Financial-crime compliance         | The cost of anti-money-laundering and know-your-customer checks — much of it every institution re-verifying the same person from asserted documents.           | \$50B–\$61B     | Derived  | LexisNexis Risk Solutions / Forrester (2024), US share     |
| Card chargeback and dispute losses | Merchant losses to card chargebacks and disputes, most of it "friendly fraud" adjudicated by the party that profits from the network.                          | \$20B–\$35B     | Measured | Chargebacks911 (Mastercard data); Nilson Report            |
| Public-company audit fees          | External audit fees US public companies pay — sampling exists because ledgers are assertions rather than proofs.                                               | \$20B–\$22B     | Measured | Ideagen Audit Analytics, 20-year fee review                |

| Item                            | What it is, in plain words                                                                                                                                          | Annual US range | Grade    | Source                                           |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------|--------------------------------------------------|
| Market-data and index licensing | US spending on financial market data and index licensing — largely locked in by market-structure rules.                                                             | \$20B-\$25B     | Derived  | Burton-Taylor International Consulting           |
| Credit-bureau data rent         | The resale margin on consumer credit files that lenders furnish free and consumers can neither own nor move.                                                        | \$10B-\$13B     | Derived  | Equifax / TransUnion / Experian FY2024 reporting |
| Remittance take                 | The intermediation take on money migrant workers send home — the excess above the UN's 3% target is the opacity premium.                                            | \$5B-\$12B      | Derived  | World Bank Remittance Prices Worldwide 2024      |
| Unclaimed-property escheatment  | Value falling out of the financial system into state unclaimed-property funds each year because entitlement is expensive to prove (against a \$70B+ standing pile). | \$4.5B-\$6B     | Measured | NAUPA, FY2024                                    |
| Credit-ratings fees             | US credit-ratings revenue — issuer-pays gatekeeping, though largely entrenched by regulation.                                                                       | \$4B-\$5B       | Derived  | Moody's / S&P Global FY2024 reporting            |

**What we did not count, and why.** The capture inside core banking software (fees to exit, per-call charges to read the bank's own ledger), payment-security and reconciliation labor across millions of merchants, the cost of credit exclusion for the ~13.5 million "credit invisibles," probate and estate-reconstruction fees, market-data license-compliance audits, and repeated remittance identity checks are all real and uncounted. A single-survey \$100B/yr friendly-fraud estimate is deliberately held out in favor of the sourced \$20-35B chargeback range.

## Information Technology — \$94.0B to \$135.0B a year

Software, cloud, hardware, and IT services: the two largest items are measured pools only partly caused by capture, so a capture-strict reading of this sector runs closer to \$35–60B.

| Item                            | What it is, in plain words                                                                                                                                              | Annual US range | Grade                 | Source                                                           |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|------------------------------------------------------------------|
| Cloud waste                     | The measured share of US cloud spending that is wasted — part structurally caused by committed-spend contracts and data-egress lock-in, the rest internal inefficiency. | \$30B–\$45B     | Derived               | Flexera 2024 State of the Cloud; Gartner; Synergy Research       |
| Repair-versus-replace overspend | The household pool created by repair barriers and unverifiable device history across electronics and appliances.                                                        | \$40B–\$49.6B   | Measured              | US PIRG, Repair Saves Families Big (2021 / 2023)                 |
| IT-staffing pay-vs-bill spread  | The gross margin between what clients are billed and what IT contractors are paid — the slice protected purely by non-portable performance records is the capture.      | \$9.2B–\$12.1B  | Derived               | Staffing Industry Analysts, US IT staffing forecast              |
| App-store take rate             | The 15–30% commission on US consumer app spending, bundling payment and review with gate position.                                                                      | \$7.8B–\$15.6B  | Derived               | Sensor Tower 2025 State of Mobile × published store commissions  |
| Counterfeit-component losses    | Losses to US semiconductor firms from counterfeit parts, which enter where chain-of-custody is asserted rather than provable — a 2011 figure, likely higher today.      | \$6B–\$9B       | Measured (2011 basis) | Semiconductor Industry Association anti-counterfeiting testimony |
| Software-license audit tax      | What companies spend on software-license audits, true-ups, and defense — monetizing contract ambiguity and non-portable usage records.                                  | \$0.7B–\$3.1B   | Derived               | Flexera State of ITAM Reports; US Census business data           |

| Item                                       | What it is, in plain words                                                | Annual US range | Grade    | Source                                               |
|--------------------------------------------|---------------------------------------------------------------------------|-----------------|----------|------------------------------------------------------|
| Conflict-minerals compliance (electronics) | The electronics-supply-chain share of Dodd-Frank Section 1502 compliance. | \$0.2B-\$0.7B   | Measured | SEC Conflict Minerals rule; Tulane 1502 impact study |

**What we did not count, and why.** The security-questionnaire treadmill (directional \$3-10B — the per-vendor cost is measured, but no one has counted the vendors), the upcharge for basic single-sign-on security, cloud data-egress rent, software renewal repricing and data-migration labor, developer deplatforming losses, and cloud-GPU allocation by relationship are all named but uncounted. Two double counts are removed in How the headline is built: the repair figure overlaps Consumer Discretionary, and app-store commissions overlap Communication Services.

## Communication Services — \$64.1B to \$146.7B a year

Advertising, media, telecom, and platforms: capture concentrated in the programmatic-advertising chain and in the resale of behavioral data about people who cannot see or revoke it.

| Item                                             | What it is, in plain words                                                                                                                                           | Annual US range | Grade   | Source                                                      |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|-------------------------------------------------------------|
| Behavioral-data broker resale                    | The share of the US data-broker market that is resale of individual behavioral, identity, and location records about people who cannot see, correct, or revoke them. | \$25B-\$53B     | Derived | Grand View Research, US Data Broker Market (2024)           |
| Programmatic ad-tech margin                      | The intermediary margin in the open-web programmatic advertising chain above the real cost of the auction and matching work.                                         | \$12B-\$25B     | Derived | ANA Programmatic Transparency Study (2023); ISBA/PwC        |
| Programmatic waste (junk sites and fake traffic) | Advertiser money lost to made-for-advertising sites and invalid traffic, economical only because delivery is asserted by the intermediaries paid on it.              | \$10B-\$34B     | Derived | ANA (2023); Juniper Research (2023)                         |
| App-store commissions                            | The 15-30% in-app-payment commission on US consumer spending.                                                                                                        | \$7.8B-\$15.6B  | Derived | Sensor Tower 2025 State of Mobile × store commissions       |
| Ticketing fees                                   | Ticketing fees and commissions, sustained above competitive levels by exclusive multi-year venue contracts and ownership of the ticket record.                       | \$7B-\$12.5B    | Derived | GAO-18-347; IBISWorld US online event ticketing             |
| Ad-verification vendor spend                     | What advertisers pay third parties to re-verify delivery claims the ad pipe could prove itself.                                                                      | \$1.2B-\$5B     | Derived | DoubleVerify / Integral Ad Science FY2024 filings           |
| Influencer fake-audience fraud                   | Marketing money lost to fake followers and engagement, because audience claims are asserted by the platform and the influencer.                                      | \$1.1B-\$1.5B   | Derived | CHEQ / University of Baltimore (2019) × US influencer spend |

| Item            | What it is, in plain words                                                                              | Annual US range   | Grade    | Source                                          |
|-----------------|---------------------------------------------------------------------------------------------------------|-------------------|----------|-------------------------------------------------|
| SIM-swap losses | Reported consumer losses from SIM-swap fraud — the failure mode of an identity the owner does not hold. | \$0.026B–\$0.049B | Measured | FBI Internet Crime Complaint Center (2023–2024) |

**What we did not count, and why.** The music-royalty "black box" (the collective's \$424.4M of unmatched royalties is a standing stock, not an annual flow), annual privacy-compliance labor (directional \$5–15B, anchored only to a one-time California figure), the value of publisher content ingested by AI answer engines (a contested \$10–14B counterfactual for Google and Meta alone), and creator follower-graphs locked in revocable accounts are all real and uncounted. The FCC's ~\$200M in 2024 fines for selling subscriber location data are enforcement events, not an annual flow.

## Utilities — \$14.7B to \$34.2B a year

Electric and gas utilities: the best-measured item is the excess return regulators allow on utility capital; the largest is, again, the climate damage of methane in the gas supply chain.

| Item                                      | What it is, in plain words                                                                                                                                                                                                  | Annual US range | Grade             | Source                                                                      |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|-----------------------------------------------------------------------------|
| Gas-chain methane damage                  | The unpriced climate damage from methane across the gas supply chain feeding utilities — damage to society, not a transaction fee. This is the same national methane measurement as in Energy; the headline counts it once. | \$7B–\$21B      | Derived (damages) | Alvarez et al., Science (2018) × EPA 2023 Social Cost of Methane            |
| Excess allowed-return rent                | The excess cost to electricity customers when regulators let utilities earn a return on capital above the market benchmark — the sector's single best-measured figure.                                                      | \$5B–\$9B       | Measured          | Dunkle Werner & Jarvis, J. Public Economics (2026); Rode & Fischbeck (2019) |
| Clean-energy tax-credit transfer discount | The diligence, insurance, and broker cost absorbed when clean-energy tax credits are sold — per-deal re-verification of wage, content, and production claims.                                                               | \$2.5B–\$3.4B   | Derived           | Crux, 2025 Market Intelligence Report                                       |
| Demand-response aggregator retention      | The share of grid-service payments aggregators keep, above the real aggregation work, because a household cannot prove its own dispatch history and switch providers.                                                       | \$0.2B–\$0.8B   | Derived           | GM Insights Demand Response Market; DOE FEMP                                |

**What we did not count, and why.** The study-and-restudy churn and dead development capital across the grid-connection queue (directional \$2–15B across ~10,300 stalled projects), broker spreads on renewable-energy certificates, rate-case litigation costs, meter-data access friction, coal-ash and plant-decommissioning liabilities, and the overbuilding that excess allowed returns encourage are all named but uncounted. Removing the methane damage entirely leaves a transactions-only floor for this sector of \$7.7–13.2B.

## Real Estate — \$40.9B to \$72.5B a year

Brokerage, title, appraisal, mortgage servicing, and rentals: capture built on records that stay with the hub — the agent's listing data, the title plant, the servicer's payment history.

| Item                              | What it is, in plain words                                                                                                                                                           | Annual US range | Grade   | Source                                                     |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------|------------------------------------------------------------|
| Brokerage commission excess       | Real-estate agent commissions above a competitive benchmark, measured against post-settlement compression and international norms. Portal lead-resale fees are folded in, not added. | \$30B–\$50B     | Derived | Federal Reserve FEDS Note (2025); KBW; Brookings           |
| Title trust tax                   | Title-insurance premiums above the small share that actually pays claims (a ~4.2% loss ratio) — re-purchased verification of a mostly unchanged public record at each sale.          | \$8B–\$15.5B    | Derived | ALTA Title Insurance Premium reports (2024)                |
| Mortgage default-servicing tax    | The record-reconstruction and dispute share of servicing troubled mortgages — proving facts that exist only in the servicer's proprietary system.                                    | \$1.5B–\$3B     | Derived | MBA Servicing Operations Study (2024); FSOC                |
| Appraisal-management spread       | The middleman spread appraisal-management companies keep out of the fee a consumer pays — for coordination, not the valuation itself.                                                | \$0.8B–\$1.5B   | Derived | IBISWorld Real Estate Appraisal; documented AMC fee splits |
| Tenant-screening application fees | Stacked rental-application fees renters pay again and again for the same asserted history across multiple applications.                                                              | \$0.6B–\$2.5B   | Derived | Georgetown Law / Upturn; CFPB tenant-screening reports     |

**What we did not count, and why.** Overbilling of common-area charges to small commercial tenants (directional \$2–10B — 30–40% of statements carry errors, but total pass-through volume is unmeasured), property-management software that holds records hostage at exit, green-certification and benchmarking costs, and borrower hours spent reconstructing their own payment history are all real and uncounted. The \$32.3B of at-risk "heirs' property" — homes with tangled inheritance title — is a standing stock, not an annual flow, and is kept out of the total.



## How the headline is built

This is the arithmetic, shown in full. Nothing here is hidden in a footnote.

**Step 1 — Add the eleven sectors.** Summing only the measured and derived items in each sector ledger above:

| Sector                 | Low             | High            |
|------------------------|-----------------|-----------------|
| Energy                 | \$13.8B         | \$29.9B         |
| Materials              | \$4.7B          | \$15.7B         |
| Industrials            | \$234.0B        | \$328.0B        |
| Consumer Discretionary | \$389.0B        | \$491.0B        |
| Consumer Staples       | \$36.0B         | \$83.0B         |
| Health Care            | \$480.0B        | \$734.0B        |
| Financials             | \$595.0B        | \$760.0B        |
| Information Technology | \$94.0B         | \$135.0B        |
| Communication Services | \$64.1B         | \$146.7B        |
| Utilities              | \$14.7B         | \$34.2B         |
| Real Estate            | \$40.9B         | \$72.5B         |
| <b>Raw sum</b>         | <b>\$1,966B</b> | <b>\$2,830B</b> |

**Step 2 — Subtract the double counts.** Five times, the same measured dollar was counted in two sectors. We remove one copy of each and show it here:

1. **Methane, in both Energy and Utilities.** The same national oil-and-gas methane measurement drives both sectors' methane line. We keep it once, in Energy, and remove the Utilities copy: **-\$7B to -\$21B.**
2. **Repair restrictions, in both Consumer Discretionary and Information Technology.** The same household-repair study was counted in both. One copy is removed: **-\$40B to -\$49.6B.**
3. **Residential construction late-pay, in both Consumer Discretionary and Industrials.** The Consumer Discretionary figure is an explicit 43% slice of the same industry-wide construction total already held whole in Industrials. The slice is removed: **-\$100B to -\$125B.**

4. **App-store commissions, in both Information Technology and Communication Services.** The same app-spending base drives both. One copy is removed: **−\$7.8B to −\$15.6B.**
5. **Conflict-minerals compliance, in both Materials and Information Technology.** The same Dodd-Frank Section 1502 obligation appears in both. The technology copy is removed: **−\$0.2B to −\$0.7B.**

**Total removed: −\$155B (low) to −\$212B (high).**

### **Step 3 — The footed total.**

|                           | <b>Low</b>      | <b>High</b>     |
|---------------------------|-----------------|-----------------|
| Raw sum of eleven sectors | \$1,966B        | \$2,830B        |
| Less: five double counts  | −\$155B         | −\$212B         |
| <b>Footed total</b>       | <b>\$1,810B</b> | <b>\$2,620B</b> |

**What is still imperfect, stated plainly.** A few smaller overlaps could not be cleanly separated with public data and were left in — card-network fees that sit inside marketplace take-rates, the blurry line between card chargebacks and returns fraud, and tiny fund-audit fees inside the audit total — so a little double counting remains. Pulling the other way, every directional and not-priceable item was excluded entirely, so the total is also an undercount of the real picture. Both are true at once; that is why the number is a floor.

**The flow-only floor.** The \$1.81–2.62 trillion is gross flow, not a recoverable pot. Apply each item's own estimate of the addressable share (typically 20–70%) and the verification-addressable slice is on the order of **one-third** of the gross. Separately, **\$46–145 billion** of the total is environmental damage — leaked methane, health-sector emissions, packaging waste, the carbon of returns — that verification can make visible and priceable but does not itself turn into cash. And none of it is inflation-adjusted; the sources span 2011 to 2025.



# Methodology and sources

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**How the work was done.** Eleven sectors of the US economy were each researched against named public sources — regulatory filings, government statistics, peer-reviewed studies, and named industry surveys — across more than 160 individual source lookups. Every priced item names its source in the tables above. The organizing principle is the same as an auditor's: measure what can be measured, disclose every assumption, and refuse to invent what cannot be sourced.

**The evidence key (repeated for reference).** Measured — reported directly by a named source. Derived — a measured base times a stated assumption. Directional — order-of-magnitude only, never added to a total. Not priceable — real but with no defensible national figure, kept visible and named. Only measured and derived items enter the totals.

**Why ranges.** Single points would be false precision. Each figure is a low-to-high band that absorbs source age, assumption width, and honest uncertainty; where two credible studies disagree, the range spans them.

**The honest limits.** In the spirit of an accounting that shows its own weaknesses:

- **Gross, not takeable.** Every figure is a gross flow through a capture-shaped stage, not extractable rent. Real work lives inside these pools and stays paid; the addressable slice is very roughly one-third.
- **Mixed vintages.** Sources span 2011–2025 and are not inflation-harmonized. Some anchors are old — the auto-finance markup (2011), counterfeit components (2011), travel-agency commissions (2017–19). Range widths absorb but do not cure staleness.
- **Survey extrapolations carry weight.** The single largest item — construction late-pay — is a survey extrapolated to census construction spending; a landmark waste study anchors much of Health Care. If either method is generous, the high end moves.
- **Allocation judgment is load-bearing.** US shares of global figures, sector shares of economy-wide pools, and opacity fractions are stated assumptions, not measurements — always shown, never hidden.
- **De-duplication is only as complete as the overlaps we found.** Five clear double counts were removed; smaller partial overlaps remain, and every directional and not-priceable item is excluded — so the total double-counts a little and undercounts a lot.

- **Some of it is damage, not a transaction.** Roughly \$46–145B is environmental damage priced at social-cost benchmarks that are themselves policy-contested. Verification makes it priceable; it does not monetize it.
- **Adoption is not modeled.** Nothing here estimates uptake, willingness, resistance, or second-order effects. "Addressed" means the pool an item points at, not savings anyone will realize.
- **Stocks are kept separate from flows.** The biggest household-level harms are standing piles we refused to annualize: \$70B+ in unclaimed property, \$32.3B in at-risk heirs' property, ~\$220B in medical debt, \$424M in unmatched music royalties. None is in the headline.
- **The uncounted list is not a rounding error.** Several honest holes — capture inside electronic health records and core banking, industrial-distribution opacity, the value lost at business succession, "index-minus" spreads on small producers — are plausibly the same size as priced items in their sectors. Refusing to fabricate them biases the headline low in coverage even as the gross pools run high.

An accounting is only as honest as the holes it is willing to show. This one shows them.

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