



The Financial-Supply Chain Management CONNECTION

This is the first in a series of three articles by Dr. Stephen G. Timme, President of FinListics® Solutions and CFOEd,™ and Adjunct Professor at the Georgia Institute of Technology in the School of Industrial and Systems Engineering.

Introduction

Supply chain management (SCM) has the potential to improve many companies' financial performance. Yet, relatively few organizations utilize SCM as a tool to drive financial performance and, ultimately, increase their cash flow.

There are three common impediments to companies making the financial-SCM connection. First, many executives view SCM as a tactical backroom cost-center activity, and not a key tool for managing overall financial performance. Fortunately, this view appears to be changing.

Second, most SCM professionals do not speak the language of finance. Therefore, they lack the ability to link SCM to key financial metrics and articulate how it drives financial performance. Third, SCM drives performance throughout the enterprise. Strategic and tactical SCM decisions cannot be made in a vacuum. Yet, most SCM scorecards and analysis of SCM initiatives are incomplete since they're not from an enterprise-wide perspective.

This article addresses the second of these three impediments by providing an introduction to the linkages between supply chain management and financial performance. It helps SCM professionals become more fluent in the language of finance and how to better understand the impact SCM has on key financial metrics.

The Financial-SCM Connection

Supply chain management has the potential to improve the three key drivers of financial performance:

- **Growth**—annual growth in revenue
- **Profitability**—percentage of profits after deducting from revenue total operating expenses
- **Capital Utilization**—dollars of revenue generated relative to dollars invested in assets like inventory, accounts receivable, warehouses, fleets, manufacturing, and stores

The SCM-related financial metrics underlying these three key drivers are shown in Table 1. These metrics are managed by executives and closely watched by investors. Table 1 provides definitions of the metrics, examples

TABLE 1

Financial Metric [Calculation]	Description	Examples of Supply Chain Management Connection	Manufacturing	Wholesale Distribution	Retail
Revenue Growth [Change in Annual Revenue ÷ Last Year's Revenue]	Revenue Growth measures the year-over-year percentage change in revenue.	<ul style="list-style-type: none"> • Fill rates • Forecasting • Customer service • Lead times 	2.4%	1.0%	4.0%
Profitability					
COGS as a Percentage of Revenue [COGS ÷ Revenue]	Cost of Goods Sold as a Percentage of Revenue measures the percentage of revenue absorbed by COGS.	<ul style="list-style-type: none"> • Transportation mgt. • Warehouse mgt. • Inventory mgt. • Network design 	66.1%	77.3%	66.2%
SG&A as a Percentage of Revenue [SG&A ÷ Revenue]	Selling, General, & Administrative as a Percentage of Revenue measures the percentage of revenue absorbed by SG&A.	<ul style="list-style-type: none"> • Customer service • Supply chain administration 	21.2%	20.7%	25.4%
Capital Utilization					
Days in Inventory [Inventory ÷ (Cost of Goods Sold ÷ 365 Days)]	Days in Inventory measures the number of days of operations held in inventory.	<ul style="list-style-type: none"> • Transportation mgt. • Warehouse mgt. • Network design • Inventory visibility 	60 Days	64 Days	94 Days
Days Sales Outstanding (DSO) [Accounts Receivable ÷ (Revenue ÷ 365 Days)]	Days Sales Outstanding measures the number of days on average that a company takes to collect credit sales from its customers.	<ul style="list-style-type: none"> • Shipment integrity • Fill rate • Proof of delivery • Invoicing accuracy 	35 Days	36 Days	8 Days
Days Purchases Outstanding (DPO) [Accounts Payable ÷ (Cost of Goods Sold ÷ 365 Days)]	Days Purchases Outstanding measures the number of days on average that a company takes to pay its vendors and suppliers.	<ul style="list-style-type: none"> • Procurement terms • Payment practices 	61 Days	75 Days	59 Days
Fixed Asset Utilization [Revenue ÷ Net Property, Plant, & Equipment]	Fixed Asset Utilization measures the amount of revenue generated per unit of currency (such as the US dollar) invested PP&E like warehouses, fleets, manufacturing facilities, and stores.	<ul style="list-style-type: none"> • Warehouse management • Network design • Transportation management 	3.61	17.31	6.22

of the SCM connection, and average values for manufacturing, wholesale distribution, and retail for 2002.

Table 1 highlights why executives are always seeking new solutions to reduce costs of goods sold (a key driver of profitability) since it absorbs approximately two-thirds of revenues for manufacturers and retailers, and over three-fourths of revenues for wholesale distributors. The results also show why many executives are looking for new solutions for managing inventory (a key driver of capital utilization) since manufacturers and distributors—on average—are financing two months of inventory, whereas retailers hold three months of merchandise.

Furthermore, the results show why executives are seeking new solutions to improve revenue growth. Revenue growth for most companies has dropped compared to historical growth. This change is a result of a downturn in the economy, but also shifts in other fundamental factors like heightened competition and increasing customer demands.

Benchmarks for other industries are available in the FinListics Industry Analyzer located at www.clm1.org under Downloads.

Table 1 shows that SCM impacts the key financial metrics in many ways, and, as a result, is receiving increasing interest by executives.

Making the Financial-Supply Chain Management Connection

The mapping in Table 1 is a useful guide for identifying SCM areas to explore in order to improve financial performance. The first step in making the connection is to benchmark a company's key financial metrics. For illustrative purposes, Table 2 benchmarks a hypothetical retailer "Stuff to Go" with \$1,000 million in revenue

TABLE 2

Financial Metric	Stuff to Go	Industry Average	1st-Year Cash Flow Benefit	Calculation of 1st-Year Cash Flow Benefit
COGS as % of Revenue	68.0%	66.2%	\$18 million	Change in % COGS (68.0% – 66.2%) x \$1,000 million Revenue = \$18.0 million Lower Cost of Goods Sold
Days in Inventory	110 Days	94 Days	\$32 million	14.5% Reduction in Days in Inventory ((110 – 94)/110) x \$200 million in Inventory = \$29 million Reduction in Inventory 10.0% Annual Non-Capital Inventory Carrying Charge x \$29 million Change in Inventory = \$3 million Reduction in Non-Capital Inventory Carrying Charge

and \$200 million in inventory to the retail industry averages shown in Table 1 for 1) cost of goods sold as a percentage of revenue, and 2) days in inventory.

The results show that the 1st-year cash flow benefits of closing the gaps in the cost of goods sold as a percentage of revenue and days in inventory are \$18 million and \$32 million respectively.

Gaps in financial metrics typically are driven in part by unique company factors, like sales mix and pricing strategies. They are, however, often a reflection of gaps in business processes. Improvements in SCM business processes generally cannot completely close financial performance gaps. But for many companies, it can make a significant contribution.

The values of the gaps are an effective means of communicating the need for change. For example, communicating that closing Stuff to Go's 16-day gap in days in inventory is worth \$32 million (cash that could be used to fund new stores) is likely to generate greater motivation for change compared to the often-employed strategy of simply announcing the need to reduce days in inventory.

Using the financial-SCM mapping in Table 1 as a guide, Stuff to Go would likely start examining areas like transportation, warehouse management, and procurement practices as a means of improving cost of goods sold as a percentage of revenue; and forecasting and inventory visibility to lower days in inventory. The potential cash flow benefits from improvements in these areas could provide the impetus for implementing new SCM solutions.

Summary

As you can see, SCM is a powerful driver of financial performance. In the next article in this series, we'll conduct a more detailed case study of benchmarking a company's financial performance, and linking it to SCM business processes and solutions.



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