

# Expense Ratio Audit — 30-Year Cheat Sheet

<p>30-YEAR WEALTH GAP</p> <p style="font-size: 2em; font-weight: bold; color: #e67e22;">\$334,814</p>	<p>INDEX FUND · 0.03% ER</p> <p style="font-size: 2em; font-weight: bold; color: white;">\$1,553,537</p> <p style="font-size: 0.8em; color: white;">at Year 30</p>	<p>ACTIVE FUND · 1.00% ER</p> <p style="font-size: 2em; font-weight: bold; color: #e67e22;">\$1,218,723</p> <p style="font-size: 0.8em; color: white;">at Year 30</p>	<p>INPUTS</p> <p style="font-size: 0.8em; color: white;">\$75,000 initial \$500/mo contrib. 8% gross / 30 yr</p>
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## THE COMPOUND FORMULA

**r\_net = r\_gross - ER**      then:     $FV = P \times (1 + r/12)^{(12t)} + PMT \times [(1 + r/12)^{(12t)} - 1] / (r/12)$

Path A: 8.00% - 0.03% = 7.97% net · Path B: 8.00% - 1.00% = 7.00% net

## STEP 1 — FIND YOUR NET EXPENSE RATIO

- Fidelity NetBenefits**

Investments > Fund Name > Fees & Expenses

Look for: **Net Expense Ratio** row (not Gross)

Gross ER shown by default. Dollar cost not displayed.
- Charles Schwab**

Accounts > Research > Fund Detail > Expenses & Fees

Look for: **Annual Expense Ratio (Net)** row

No gross-of-fees toggle. Dollar cost not displayed.
- Vanguard**

My Accounts > Holdings > Click Fund > Expense Ratio

Look for: **Expense Ratio** row (Net ER shown directly)

Annual dollar cost on balance also displayed.
- Any other platform / 401(k) provider**

Search fund ticker on Morningstar → Prospectus Net ER

## SENSITIVITY — GAP UNDER 8 SCENARIOS

Scenario	30-Year Gap
<b>Base case (8% / 0.03% vs 1.00% / 30yr)</b>	<b>\$334,814</b>
6% gross return	\$195,841
10% gross return	\$577,456
0.50% ER (vs 0.03%)	\$173,199
1.50% ER (vs 0.03%)	\$476,063
20-year horizon	\$97,360
40-year horizon	\$993,589
ICI avg active (0.66% vs 0.03%)	\$227,308
401(k) avg (0.26% vs 0.03%)	\$87,514

Python-verified. \$75K + \$500/mo base. Sources: ICI 2026, French 2008.

## STEP 2 — CALCULATE YOUR GAP

1. Record current fund's Net ER
  2. Find lower-cost alternative (same benchmark)
  3. Run: Expense Ratio Impact Calculator
- [thefinsense.io/blog/expense-ratio-impact/](https://thefinsense.io/blog/expense-ratio-impact/)
- If gap > \$50,000 → proceed to Step 3

## KEY FACTS

- 0.98% × \$75,000 = **\$735/yr** extracted (no statement line)
- ER deducted from NAV daily: 1.00% ÷ 365 = **0.00274%/day**
- \$334,814 gap = **22%** of \$1,553,537 terminal wealth
- Switch = saving **\$500/mo extra for 21 years**
- ICI 2026: index ETF avg **0.14%** vs active MF avg **0.40%**
- Morningstar 2026: only **20%** of active funds outperformed (10yr)
- French (2008): 0.67% drag held stable for **27 years**

## STEP 3 — EXECUTE THE SWITCH (15 min)

- Fidelity: **Investments** → **Exchange function**
- Schwab: **Trade** → **Exchange**
- Vanguard: **Transact** → **Exchange**
- In-plan exchange = NO taxable event in 401(k) or IRA**
- Confirm: check holdings 24-48 hrs after switch

## WHEN TO KEEP THE ACTIVE FUND

- Concentrated sector holdings where active management adds value exceeding the fee differential (Sharpe 1991 ~20% of cases).
- Compare: fund ER vs tracking error of passive sector ETF before switching.

Sources: ICI 2026 Trends in Mutual Fund Fees (ici.org, Mar 2026) · French (2008) "The Cost of Active Investing" JoF 63(4) · Sharpe (1991) "The Arithmetic of Active Management" FAJ 47(1) Morningstar Active/Passive Barometer Year-End 2025 · All FV calculations Python-verified. LUMP\_PLUS\_CONTRIBUTION formula. 8% gross, 0.03% vs 1.00% ER, 30yr unless stated.

This document is for informational purposes only and does not constitute investment advice. Past performance does not guarantee future results. Investing involves risk, including risk of loss of principal.