Supply Chain Finance

MIT Center for Transportation & Logistics

Connecting Supply Chain Transactions to the Financial Statements

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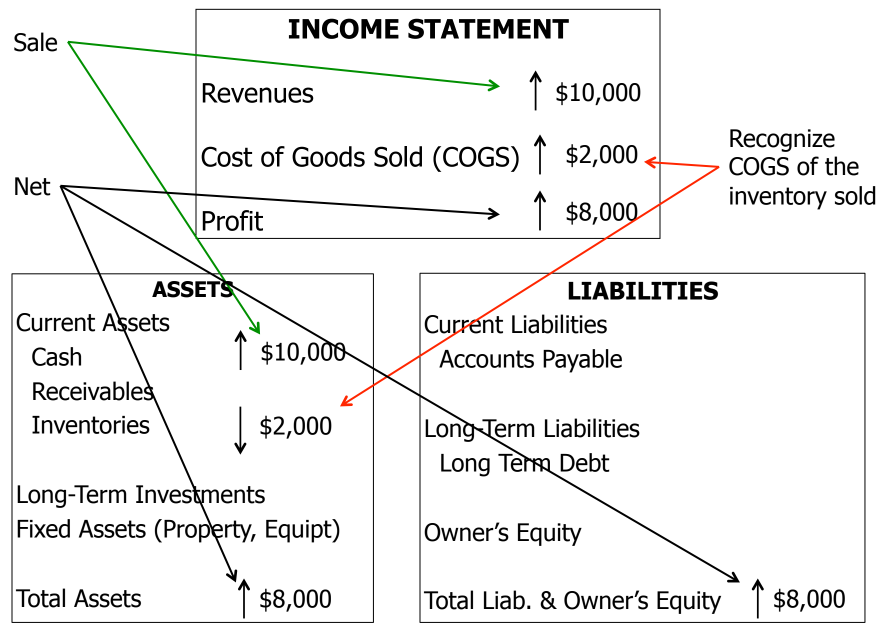
- So far we have discussed two important financial statements – the income statement and balance sheet
- Additionally we have introduced financial, tax and managerial accounting, core accounting principles, and inventory valuation methods (LIFO and FIFO)
- These set the foundation for the next step – identifying the specific balance sheet and income statement impact of transactions that involve the supply chain.
  - Let's start with one fundamental transaction that involves the supply chain: Sale of finished goods

Ex.: Sale of Finished Goods

- Case: A company sells a printer system for $10,000 cash; the product cost $2,000 to produce
- What is the impact on the income statement & balance sheet?
  - Revenue would increase by $10,000
  - Cost would increase by $2,000
  - Net income would increase by $8,000
  - Cash (Current Asset) would increase by $10,000
  - Inventory (Current Asset) would decrease by $2,000
  - Retained Earnings would increase by $8,000

Note: This is a gross simplification of the accounting transactions which are not complete; this is for general illustration purposes only.



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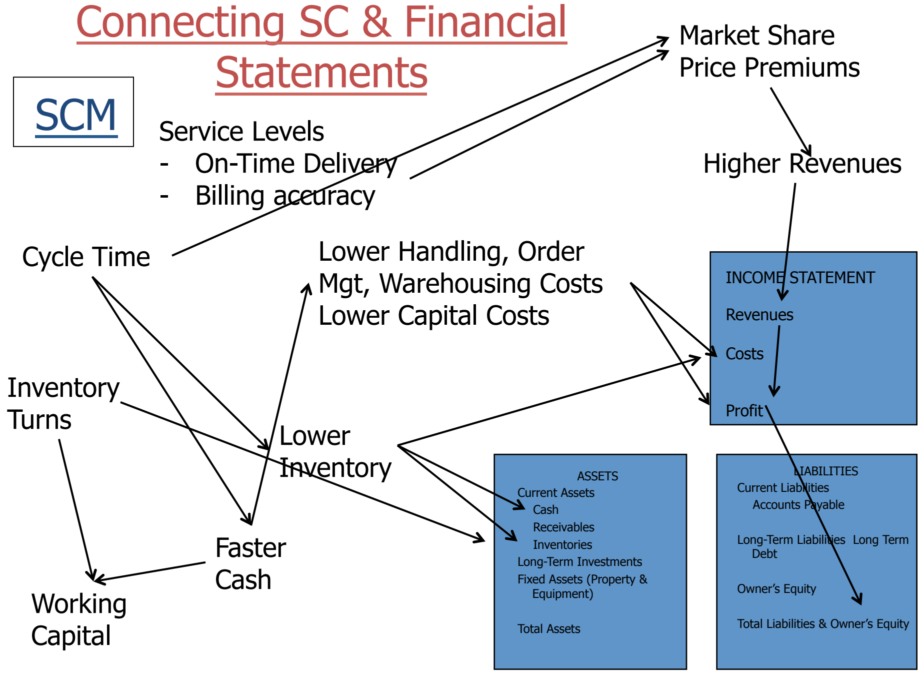
- What about other transactions or activities that are not sales?
- Such as the impact of operational performance changes:
  - Improving cycle time
  - Faster service
  - More accurate delivery
  - Increasing inventory turns

SCM Hits the Financial Reports

SCM Impact	Linkage	Linkage	Financial Reports
Order Cycle Time	Faster Cash Cycle		Cash, Accts Receivable
	Lower Invty Req't	Lower Capital Costs	Costs
		Lower Assets	Current Assets
	Less Handling	Lower Warehouse Costs	COGS
	Competitive Advtg.	Higher Market Share	Revenue
		Price Premiums	Revenue
On-Time Orders	Higher Cust. Sat.	Competitive Advantage	Revenue
	Reduce Delays	Lower Transportation Costs	COGS
As-ordered Orders	Higher Fill Rate	Faster Cash (no deductions)	Cash, Accts Receivable
Accurate Billing	Red Invoice Errors	Lower Order Mgt. Costs	Costs
Inventory Turns	Lower Assets		Assets
	Lower Invty Req't	Lower Capital Costs	Costs, Cash
		Lower Assets	Current Assets
	Less Handling	Lower Warehouse Costs	COGS
	Fewer DCs Req'd	Lower PPE	LT Assets

CTL.SC2x - Supply Chain Design Lesson: SUPPLY CHAIN FINANCE

Connecting SC & Financial Statements



CTL.SC2x - Supply Chain Design Lesson: SUPPLY CHAIN FINANCE

Beware: the path is dangerous

- Accounting enables reporting…but also bad behavior
- There are many recent scandals where accounting misdeeds played a central role in damaging and destroying companies and individuals in the companies
- Recent core accounting problems:
  - Overstating profits by understating costs
  - Forcing downstream customers to take inventory in order to declare sales increases
  - Delaying recognition of transactions including purchases
  - Faulty revenue recognition
  - Counting operational costs as capital costs

Recent Accounting Scandals

- **Toshiba:** July 2015, Overstated profits by ¥152B ($1.22B) since 2008, by understating long-term project costs, postponing costs and accelerating revenues (no direct orders to cheat, said to be implicit through culture)
- **Diageo:** July 2015, Channel-stuffing! SEC inquiry whether Diageo shipped excess inventory to distributors beyond demand, measuring distributor sales rather than 'depletions' (sales to customers)
- **Tesco:** October 2014, Overstated profits by £263M ($420M), by delaying recognition of payables and accelerating recognition of sales
- **Enron**: high-risk accounting practices; revenue recognition (merchant versus agent model; mark-to-market, NPV of LT contract value, etc.)
- **Arthur Andersen**: questionable audits (e.g. Enron) ruined company name
- **Bristol-Myers Squibb**: improper booking of sales (e.g. 'channel stuffing')
- **MCI**: booked line costs as capital instead of expense
- **Overstock.com**: government scrutiny over accounting for expenses

Key Points

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- One can connect supply chain transactions directly to the income statement and the balance sheet
- These enable the supply chain leader to communicate with company leaders in the language of business – finance
- There is great power behind accounting – enabling accurate reporting, informed decision making….but also the potential for business- and life-changing consequences for failing to follow proper accounting principles and procedures

CTL.SC2x -Supply Chain Design

Questions, Comments, Suggestions? Use the Discussion…..

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Sources, Image & Reference Information

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