

SupplyChainDigest™

Inventory Performance by Industry Sector

Supply Chain Digest recently took a look at inventory performance by specific industry sectors. The data was based on the annual working capital report from CFO magazine and Hackett-REL in analyzing working capital efficiency, based on filings by public companies.

Supply Chain Digest looked across the last three years of this data, focusing specifically on the Days Inventory Outstanding (DIO) component of the overall working capital analysis. DIO is basically the reverse of the "inventory turns" number that is probably more commonly used by supply chain professionals.

DIO is equal to inventory levels for the period divided by the average sales per day for the period. So, a company with average sales of \$10 million per day and an average inventory of \$200 million has a DIO of 20.

The CFO data goes back further, but unfortunately the industry groupings have changed quite a bit over the years, so that really only the last three years are good for industry sector analysis.

Overall U.S. Inventory Levels Declining

In the U.S. overall, there has been a lot of progress in reducing inventory levels relative to sales. We don't know the numbers for Western Europe or Japan, but we would expect them to be similar.

In January 1992, the monthly inventory-to-sales ratio in the U.S. overall stood at 1.56 – that is, for the month of January, there were 1.56 dollars of inventory for every dollar of goods sold.

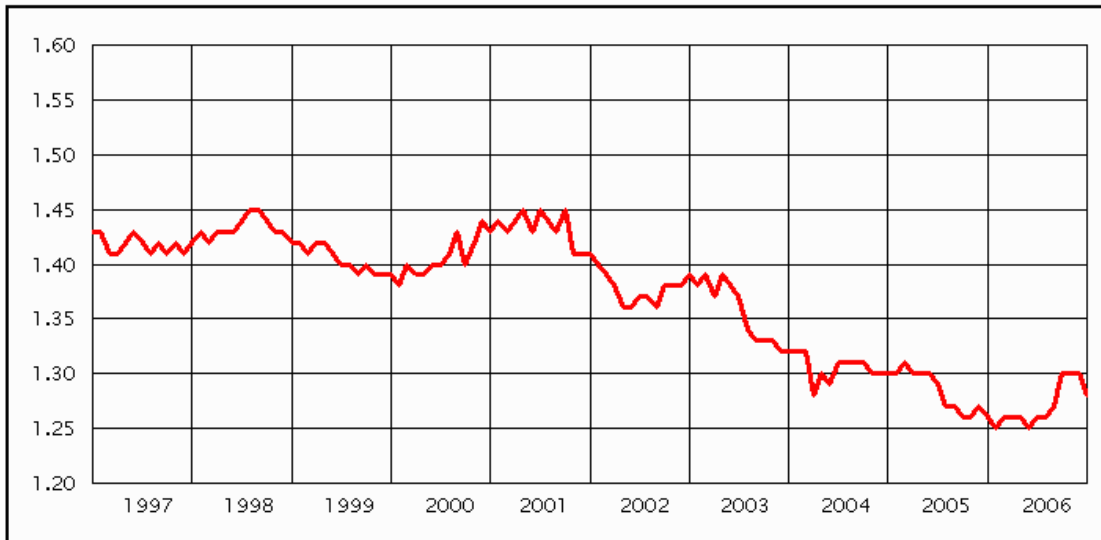
You can see the subsequent progress:

- January, 1992: 1.56
- January, 1995: 1.45
- January, 1998: 1.43
- January, 2001: 1.44
- January, 2004: 1.32
- July, 2006: 1.26

On the next page, you'll find a chart of these aggregate numbers from 1997 through 2006.

Total Business Inventories/Sales Ratios: 1997 to 2006

(Data adjusted for seasonal, holiday and trading-day differences but not for price changes)



Performance by Sector

Below are listed the three-year performances of several dozen industry sectors in terms of DIO. In a couple of cases, we list sectors for which only the last two years of data is available.

Blue shading for the sector name indicates improved DIO performance from 2002 to 2005 (2006 data won't be available for awhile). Red indicates worsening performance (higher DIO), while orange means basically flat.

	2005	2004	2003
SECTOR	DIO	DIO	DIO
AEROSPACE & DEFENSE	47	42	42
Example companies: Lockheed Martin, Boeing, Northrup Grumman, Goodrich			
AUTO PARTS	30	33	31
Example companies: Visteon, Lear, Johnson Controls			

	2005	2004	2003
SECTOR	DIO	DIO	DIO
BIOTECHNOLOGY	38	37	45
Example companies: Biogen, Genzyme, Monsanto			
BUILDING MATERIALS	37	38	40
Example companies: Owens Corning, USG, LAFARGE			
CHEMICALS, COMMODITY	43	48	59
Example companies: Lyondell, Arch Chemicals, DuPont			
CHEMICALS, SPECIALITY	40	43	47
Example companies: Eastman Chemical, Praxair, IFF			
CLOTHING & FABRIC	47	54	55
Example companies: Liz Claiborn, Kellwood, Warnaco			
CONTAINERS & PACKAGING	40	44	NA
Example companies: Crown, Smurfit Stone, PACTIV, Owens Illinois			
DISTRIBUTORS	38	37	34
Brightpoint, Ingram Micro, Anixter			
DRUG RETAILERS AND WHOLESALERS	36	39	48
Example companies: Cardinal Health, CVS, Walgreens			
ELECTRICAL COMPONENTS & EQUIPMENT	46	50	NA
Flextronics, Selectron, Lincoln Electric			
FOOD PRODUCERS	43	41	40
Example companies: Hershey, ConAgra, General Mills			
FOOD RETAILERS & WHOLESALERS	23	24	25
Example companies: SuperValu, Kroger, 7 Eleven			

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SECTOR	DIO	DIO	DIO
FOOTWEAR	52	51	NA
Example companies: Genesco, Timberland, Nike			
HOME FURNITURE	51	47	42
Example companies: Herman Miller, Furniture Brands International, Leggett and Platt			
HOUSEHOLD PRODUCTS, NON DURABLE	40	35	34
Example companies: Procter & Gamble, Clorox, Scotts, Energizer Holdings			
INDUSTRIAL TECHNOLOGY	50	48	56
Example companies: Deibold, Tektronix, Pall			
INDUSTRIAL, DIVERSIFIED	42	44	47
Example companies: GE, 3M, Eaton, Black and Decker			
MEDICAL DEVICES	44	46	47
Example companies: Stryker, St. Jude Medical, Medtronic			
MEDICAL SUPPLIES	34	47	NA
Example companies: Owens and Minor, Patterson, Baxter,			
PAPER & FOREST PRODUCTS	37	36	39
Example companies: Louisiana Pacific, Meadwestvaco, Rayonier			
PHARMACEUTICAL COMPANIES	47	44	35
Example companies: Johnson & Johnson, Pfizer, Merck, Bristol Myers Squibb			
RESTAURANTS	6	6	6
Example companies: Yum Brands, Brinker International, Darden			

	2005	2004	2003
SECTOR	DIO	DIO	DIO
RETAILERS, APPAREL	52	54	57
Example companies: GAP, Limited Brands, Kohl's			
RETAILERS, BROADLINE	65	40	44
Example companies: Costco, Wal-Mart, JC Penney, Federated Dept. Stores			
RETAILERS, SPECIALTY	62	58	57
Example companies: Best Buy, Staples, Office Depot, Michael's, Borders			
SEMICONDUCTORS & RELATED	40	39	43
Example companies: Broadcom, KLA Tencor, Freescale			
SOFT DRINKS	17	19	NA
Example companies: Cocal Cola, Coca Cola Bottling, Pepsi Americas			
STEEL	51	45	60
Example companies: Nucor, US Steel, Quanax			

From the above charts, 12 industries overall saw improvements in inventory levels. The biggest absolute and relative improvement was in the commodity chemicals sector, which drove down DIO from 59 in 2002 to 43 in 2005. Specialty chemical manufacturers also improved, but not quite as much, going from 47 to 40 DIO.

Apparel manufacturers also did well as a sector, moving from a DIO of 55 in 2003 to 47 in 2005. This is a sector that has been offshoring for a long time, and may now be getting the process (and inventory buffers) down. Drug retailers and wholesalers also improved (DIO of 48 to 36), but it appears this was mostly on the wholesale side, showing the troubles with getting groupings right.

Eight sectors saw their DIOs increase during this time period (there were a few flat sectors, in addition). Worth noting, these were mostly in the consumer goods-to-retail supply chain. Specialty retailers, for example, saw average DIO rise from 57 to 62 during the period. Broadline retailers such as Wal-Mart and the department stores saw, on average, DIO skyrocket from 44 to 65. Perhaps part of the same trend as apparel manufacturers in improved offshoring control, apparel retailers did show modest DIO improvement, however.

Consumer packaged goods companies saw DIO go on average from 34 to 40, and food manufacturers a modest increase of 40 to 43.

So what does this tell us?

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It supports the notion that most of the overall progress in reducing inventories in the economy overall is coming from reduction in manufacturing inventory (raw materials and work-in-process), based on Lean-oriented thinking. The sectors that showed the least progress, or were headed the wrong way, were those most oriented towards finished consumer goods (consumer packaged goods and food producers, retailers).

SKU (stock keeping unit) proliferation would seem the primary villain. Lack of real true collaboration in most consumer goods-retail relationships would be another. In retail and some segments of consumer goods, the move to offshoring and the rise in inventory levels that most companies tell SCDigest they experience as a result could certainly also be a factor.

We also identified some standout individual company performers over the three year period. Again, lots of qualifications (DIO improvement is not necessarily, on its own, a real indicator of overall supply chain performance). The data didn't provide visibility to all individual companies by any stretch, so some excellent performers may not be reflected here. Nonetheless, noteworthy DIO improvements came from:

- The GAP, which went from DIO of 52 in 2002 to 38 in 2005
- Autoparts makers Visteon (17 to 11.5) and Federal Mogul (54 to 47)
- Building products companies Owens-Corning, which went from 33 to 27, and Texas Industries (75 to 61)
- Arch Chemicals, DIO of 57 to 48 over the three years, and Eastman Chemicals (which has put a large emphasis on its supply chain), going from 49 to 34
- Apparel manufacturer Kellwood, which does a huge amount of offshoring, going from DIO of 60 in 2002 to 36 in 2005
- Drug wholesalers AmerisourceBergen (44 to 27) and Cardinal Health (53 to 36)
- Food giant General Mills, bucking the overall sector trend, reducing DIO from 48 to 33
- Industrial giant 3M, going from 43 to 37, as it found "Lean Six Sigma"
- Medical device manufacturer Stryker (52 to 42)
- Office products retailers Staples (49 to 38, as it focused its supply chain of driving Return on Assets) and Office Depot (42 to 34), both bucking the specialty retailer trend
- Paper company MeadWestvaco, which went from 51 to 42
- Federated Dept. Stores, which managed an outstanding improvement from 82 to 68

There were more, but these were a few worth highlighting. If we missed your company's improvements, or you're a technology vendor with a company story to share, drop us a line.

Send comments to feedback@scdigest.com

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