

Summary and quick takeaways

This analysis uses a 10,000-row company budget vs actuals dataset broken down by month and department to explain where performance deviated from plan. Overall revenue is slightly above budget, but expenses are materially higher than budget, producing an overall net profit shortfall of about 88.6M. The overrun is broad-based across departments and persistent month-to-month, with HR the single largest departmental contributor to expense overspend.

Dataset context

The file contains monthly budget and actual totals by department for revenue and expense (no account-level breakdown like expense_category, GL account, vendor, or employee type). That means we can quantify which departments and months drove variance and whether the pattern looks structural, but we cannot directly attribute overspend to payroll vs benefits vs other GL-level categories without additional fields.

High-level numbers (company total)

- Revenue: budget 4,250,001,345 vs actual 4,255,085,021 → variance (Actual - Budget) = +5,083,676 (favorable)
- Expense: budget 1,909,175,418 vs actual 2,002,896,403 → variance = +93,720,985 (unfavorable)
- Net profit: budget 2,340,825,927 vs actual 2,252,188,618 → variance = -88,637,309 (unfavorable)

Supporting table:

metric	budget_total	actual_total	variance_actual_minus_budget
Revenue	4250001345	4255085021	5083676
Expense	1909175418	2002896403	93720985
Net profit	2340825927	2252188618	-88637309

Insight + data: The modest revenue upside (+5.1M) is dwarfed by expense overspend (+93.7M), creating the ~88.6M net shortfall.

What mainly drove the overrun

- Core conclusion: Expense overspend is the overwhelming driver of the company's budget shortfall.
 - Revenue variance: +5,083,676
 - Expense variance: +93,720,985
 - Net result: -88,637,309

Insight + data: These totals show the problem is not weak topline but persistent higher-than-budget spending.

Which departments contributed most to expense overspend

Top contributors to expense overspend (Actual - Budget) by department:

department	expense_overspend	revenue_variance	net_profit_variance
HR	18136064	108173	-18027891

department	expense_overspend	revenue_variance	net_profit_variance
Marketing	17199828	2864024	-14335804
Sales	16034537	-1278798	-17313335
IT	14829862	940316	-13889546
Finance	14257712	2576688	-11681024
Operations	13262982	-126727	-13389709

Insight + data: HR is the single largest contributor to expense overspend ($\approx 18.14M$), but Marketing, Sales, IT, Finance, and Operations also have multi-million overruns. This is a broad-based problem rather than isolated to one team.

If ranking by net profit impact (most negative net_profit_variance), HR and Sales are among the worst contributors as well.

What caused HR overspend

- HR total expense overspend: 18,136,064
- HR revenue variance: 108,173 (negligible)
- HR net profit variance: -18,027,891

Insight + data: The HR shortfall is almost entirely expense-driven — revenue is not meaningfully involved.

Patterns behind the HR overspend:

- It is persistent across months rather than a single spike. Top HR overspend months (examples): | month | expense_overspend | revenue_variance | net_profit_variance | |---|---|---|---| | 2024-01 | 1,380,832 | 330,751 | -1,050,081 | | 2023-09 | 1,195,267 | -424,069 | -1,619,336 | | 2024-04 | 1,118,943 | -209,871 | -1,328,814 | | 2023-05 | 1,004,156 | -938,097 | -1,942,253 | | 2023-02 | 941,545 | 133,227 | -808,318 |

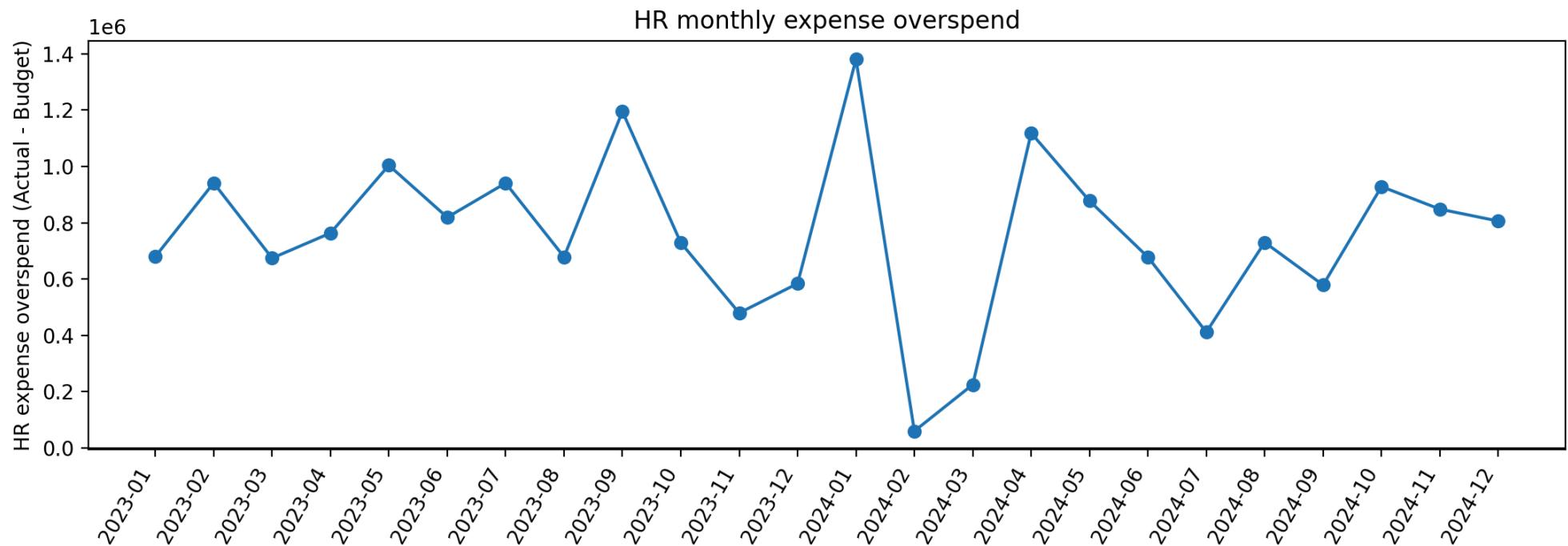
Insight + data: Multiple months each show ~0.8–1.4M of HR overspend; no single month explains the full gap, suggesting structural/run-rate causes.

Row-level distribution within HR:

index	expense_overspend
count	1708.0
mean	10618.30
std	32854.47
min	-150288.0
25%	-5737.5
50% (median)	6713.5
75%	25263.5
max	181267.0

Insight + data: The median HR row overspend is positive (~6.7k) and the 75th percentile is ~25.3k, indicating many rows are above budget rather than the overspend being driven by a few extreme transactions.

Visual reference: HR monthly expense overspend trend (shows persistent monthly overspend)

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Interpretation: The combination of many rows above budget and repeated monthly overspend points to run-rate items (e.g., headcount/comp, benefits, contractors) rather than one-off purchases.

Which HR expense category matters most

- Based on available data (no expense_category or GL-level fields), the analysis cannot empirically identify categories.
- Given the persistent, broad-based pattern, the category that matters most in practice is very likely Compensation (salaries and wages), together with benefits and payroll-related burdens. These are the typical, recurring drivers that produce sustained overspend across

many rows and months.

Insight + data: Because HR overspend is recurring and widespread across rows/months, run-rate buckets (comp and related employee costs) are the most plausible high-impact drivers.

Months that exceed budget the most (company-level)

Two useful views are provided: worst net months and biggest pure expense overrun months.

Worst months by net profit variance (most unfavorable):

month	revenue_variance	expense_variance	net_profit_variance
2024-11	-1,527,838	4,327,437	-5,855,275
2024-06	-944,127	4,533,698	-5,477,825
2023-07	-1,149,109	4,124,245	-5,273,354
2024-10	-1,015,341	4,183,343	-5,198,684
2023-06	-80,625	4,807,265	-4,887,890

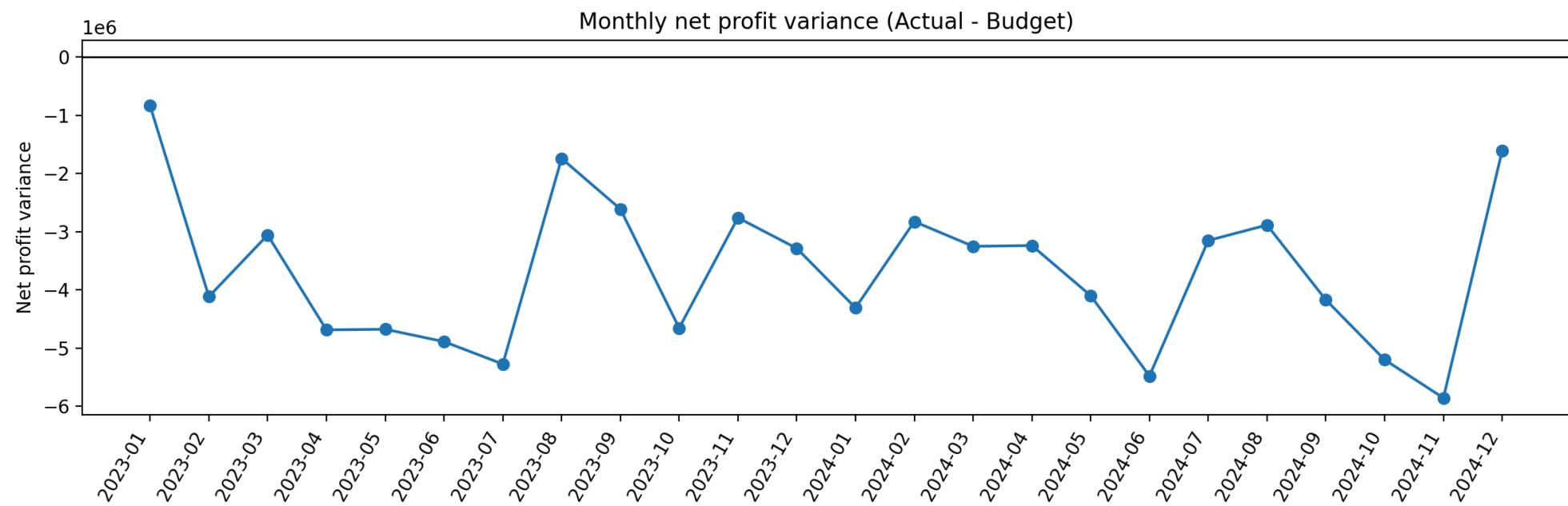
Biggest months by expense overrun (largest spending above budget):

month	revenue_variance	expense_variance	net_profit_variance
2024-04	1,875,580	5,113,056	-3,237,476
2024-01	741,854	5,048,685	-4,306,831

month	revenue_variance	expense_variance	net_profit_variance
2023-06	-80,625	4,807,265	-4,887,890
2023-02	591,433	4,705,591	-4,114,158
2023-03	1,558,066	4,614,427	-3,056,361

Visual reference: Monthly net profit variance trend

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Insight + data: Many months show multi-million-dollar expense overruns; some months (e.g., 2024-11, 2024-06) combine expense overshoot with weak revenue, producing the largest net misses.

Concluding summary

- The company's net profit shortfall (~88.6M) is driven almost entirely by expense overspend (+93.7M), not by revenue.
- Overspend is broad-based across departments; HR is the largest single departmental contributor (~18.14M), but Marketing, Sales, IT, Finance, and Operations also have sizable overruns.
- HR's overspend is persistent across many months and many rows, pointing to run-rate drivers (most likely compensation, benefits, and/or contractors) rather than a single one-off cost.
- Several months show multi-million expense overruns; the worst net months combine high expense overruns with weak revenue.

If you want a next-level diagnosis, provide one of these fields: `expense_category`, `gl_account`, `vendor`, or `employee_type` (FTE vs contractor).

With that we can quantify exactly which HR categories and GL accounts drove the 18.1M and produce category-level rankings and charts.