

# Turning Depreciation into Strategy: Maximising Fleet Performance through Residual Value Management

## Introduction

In today's competitive fleet environment, managing vehicle value is just as vital as controlling fuel or maintenance costs. Residual value (RV) isn't just an accounting figure—it drives capital planning, cash flow, and fleet replacement strategies. Yet many organisations still rely on straight-line depreciation, missing the opportunity to align book value with real-world market dynamics.

The result? Unexpected losses at disposal and reduced fleet agility. This article explores how smarter depreciation strategies and maintenance alignment can unlock both financial and operational performance.

## The Depreciation lever

Depreciation can account for 40–60% of a vehicle's total cost of ownership (TCO), making it one of the most important financial levers in any fleet business. The topic spans both finance and fleet operations, yet it's often applied using outdated or simplistic models.

RV represents the estimated value of a vehicle at the end of its operational life, typically expressed as a percentage of its original purchase price. Whether you manage a small fleet of light commercial vehicles or a global network of heavy-duty trucks, accurate RV forecasts are essential to effective depreciation planning, cash flow forecasting, and risk mitigation.

Many finance departments default to straight-line depreciation, despite the fact that real-world vehicle values decline rapidly in the early years and level off later. This “front-loaded” economic depreciation creates a disconnect between book value and market reality—often resulting in painful write-downs if vehicles are replaced before accounting and market values converge. The result is reduced operational flexibility and poor financial outcomes.

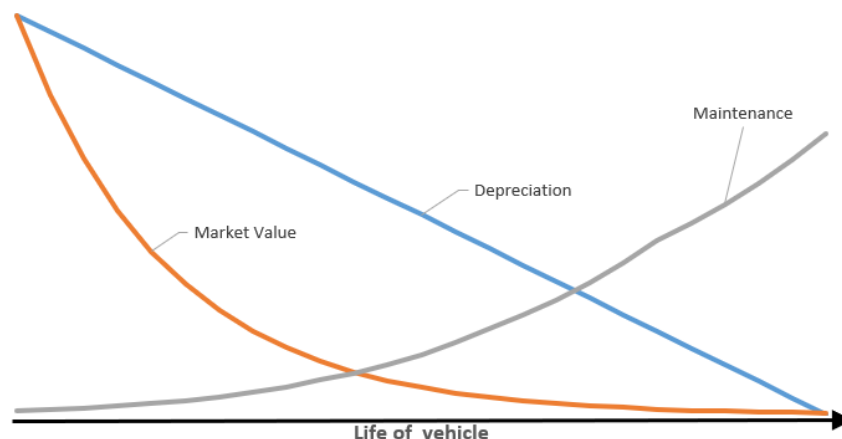


Figure: Typical depreciation curve for a vehicle's value over time (as a percentage of its original price). New vehicles lose value fastest in early years, then depreciation tapers off toward a salvage value.

## Double Declining Balance (DDB): Bridging Book and Market

The Double Declining Balance (DDB) method is an accelerated depreciation approach that better reflects the actual pattern of value erosion seen in fleet vehicles. It works by applying a fixed multiple (commonly 2x) to the straight-line depreciation rate.

How it works:

1. Calculate the straight-line rate:  $100\% \div \text{useful life}$  (e.g., 20% for a 5-year life).
2. Double it (e.g., 40%).
3. **Apply to the book value each year** (not original cost).

This front-loads depreciation expense, more closely mirroring real-world RV erosion. Critics point to the higher early higher early book expenses, but these are offset by:

- **Lower early maintenance spend**—newer vehicles require fewer major services.
- **Accelerated tax deductions**—improving early cash flow under many jurisdictions' tax codes.

For example, a ZAR 1 000 000 truck with a 5-year life and 10% salvage:

- **Straight-line:** ZAR 180 000 annual depreciation.
- **DDB year 1:** ZAR 400 000; year 2: ZAR 240 000; decreasing thereafter.

By year 3, the net book value under DDB aligns far more closely with expected resale price, reducing surprise losses at disposal.

## Other Key Drivers of Residual Value

- **Usage-Driven Depreciation:** Vehicles depreciate based on usage patterns. A one-size-fits-all depreciation schedule cannot account for vastly different mileage, terrain, and duty cycles. Tailoring depreciation to usage profiles significantly improves forecast accuracy.
- **Condition & Maintenance History:** In the absence of perfect information, buyers assume average quality and price accordingly. This concept—outlined in George Akerlof's Nobel-winning paper "The Market for Lemons"—means that even high-quality vehicles are often underpriced at resale. Clean presentation, a complete service history, and detailed maintenance records can help justify above-average resale values.
- **Market Dynamics:** Used vehicle values are influenced by macroeconomic factors including GDP growth, inflation, interest rates, and import duties. The relationship between new and used vehicle pricing is strong. Disruptions like chip shortages or OEM promotions can push used values up or down quickly.
- **Technological & Regulatory Changes:** Emissions standards, safety features (e.g., ADAS), and electrification trends may render older vehicles obsolete sooner. Additionally, OEM model cycles—usually every 5–7 years—mean that new models can erode the resale value of previous ones.
- **Liquidity & Standardisation:** High-volume, well-spec'd vehicles sell faster and at tighter bid-ask spreads. Customised or niche vehicles face steeper discounts and longer time-to-sell. In South Africa, for example, trucks with non-white cabs often fetch lower resale prices. Large fleet disposals, if poorly timed, can also flood the market and drive prices down.

### Practical Implementation Steps

- **Model Comparison:** Run parallel depreciation models (straight-line vs DDB) on historical fleet data. Compare outcomes based on resale alignment, profit/loss on disposal, and cash flow effects.
- **Data Monitoring:** Implement dashboards that track book value versus average auction price by age, mileage, and spec. Calibrate depreciation factors quarterly.
- **Policy Revision:** Instead of relying on fixed replacement intervals, base decisions on real-time thresholds such as cost/km, net book value vs resale estimates, and upcoming major service intervals.

### Conclusion

Depreciation is not just a finance function—it's a strategic decision that shapes fleet agility, cash flow, and profitability. By aligning book value with real-world trends through methods like DDB, and by tracking maintenance and resale metrics in near real time, fleet operators can move beyond compliance toward performance optimisation.

Start small: benchmark current outcomes against real resale prices. Pilot the DDB method and maintenance-triggered replacements in a specific vehicle category. With data-driven iteration, you'll improve cash flow, strengthen resale performance, and build a fleet strategy that's responsive, resilient, and ready for the future.

#FleetManagement #ResidualValue #AssetOptimization #DepreciationStrategy