An Analysis of Financial Performance in Distribution
2016

Prepared For
CDA

Prepared by
The Profit Planning Group
7572 Panorama Drive
Boulder, CO 80303
303-444-6212
www.profitplanninggroup.com

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Overview

This report analyzes the profitability and operational statistics for distributors in twenty-eight different lines of trade, focusing on results for 2016. The goal is to help distributors understand the change in financial performance across all of distribution and for their specific industry as well.

The analysis focuses on five critical profit variables (CPVs): 1) Sales growth, 2) the gross margin percentage, 3) the operating expense percentage, 4) inventory turnover, and 5) the average collection period (often called the days sales outstanding). These are the factors that combine to produce profit for an individual firm and an individual line of trade.

In analyzing the CPVs, two conflicting realities quickly emerge. Namely, distributors are all the same, while simultaneously, they are all different. They are all the same in that there is price competition in every industry, employee productivity is always a challenge and the like. In short, all distributors share a common concern of trying to improve their internal operations. This makes even small year-over-year improvements in the CPVs critical.

At the same time, distributors are all different in terms of the financial results they produce, even given their common concerns. For the twenty-eight different lines of trade in distribution there are wide variations in virtually every important metric in determining overall profitability. For example, the lowest gross margin percentage for any line of trade in this analysis is 6.5% of sales, while the highest is 47.3%.

Such differences make it difficult, but not impossible, to compare performance across lines of trade. That is, the analysis can’t simply look at how one industry’s gross margin compares to other industries. Some adjustments must be made to allow for direct comparisons. The methods required to make comparisons are covered in the next section on Methodology. That section should not be skipped.

An Important Note on Methodology:
Please Read Carefully

This report focuses on two issues. First, how well did individual lines of trade do on key performance metrics in 2016? Second, to what extent did those metrics change by line of trade between 2015 and 2016? In short, how good are the results and how much did the results change?

As stated in the previous section it is not possible to put high-gross margin industries together with low-gross margin ones and come to any conclusion. The gross margin numbers, along with inventory turnover and the like, must be converted to some common denominator to make conclusions possible. The conversion process is straightforward, but decidedly alien to distribution management.

The procedure employed here involves converting absolute metrics into percentage change metrics. The percentage change figures measure how much better, or worse, a specific industry performed in 2016 versus 2015. This will allow an analysis of which industries are improving and which are not.

For example, if an industry with an average inventory turnover of 2.0 times experienced a .5 turn improvement in 2016, the percentage improvement in turnover was 25.0% (.5 ÷ 2.0 = 25.0%). In an industry with 5.0 turns per year as a starting point, the same .5 turnover improvement would only represent a 10.0% improvement.

To compare across industries all of the annual changes between 2015 and 2016 for gross margin, operating expenses, inventory turnover and the DSO were converted to percentages. In that way the percentage increase, or decline, are directly comparable to other industries. The focus is always on how much better or worse an industry performed.

ROA Trends For the Last Five Years

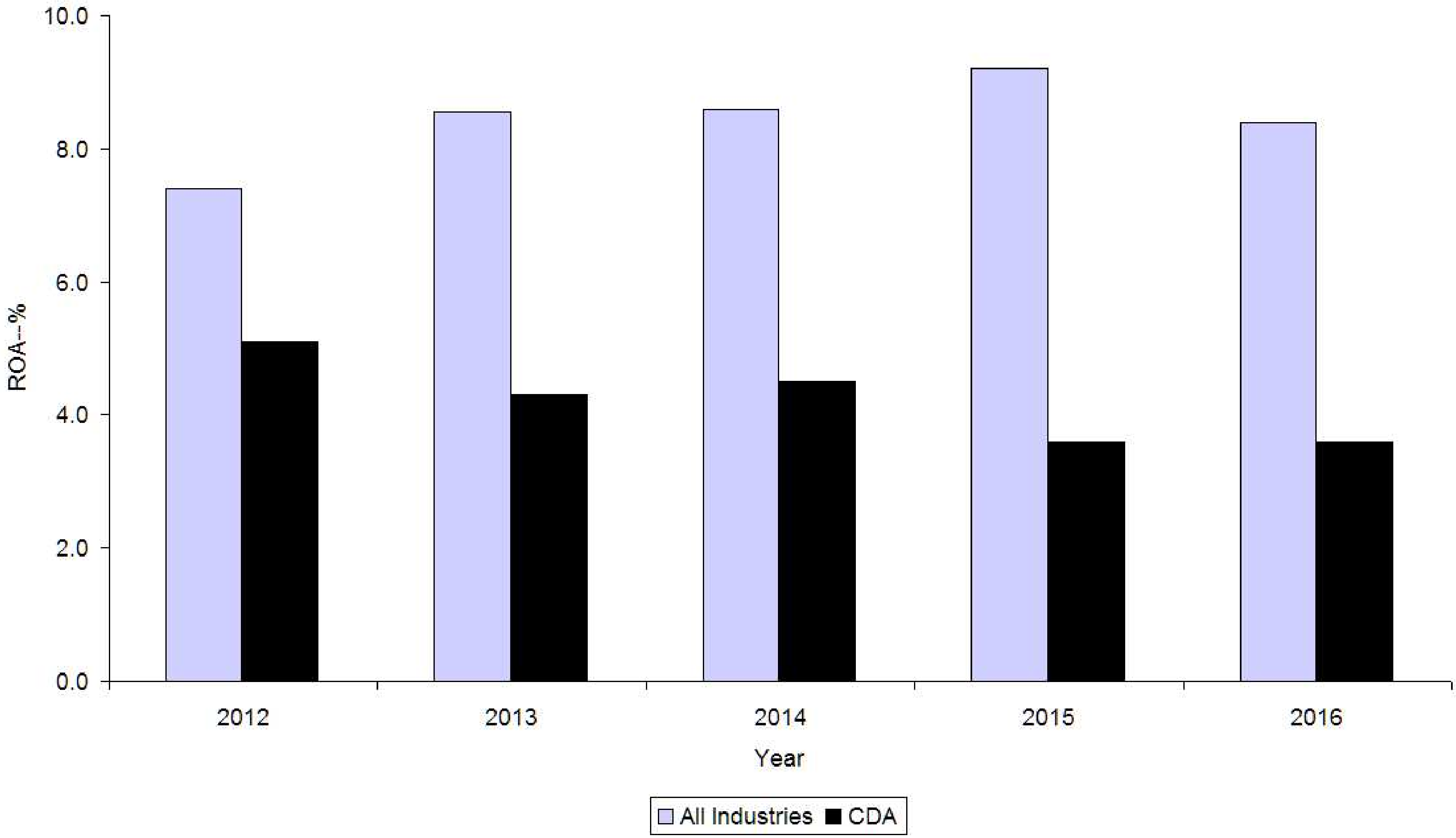
Before examining the individual CPVs, it is useful to measure overall profit performance. That is, how well did distributors combine the CPVs. **Exhibit 1** does this by examining Return on Assets for the last five years for which information is currently available.

Return on Assets (ROA) is calculated by taking pre-tax profits and dividing by total assets. For distributors, ROA is the best overall measure of profitability. Most analysts argue that an ROA of at least 5.0% is essential for long-term success. For distribution, anything in excess of 10.0% would be considered outstanding.

Exhibit 1 outlines the median Return on Asset performance for the twenty-eight lines of trade for the years 2012 through 2016. The overall pattern reflects a period of calm, without an impact from either an economic recession or an economic book. In this placid environment, distributors (as a group) enjoyed an ROA that was around 8.0%. While it is not outstanding results, it is sufficient for continued growth and market security.

The exhibit also provides comparison figures for CDA members during this period.

Exhibit 1
Return on Assets by Year



Sales Growth by Industry Segment

The ability to increase sales systematically is one of the key drivers of profit. At the same time, the importance of sales growth is somewhat overstated. Exceptional rates of growth are not required. What is needed is enough growth to allow the firm to offset the impact of inflation on expenses with some relative ease.

Different segments of distribution often produce different rates of growth. Consequently, for this analysis (and all of the other CPVs) performance is broken out by three different global industry segments.

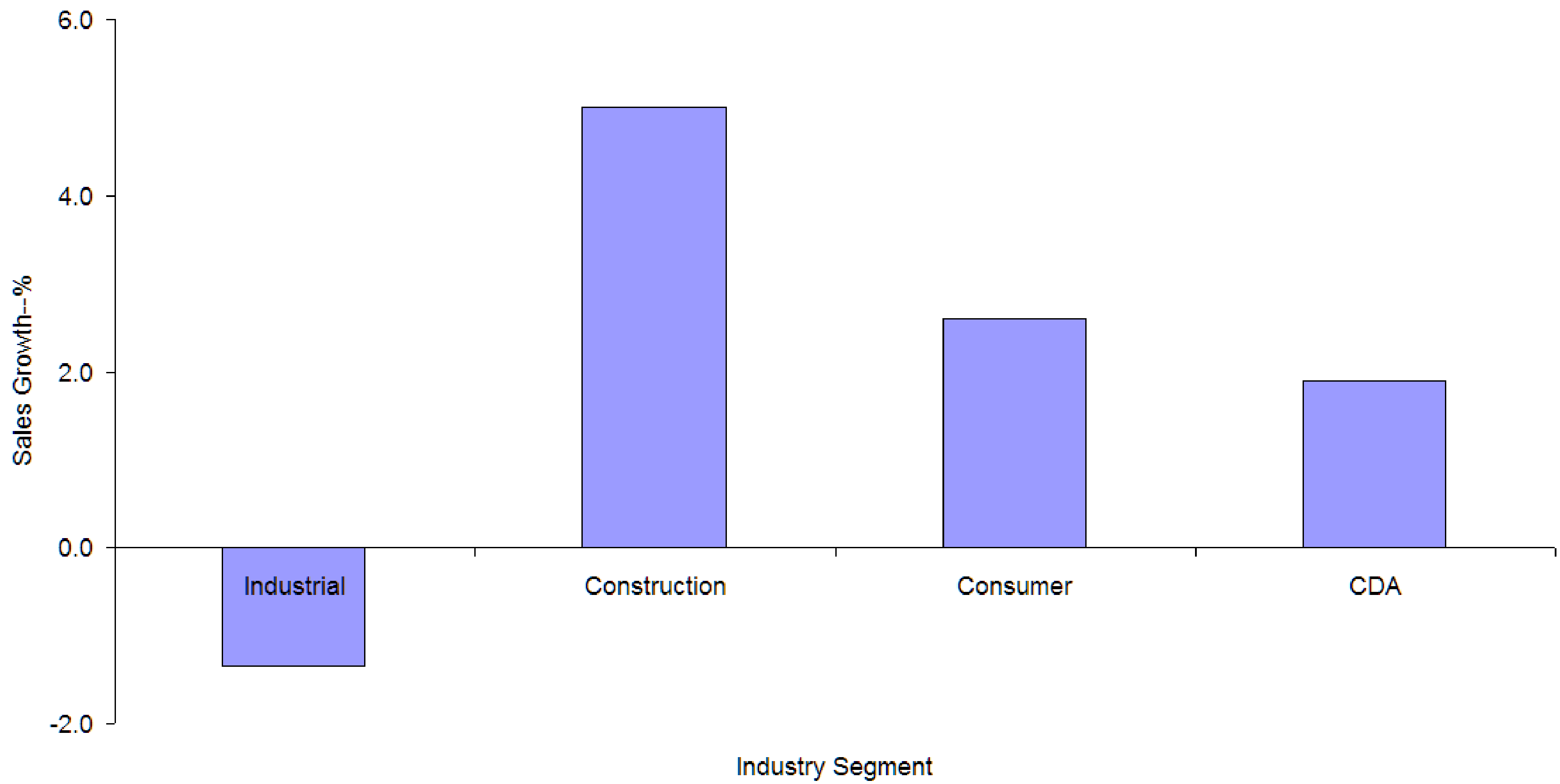
- **Industrial—**Distributors selling largely to "the factory floor."
- **Construction—**Businesses selling primarily to contractors.
- **Consumer—**Entities selling either consumer products or products that facilitate the sale of consumer products.

Exhibit 2 reflects a reality of distribution in today's environment—virtually ever segment is mature with modest rates of growth. In today's moderate inflation environment, growth of somewhere around 5.0% is considered sufficient to help firms offset expense increases and enhance profit. For 2016 only the construction section reached this level, in part because of a strong housing boom.

In contrast, the Industrial segment was especially hard hit in terms of growth, with a decline of -1.4%. The consumer section produced a modest 2.6% increase. In short, no industry was able to count on rapid growth to drive higher profit. They had to focus on the other CPVs.

For CDA members sales growth was 1.9% during 2016.

Exhibit 2
Sales Growth by Industry Segment
2016 Versus 2015



Gross Margin Changes by Industry Segment

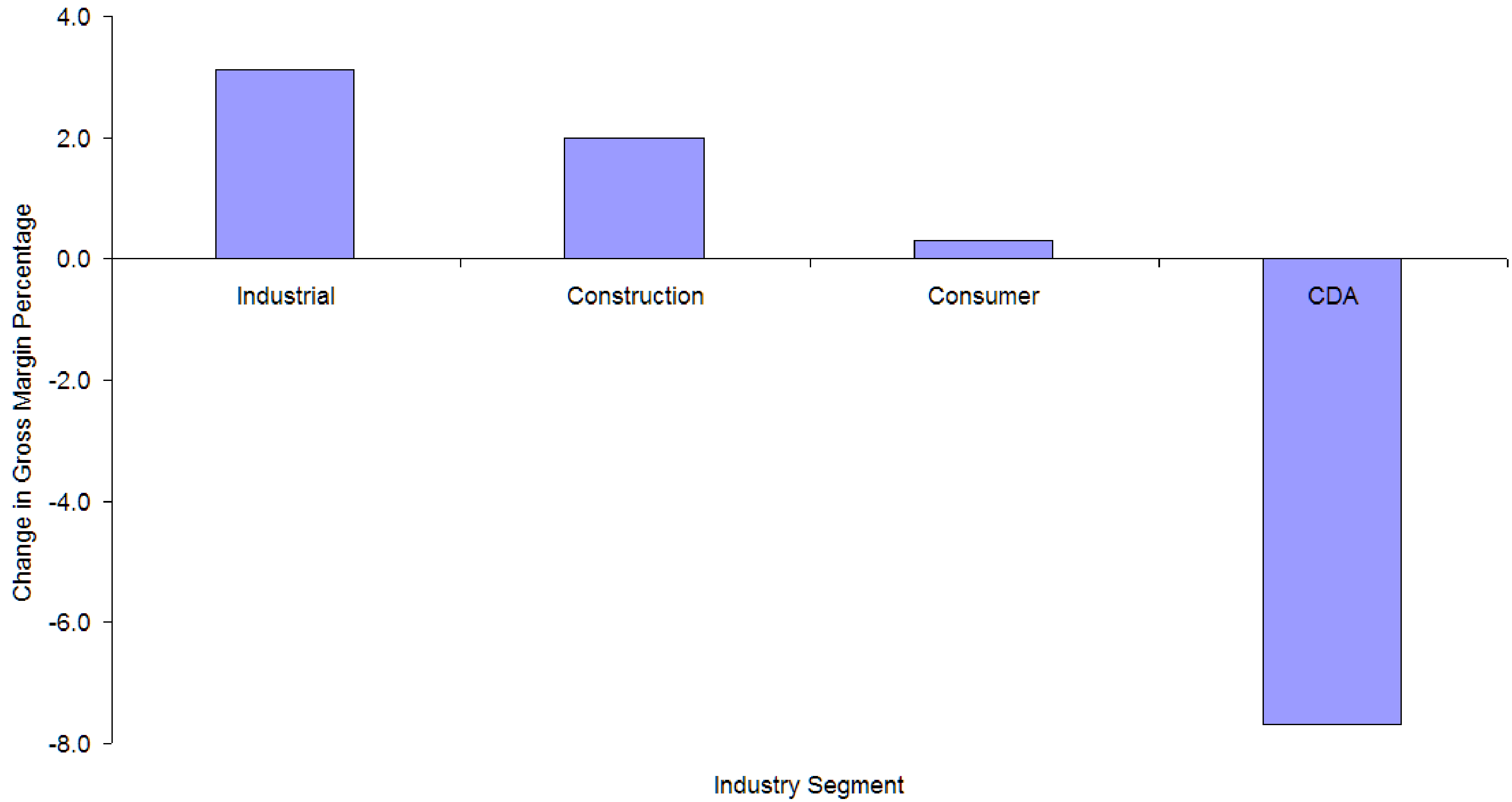
Exhibit 3 indicates that the year 2016 was characterized by important improvements in gross margins for the second straight year. This was true across all three global industry segments. However, individual lines of trade within those segments experienced significant deviations from the norm.

It is crucial to remember from the Methodology page how the changes in gross margin are being calculated. In 2015 the median gross margin percentage for CDA members was 6.5% of sales. In 2016 it was 6.0%. This means that between 2015 and 2016 there was a change of -0.5 percentage points. The relative change was -7.7% (-0.5 ÷ 6.5).

Any gross margin change, even if it appears small, is critical. The ratio reflects the change in the gross margin dollars that the typical firm would have experienced if sales had remained constant. While the numbers are typically small, their profit impact is large.

Improvements in the gross margin percentage are especially important in mature industries where sales growth tends to be modest. Every sales dollar must generate the maximum margin dollars to cover expenses and generate a profit.

Exhibit 3
The Change in Gross Margin Percentage by Industry Segment
2016 Versus 2015



Operating Expense Changes by Industry Segment

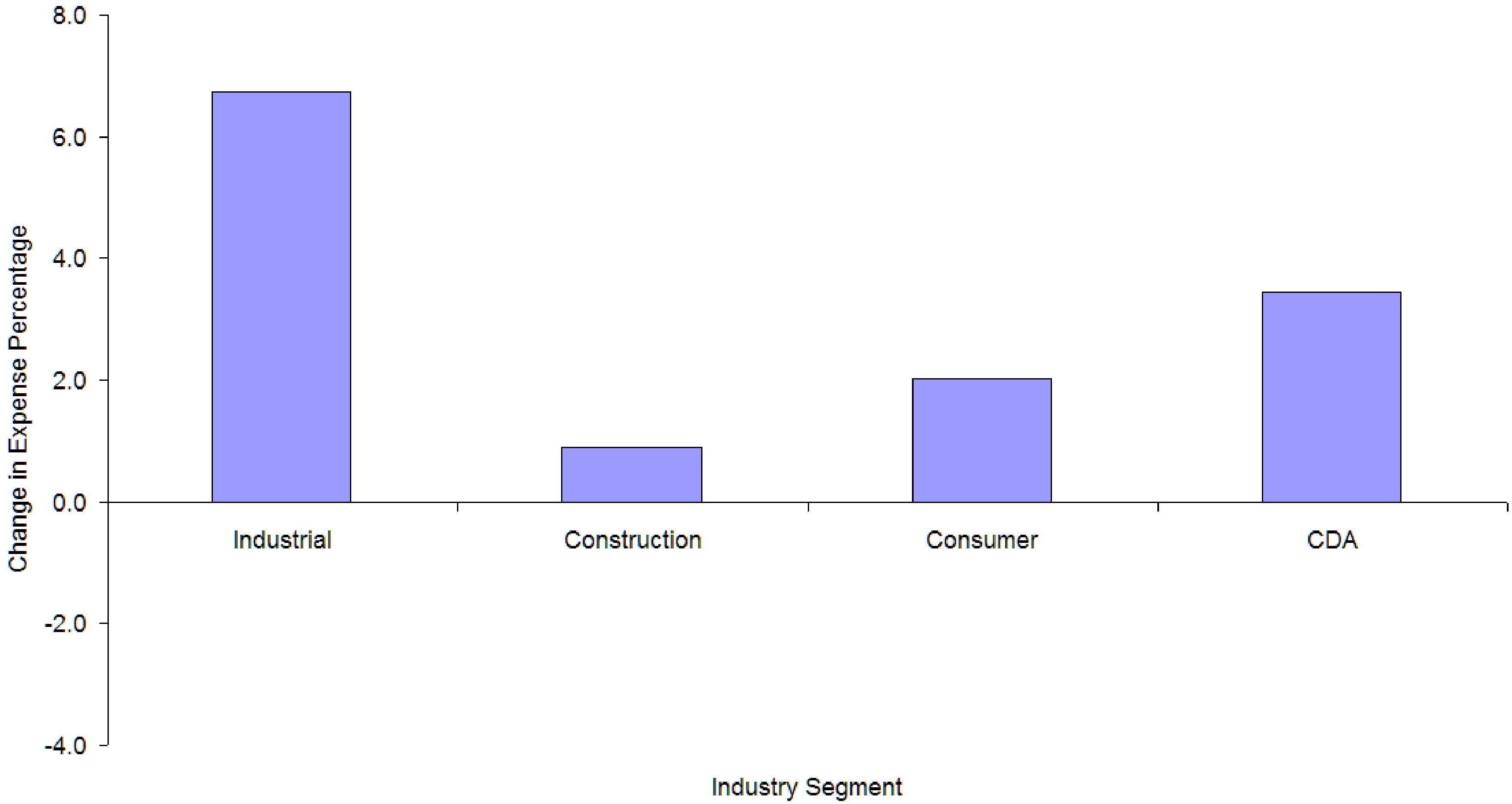
Exhibit 4 tracks the improvement or deterioration in operating expense percentages. That means that all positive numbers reflect doing better with regard to operating expenses (expenses as a percent of sales declined). Any negative numbers indicate an increase in the operating expense percentage.

Clearly, 2016 was an operating expense challenge. For all three segments operating expense performance deteriorated. The expense challenges tended to offset the gross margin improvements outlined in Exhibit 3.

In general, changes in operating expense percentages are heavily influenced by the rate of sales growth. As was noted previously, no segment enjoyed robust growth. This led fairly directly to the decline in expense performance identified in the exhibit.

For CDA members there was a -3.4% relative FALSE in the operating expense percentage. Specifically, operating expenses were 5.8% of sales in 2015 and 5.6% in 2016, resulting in a change of -0.2 percentage points. This means that the operating expense percentage got better by this amount. As a result, the relative change was -0.2% ÷ 5.8 = -3.4% better than the year before.

Exhibit 4
The Change in the Operating Expense Percentage by Industry Segment
2016 Versus 2015



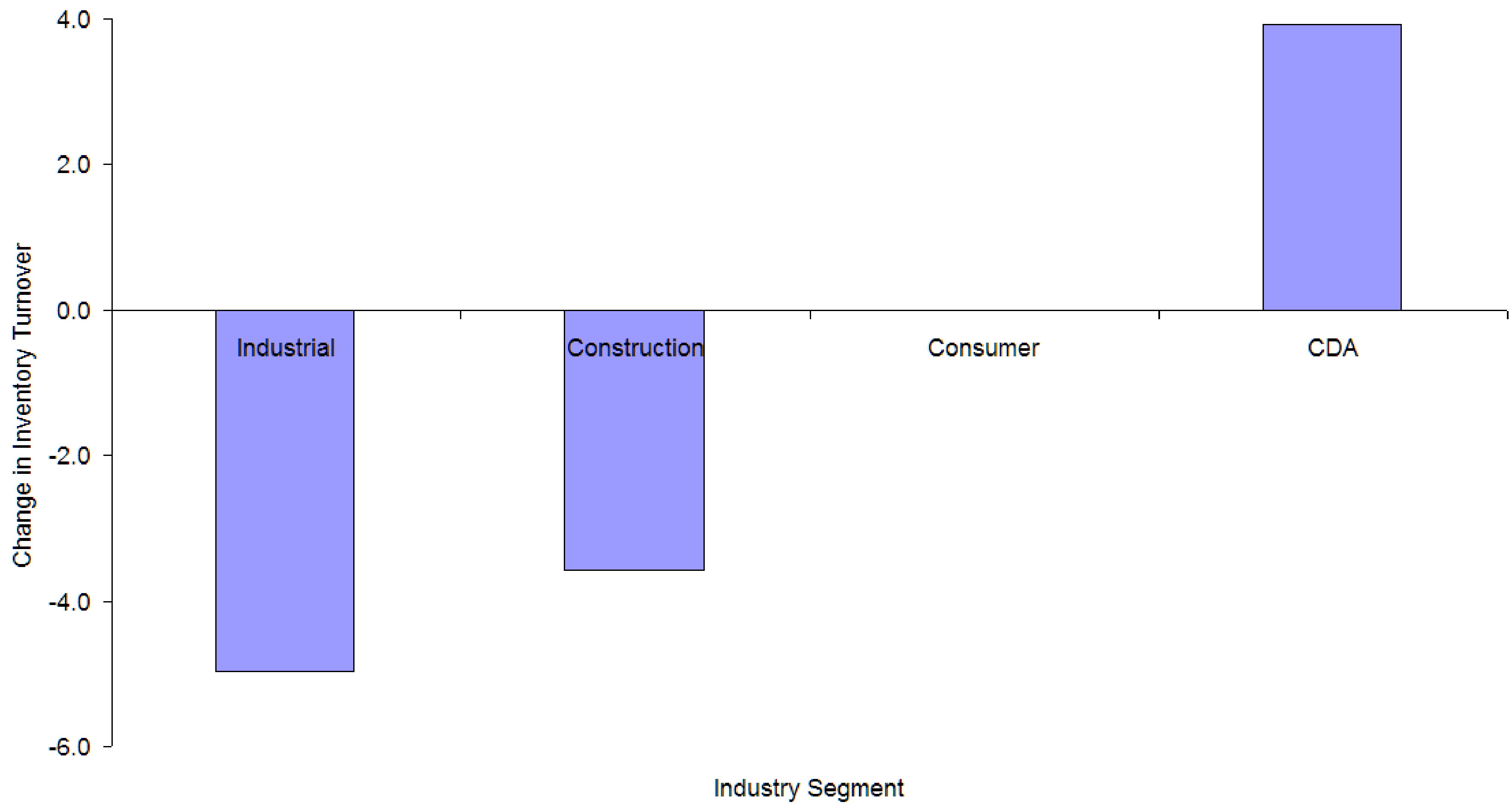
Inventory Turnover Changes by Industry Segment

Despite popular mythology, neither inventory turnover nor the Days Sales Outstanding has a very large impact on profitability for distributors. They do, of course, have a large impact on cash flow. Both ratios have to be viewed in that particular context.

Exhibit 5 indicates that the changes in inventory turnover levels were negative for all segments in 2016 (except for no change for the Consumer segment). This means that every segment had a lower aggregate rate of turnover than in the year before. Again, a portion this can be attributed to the lack of strong sales growth.

For CDA members there was a change of 0.8 times. Specifically turnover moved from 20.4 turns in 2015 to 21.2 turns in 2016. The relative changes was 3.9% (0.8 ÷ 3.9).

Exhibit 5
The Change in Inventory Turnover by Industry Segment
2016 Versus 2015



The Average Collection Period Changes by Industry Segment

Before reviewing **Exhibit 6** it is important to note once again that all of the positive figures on the graph represent a decrease in the Average Collection Period (or DSO). That is, they represent an improvement. It is also useful to be aware that the collection period is an extremely volatile ratio year to year. It is impacted not only by management actions, but unusual sales activity that may take place toward the end of the fiscal year.

For 2016 there was no clear pattern across all industries for the collection period. Again, this reflects the natural volatility of this ratio. For CDA members there was a change of 0.7%. Specifically, the DSO went from 14.9 days in 2015 to 14.8 days in 2016, a decline of 0.1 days. In percentage terms this was 0.1 ÷ 14.9 = 0.7%.

Exhibit 6
The Change in Average Collection Period by Industry Segment
2016 Versus 2015