

# Accounting Manipulation

---

SBM Fund

Magdeburg | March 16, 2025

# Table of Contents

---

## 1. Preface

- » Goals of Analysis
- » Managerial Tools for Manipulation
- » Tools to Detect Manipulation

## 2. Manipulation of Financial Statements

## 3. Misleading Performance Metrics

*Source:*

Financial Shenanigans 4<sup>th</sup> ed. (2018) by H.M. Schilit

# Goal of Analysis

---

- » Detecting **aggressive accounting** practices by mgmt. that inflate revenue, profit margins, earnings, operating cash flows, or assets in order to camouflage a deteriorating business
- » Informed investors are **alert about the coming slowdown** in performance metrics in subsequent periods, as any growth from manipulation (e.g. accounting changes) will not recur

# Managerial Tools for Manipulation

---

## Tools to Inflate Earnings

### » Artificial revenue boost

- (1) Recording fake revenue
- (2) Recording legit revenue too soon
- (3) Recoding legit revenue at inflated amounts

### » Artificial decline in expenses

- (1) Shifting current expenses to later period
- (2) Underreporting expenses and hiding losses

### » Artificial earnings boost

- (1) One-time income/gains
- (2) Misclassification of op. as non-op. expenses & non-op. as op. income

# Managerial Tools for Manipulation

---

## Tools to Inflate Cash Flow from Operations (CFO)

- » Non-recurring CFO boost
- » Shifting financing cash inflows (CFF) to CFO
- » Shifting op. cash outflows (CFO) to cash flow from investing (CFI) or CFF or off the statement of cash flows

# Tools to Detect Manipulation

## Overview

- (1) Change in line items over time (trend analysis)
- (2) Change in financial ratios
- (3) Industry or peer comparison
- (4) MD&A section, Risk Factor section, and notes of corporate filings
- (5) Earnings call
- (6) Auditor's report
- (7) Contact company

(Yen million)	FY 2008	FY 2009	Percent Change	FY 2009	FY 2010	Percent Change
Sales	241,212	223,825	-7%	223,825	221,804	-1%
Operating profit	9,081	3,483	-62%	3,483	4,809	38%

# Tools to Detect Manipulation

---

## Major Red Flags

- » Financial statement **revision(s)** (e.g. mandated by SEC)
- » **Modified opinion** issued by current auditor and/or unscheduled **auditor change**

# 2

## Manipulation of Financial Statements

Revenue/Expense/Margin/Earnings/Op. Cash Flow Manipulation



# Revenue Manipulation

---

## Recording Fake Revenue

### » Fake receivables

» Warning signal: *Non-binding sales agreement* that waives reseller's obligation to pay in case products are not sold to end customer → no cash receipt

### » Sales with related party, strategic partner, or parent company

» Warning signal: *(Nonmonetary) barter sales* with related party as buyer → swap of goods & services is inherently suspicious, because sales is subject to the company's own estimate of the value of the exchanged goods & services

» Warning signal: Sales with *joint venture partners*

» Warning signal: Primary customer happens to be also the *company's majority owner*

# Revenue Manipulation

---

## Inflating Legit Revenue

### » Recording legit revenue too soon

- » Warning signal: Change in revenue recognition policy (mentioned in footnotes) → change to *percentage-of-completion* (POC) which depends on company's own estimates and assumptions
- » Warning signal: Switch from more conservative sell-through approach (revenue recognized when distributor sends goods to user) to more aggressive *sell-in approach* (revenue recognized when goods shipped to distributor; approach is prone to “channel stuffing”)
- » Warning signal: Change in company's *assessment of customers' ability to pay*
- » Warning signal: *Seller-provided financing* or more *extended payment terms for buyers*  
→ struggling company desperate for sales growth may decide to loosen its lending or payment terms and worry about the bad debts or receivables later
  - » Detector: check for %-change over time in cash collectively owed by customers

# Revenue Manipulation

---

## Inflating Legit Revenue [cont'd]

### » Revenue at **inflated amounts**

- » Warning signal: Recognizing *gross revenue* instead of net revenue (deducts commission fees paid to generate sales or product returns)
- » Warning signal: *Collecting cash from customers more quickly* (e.g. by offering early payment discounts)

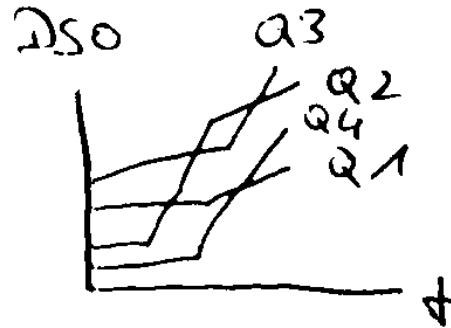
# Revenue Manipulation

---

## Detecting Fake or Inflated Revenue (from Early Recognition)

- » Days of sales outstanding (DSO) trend analysis
  - » Formula:  $DSO = \text{receivables} / \text{revenue} * \text{days in period}$  (quarter: 91.25, year: 365)
    - » Use end-of-period receivables (not average), due to potential artificial increase before cut-of date
    - » How quickly customers are paying their bills relative to how quickly revenue is recorded
  - » Distinguish total receivables by **current receivable and long-term receivables**
  - » Potential reasons for concern:
    - » **Surge in receivables that is out of line with revenue growth rate** (e.g. due to channel stuffing) raises doubt about sustainability of recent sales growth
    - » **Large decrease in DSO**, particularly following a period of rapidly rising DSO
    - » **Substantial increase in DSO**

# Revenue Manipulation



	Q1, 3/03	Q1, 3/04	Q1, 3/05	Q2, 6/03	Q2, 6/04	Q3, 9/03	Q3, 9/04	Q4, 12/03	Q4, 12/04
Accounts receivable	13.9	31.9	68.8	21.9	31.2	13.1	12.8	5.8	22.0
Revenue	68.7	76.3	89.9	59.2	83.4	41.2	64.4	21.9	29.6
DSO	18	38	70	34	34	29	18	24	68

# Revenue Manipulation

---

## Real-World Case

### **Seller-Provided Financing**

Consider the case of Signet Jewelers, owner of a host of jewelry retailers including Kay, Zales, Jared, and H. Samuel. In fiscal 2015, *61 percent* of sales in the company's sterling segment were made using Signet's in-house customer financing. This was a big step up from *58 percent* credit participation a year earlier and from the low-to-mid *50 percent* range throughout the previous decade, boosting sales by lending to customers that may not be able to pay back their loans.

# Expense Manipulation

---

## Shifting Current Expenses to Later Period

- » *Improperly* capitalizing normal op. expenses or *excessively* capitalizing permissible op. expenses
  - » Some operating expenses produce near-term benefits and must be expensed immediately (e.g. marketing costs)
  - » Warning signal: Sudden, significant *change in capitalization/expensing practices*
  - » Warning signal: Unexpected increase in capital expenditures (cash outflow from investing, neg. CFI), contrary to company's original guidance and declining market conditions
  - » Warning signal: Unwarranted *improvements in profit margins*
  - » Warning signal: Surge in *unusual asset accounts*, particularly ones that involve related parties

# Expense Manipulation

---

## Shifting Current Expenses to Later Period [cont'd]

- » **Keeping costs on the balance sheet** instead of turning them into expenses
  - » Warning signal: *Extending depreciation & amortization period* → arbitrarily increasing the portion assigned to the residual value
  - » Warning signal: *No write off capitalized assets with impaired value* before the expected benefit was received → unexpected inventory buildup → companies that announce big *restructuring charges* are often trying to “clean house” after failing to write off impaired assets appropriately in earlier period
  - » Warning signal: *Decline in bad debt expense* (for uncollectible customer receivables) or *loan loss expense* (for bad loans) → lead to *inadequate allowance for doubtful accounts and loan loss reserve* (reserves = expense accruals)
  - » Warning signal: *No impairment losses during market downturns*
- » **Caution: Compliance with new accounting rules** promulgated by the standard setters can legitimately boost company's performance



# Expense Manipulation

---

## Underreported Expenses & Hiding of Losses

- » Underreported expenses related to purchases (COGS)
  - » Warning signal: *Paying vendors more slowly* → lower COGS & higher payables
  - » Warning signal: *Unusual large vendor credits or rebates* for company → lower COGS
  - » Warning signal: *Off-balance sheet purchase commitments* (liab.) which will be expensed later (e.g. long-term real estate rental)
  
- » Underreported expenses related to reserves
  - » Warning signal: *Decline in reserve expenses* and thus liability reserve (= exp. accrual)
  - » Warning signal: *Releasing reserves* from previous charges into current income by reducing related reserve expenses
  - » Warning signal: *Changes in the pension reserve assumptions* (e.g. measurement date)
  - » Warning signal: *Outsized pension income* (when expected gains from investing pension plan assets > annual costs of running the pension plan)

# Expense Manipulation

---

## Detecting Shift in Current Expenses to Later Period

- » Excessive/improper capitalization of op. expenses
  - » Monitor trends in expenses, profit margins, earnings, CFO, capex (CFI), and generic/soft asset accounts (e.g. “prepaid expenses” or “other assets”)
  - » Look for change in capitalization policy (e.g. beginning to capitalize other op. costs)
- » Low D&A costs
  - » Check footnotes or earnings calls for changes in assumptions about of capitalized assets’ residual value & length of its depreciable/amortizable lives

# Expense Manipulation

---

## Detecting Shift in Current Expenses to Later Period

» Lack of write-offs:

- » Monitor company's **obsolescence expense** and the related **inventory reserve** and whether they are in line with the current and expected revenue growth of the business (or due to margin pressure = bad)
- » Determine whether the growth strategy had been planned (e.g. **MD&A section**) before the inventory buildup
- » Monitor **restructuring charges**
- » Days of sales of inventory (**DSI**) trend analysis
  - » Formula:  $DSI = \text{inventory} / \text{COGS} * \text{days in period}$  (quarter: 91.25, year: 365)
  - » Use end-of-period inventory (not average), due to potential artificial decrease before cut-of date
  - » How long a company holds its inventory before selling it

# Expense Manipulation

---

## Detecting Shift in Current Expenses to Later Period

- » Lack of write-offs [cont'd]:
  - » Under normal business conditions:
    - » Determine whether **bad debt expense** (from bad AR) and **allowance for doubtful accounts** (kept at similar % of gross receivables as in previous period) grow at the rate of gross receivables
    - » Monitor **loan loss expense** (from bad loans) and **loan loss reserve** (kept at similar % of nonaccrual loans as in previous quarter)

# Expense Manipulation

---

## Detecting Underreported Expenses & Hiding of Losses

- » Underreported purchase commitments:
  - » Monitor **COGS** and **payables**
  - » Days of payable outstanding (**DPO**) trend analysis
    - » Formula:  $DPO = \text{payables} / \text{COGS} * \text{days in period}$  (quarter: 91.25, year: 365)
    - » Use end-of-period payables (not average), due to potential artificial decrease before cut-of date
    - » How long it takes a company to pay its suppliers for goods & services purchased on credit
  - » Read **footnote** disclosures and **MD&A** section on...
    - » Payables: unusually large vendor credits/rebates and significant related-party transactions
    - » Off-balance sheet liabilities
  - » Be alert when cash flow from financing (CFF) section includes **financing of payables** (so-called vendor financing arrangements) categorized as short-term debt instead of operating outflow

# Expense Manipulation

---

## Detecting Underreported Expenses & Hiding of Losses

### » Underreported liability reserves:

- » Monitor generic liability account for reserves called “**other current liabilities**” or “**accrued expenses**” (often discussed in a footnote) for any percentage decline relative to revenue
  - » Pension expense typically grouped with other employee salary costs in COGS or SG&A
- » Be alert about **changes in pension accounting assumptions** mentioned in footnotes

# Expense Manipulation

## Real-World Case

### Excessive Capitalization of Expenses

In 2000, when WorldCom began capitalizing billions in line costs, it clearly continued paying the money out, although the income statement reported fewer expenses. A careful reading of the statement of cash flows would have flashed a bright light on the *32 percent jump in capital expenditures* that made no sense during a technological slowdown and *operating cash flows contracting by 30 percent*.

(\$ millions)	1999	2000
Reported cash flow from operations	11,005	7,666
Subtract: Capital expenditures (capex)	(8,716)	(11,484)
Free cash flow	2,289	(3,818)

# Earnings Manipulation

---

## Misclassifying Non-Op. as Op. Income/Gains

- » Goal: improve *operating* income
- » Recording as **recurring revenue source**
  - » Warning signal: Recording *one-time transactions as recurring revenue stream* (e.g. business sale)
  - » Warning signal: Recording *deferred gains from past non-op. transactions* as revenue
- » **Reducing net op. expenses**
  - » Warning signal: Non-op. (non-recurring) income/gains *bundled in op. (recurring) expense line items* instead of as non-op. expense



# Earnings Manipulation

---

## Misclassifying Op. as Non-Op. Losses

- » Goal: improve *operating* income
- » **One-time write-offs** of op. costs
  - » Warning signal: *One-time charge to write off inventory, plant, or equipment* → shifts related COGS or depreciation costs out of the operating section of the income statement
  - » Warning signal: Struggling companies bundling normal op. expenses into *constant restructuring charges*
  - » Warning signal: *Shift losses to discontinued operations*

# Earnings Manipulation

## Detecting Misclassification

- » Monitor **P&L line items' rate of change** to detect source for (sudden) large changes and thus growth rate differences in income line items and profit margins

(\$ millions, except %)	1998 Reported	1999 Reported	% Change
Revenue	81,667	87,548	7.2%
Cost of goods and services	(50,795)	(55,619)	9.5%
Gross profit	30,872	31,929	3.4%
Selling, general, and administrative expenses	(16,662)	(14,729)	<b>(11.6%)</b>
Research and development	(5,046)	(5,273)	4.5%
Operating income	9,164	11,927	30.2%
Nonoperating expenses	(124)	(170)	
Net income before taxes (EBT)	9,040	11,757	30.0%
Income taxes	(2,712)	(4,045)	
Net income	6,328	7,712	21.9%

# Earnings Manipulation

---

## Real-World Case

### Shift Loss to Discontinued Operation

Sabre had increased the historical allocation of costs to the Travelocity segment after it was designated as a discontinued operation, leaving the continued business segments with lower expenses and higher profits. Following the divestiture, Sabre's reported operating expenses increased back to the normal level.

Division A: \$100,00 income; Division B: \$250,000 income; Division C: \$400,000 loss. The company would report a \$50,000 net loss – unless it had decided to put division C up for sale at the beginning of the period and account for it as a “discontinued operation.” In so doing, that entire \$400,000 loss would be moved below the line and most likely be ignored by investors.

# Cash Flow from Operations (CFO) Manipulation

---

- » FCF is not affected by assigning outflows from CFO to CFI or inflows from CFF to CFO → use FCF instead of CFO for financial analysis

## Non-Recurring CFO Boost

- » Inflating CFO by aggressively managing working capital
  - » Warning signal: *Collecting from customers more quickly* (rev. ↑) by offering discounts to induce early payments
  - » Warning signal: *Paying vendors more slowly* (COGS ↓)
  - » Warning signal: *Purchasing less inventory* (COGS ↓) provides an unsustainable CFO boost

# Cash Flow from Operations (CFO) Manipulation

---

## Non-Recurring CFO Boost [cont'd]

- » Inflating CFO by **shifting financing cash inflows to CFO**
  - » Warning signal: Cash received from *selling receivables*, but the credit risk of collection loss still remains with the seller (recourse agreement) and should therefore be viewed as a form of borrowing instead (classified as financing inflow) → lowers DSO → add back sold receivables that remain outstanding at period-end for all periods
- » Inflating CFO by **shifting operating cash outflows to CFI or CFF**
  - » Warning signal: Excessively/improperly *capitalizing normal op. expenses* as capital assets (e.g. inventory purchase as capex) → places these expenditures in CFI rather than CFO

# CFO Manipulation

---

## Detecting CFO Manipulation

- » “Liquidity and Capital Resources” in the MD&A section and “supplemental cash flow information” after cash flow statement provide insights on cash flow drivers
- » Look for large positive swings in CFO (followed by decline) or sudden changes in receivables/payables/inventory relative to sales/GOGS and thus in DSO/DPO/DSI
- » Days of sales outstanding (DSO) trend analysis
  - » Collecting from customers more quickly lowers DSO
- » Days of payable outstanding (DPO) trend analysis
  - » Paying vendors more slowly increases DPO
- » Days of sales of inventory (DSI) trend analysis
  - » Purchasing less inventory lowers DSI and should be viewed as non-recurring due to a higher investing requirement from the lack of inventory in the following period(s)

# CFO Manipulation

---

## Detecting CFO Manipulation

- » Look for key words in financial statements related to receivables sold (e.g. **factoring** or **securitization**)
  - » While most of the text may be similar from period to period, look carefully for any change in the verbiage about the company's risk factors in "**Risk Factor**" section of corporate filings (such as details of (non)recourse agreements), using word processing software that has *word compare* or *blackline* functionality (only significant/material changes require new disclosure, so anything new can be considered a big deal)
- » Excessive/improper capitalization of op. expenses
  - » Monitor **trends in expenses, profit margins, earnings, CFO, capex (CFI), and generic/soft asset accounts** (e.g. "prepaid expenses" or "other assets")
  - » Look for **change in capitalization policy** (e.g. beginning to capitalize other op. costs)

# CFO Manipulation

---

## Real-World Case

### Aggressive Working Capital Actions

Chinese telecom equipment manufacturer UTStarcom reported markedly improved CFO in early 2008. After a dismal 2007, in which it logged four consecutive quarters of negative CFO, for a total cash burn of \$218 million, the company suddenly reported positive cash flow of \$97 million in March 2008. Investors could have readily noticed that the cash flow turnaround resulted from a variety of particularly aggressive working capital actions. A quick peek at the balance sheet revealed a *\$65 million drop in accounts receivable* and a *\$66 million increase in accounts payable*.



# CFO Manipulation

## Real-World Case

### Aggressive Working Capital Actions

A quick review of Home Depot's CFO in 2001 shows that improvements in accounts payable and inventory were the primary drivers of CFO growth. Home Depot had successfully stretched out accounts payable to 34 days from 22 the year earlier.

Home Depot Statement of Cash Flows, 2000–2002

(\$ millions)	Fiscal Year		
	2000	2001	2002
Net earnings	2,581	3,044	3,664
Depreciation and amortization	601	764	903
Increase in receivables, net	(246)	(119)	(38)
<b>Increase in merchandise inventories</b>	<b>(1,075)</b>	<b>(166)</b>	<b>(1,592)</b>
<b>Increase in accounts payable and accrued liabilities</b>	<b>268</b>	<b>1,878</b>	<b>1,394</b>
Increase in deferred revenue	486	200	147
Increase in income taxes payable	151	272	83
Increase (decrease) in deferred income taxes	108	(6)	173
Other	(78)	96	68
<b>Net cash provided by operations</b>	<b>2,796</b>	<b>5,963</b>	<b>4,802</b>

# Misleading Performance Metrics

Misleading Earnings/Cash Flow/Balance Sheet Metrics

# Misleading Performance Metrics

---

## Non-GAAP (“Pro-Forma”) Key Metrics

Warren Buffet has long poked fun at management teams that create dishonest pro forma metrics. He memorably compared this practice to an archer who shoots an arrow into a blank canvas and then draws a bull’s-eye around the implanted arrow.



Be cautious about new company-created non-GAAP metrics. Varying definitions of these metrics abound. To compare metric at different companies on an apples-to-apples basis, investors would have to decide on which version of metric to use and adjust other companies’ calculations.

# Misleading Earnings Metrics

---

- » Metrics that ignoring accruals for expenses such as bad debts, impairments and warranty expenses will give you an illusory sense of profitability

## EBITDA Variations

- » EBITDA is **outside** the realm of **GAAP**
- » Misleading profitability metric for **capital-intensive businesses** b/c D&A excluded
- » Misleading non-GAAP EBITDA variations:
  - » **Adj. EBITDA** → adjustments are made at management's discretion
  - » **EBITDA less one-time items** → pretend that recurring charges are one-time in nature
  - » **Cash EBITDA** → abused as CF metric by adding back non-cash expenses (e.g. D&A) **BUT** ignoring working capital charges

EBITDA = earnings before interest, taxes, depreciation and amortization

# Misleading Earnings Metrics

---

## Return on Invested Capital (ROIC)

» EBITDA is **outside** the realm of **GAAP**

EBITDA = earnings before interest, taxes, depreciation and amortization

# Misleading Cash Flow Metrics

---

## Free Cash Flow (FCF)

- » FCF is **outside** the realm of **GAAP**
- » Management has quite a bit of discretion in what investments in Capex to allocate to growth or maintenance
  - » *Growth capex* = capital spent on existing facilities or new ones to expand business
  - » *Maintenance capex* = capital spent on existing facilities that do not increase capacity
- » Some firms exclude growth capex from FCF calculation → hence the more the company classifies as maintenance, the higher FCF

# Misleading Balance Sheet Metrics

---

## Distorted Receivable-Based Metrics

- » Used for **hiding revenue problems**
- » Companies may seek to **distort receivables** numbers
  - » Warning signal: *Selling receivables* → *Hint*: add back sold receivables that remain outstanding at quarter-end to non-GAAP DSO metric for all periods
  - » Warning signal: *Reclassify receivables as bank notes receivables* (not as closely monitored by investors) → *Hint*: watch for increase in receivables other than accounts receivable
  - » Warning signal: *Changing calculation of non-GAAP DSO metric* (e.g. from using ending receivables balance to average balance) → *Hint*: use end-of-period numbers

# Misleading Balance Sheet Metrics

---

## Distorted Inventory-Based Metrics

- » Used for **hiding profitability problems**
  - » Warning signal: *Selling inventory* to a third party *but agreeing to repurchase it*
  - » Warning signal: *Re-classified inventory* (e.g. as “other assets”) → Hint: check footnotes and include all inventory in non-GAAP DSI metric
- » Unexpected rise in inventory is usually seen as a sign of upcoming margin pressure, through:
  - » Falling product demand
  - » Markdowns (reduction in selling price of inventory)
  - » Write-offs of obsolete inventory



# Misleading Balance Sheet Metrics

---

## Distorted Financial Asset-Based Metrics

- » Used for **hiding problems of upcoming impairments**
  - » Warning signal: *Grouping/adding reserve accounts* to distract from *shrinking reserves*

## Distorted Debt-Based Metrics

- » Used for **hiding liquidity problems**
  - » Warning signal: Issuance of *new float equity to pay off debt* → *Hint*: check near-term debt obligations

# Thank you for listening.

If this sounded interesting to you, join us at SBM!



# About the Presenter

---



**Alexander Neumann** plays an active role in managing the SBM fund. At present, he completes his master's degree in finance and enjoys meeting like-minded people who share his passion for investing.

For his master's thesis, he is conducting an empirical comparison of the statistical accuracy of dividend-, free cash flow-, and earnings-based equity valuation models for mid-to-large cap public stocks, traded on German stock exchanges.

He has also passed the CFA level 2 exam. Current GPA: 1.5/1.0