



FISHER INVESTMENTS™ on  
**INDUSTRIALS**



- An in-depth look at the global Industrials sector investment universe including conglomerates, machinery producers, electrical equipment manufacturers, defense contractors, railroads, and more . . .
- Tips and tools for security analysis and portfolio management
- A useful guide for investing in any market condition

Foreword By *New York Times* bestselling Author Ken Fisher



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Fisher Investments Press brings the research, analysis, and market intelligence of Fisher Investments' research team, headed by CEO and *New York Times* best-selling author Ken Fisher, to all investors. The Press covers a range of investing and market-related topics for a wide audience—from novices to enthusiasts to professionals.

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# Fisher Investments on Industrials

Fisher Investments  
with  
Matt Schrader and  
Andrew S. Teufel



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# Foreword

Welcome to the fourth in a series of investing guides from Fisher Investments Press—the first ever imprint from a money manager, produced in partnership with John Wiley & Sons. This particular guide is on one category of stocks—Industrials—the most diverse of all the standard investing sectors. Those newer to investing will immediately think of heavy machinery and manufacturing—and maybe airplanes. But this broad sector also hits bridges and tunnels, defense, transportation services, and even light bulbs and package delivery.

Another interesting feature about Industrials: Industrials firms overwhelmingly have customers in other businesses and governments. They're not heavily retail-oriented—the way Health Care, Consumer Staples, or Consumer Discretionary firms are. Instead, these firms produce huge machinery or other complex products—with big sticker prices. And for this reason, out of all the sectors, Industrials has historically been among the most economically sensitive, and most correlated to the broader market. When you think about those big ticket items, it makes sense. If Machinery and Defense firms anticipate rough economic times, they're less likely to spend big money to update equipment. Which is why it's important to not only understand what drives Industrials, but also what drives their end-customers' spending plans. This book details what to look for.

But it's not as simple as anticipating economic cycles. Each industry has unique drivers. And because the life-cycle for many Industrials products can be long—regardless of the economy—and how long-term contracts are negotiated also

plays a role, it's important to learn to anticipate where demand is coming from next. This book shows you how.

Manufacturing globally has been evolving tremendously over the past few decades, and continues to evolve. This book provides background on the modern production process—from lean manufacturing to Six Sigma—to help you understand how we got here and how it's likely to continue evolving. A significant theme is globalization and liberalization of trade policy, which helped give rise to the Asian Tigers (as detailed here)—and which will give rise to the next round of global tigers.

What this book doesn't provide is hot stock tips or a simple to-do list for picking the right stocks. Such a thing doesn't exist. Instead, this book, and all the books in the series, aims to give you a workable, top-down framework for analyzing a sector. The framework gives you tools allowing you to use commonly-available information to uncover profitable opportunities others overlook. And those opportunities should allow you to make market bets relative to an appropriate benchmark that win more often than lose. This isn't a framework that goes stale. Rather, this is a scientific method that should serve you all throughout your investing career. So good luck and enjoy the journey.

Ken Fisher

CEO of Fisher Investments

Author of the *New York Times*

Best Sellers *The Ten Roads to Riches* and

*The Only Three Questions That Count*

# Preface

The *Fisher Investments On* series is designed to provide individual investors, students, and aspiring investment professionals the tools necessary to understand and analyze investment opportunities, primarily for investing in global stocks.

Within the framework of a “top-down” investment method (more on that in Chapter 7), each guide is an easily accessible primer to economic sectors, regions, or other components of the global stock market. While this guide is specifically on Industrials, the basic investment methodology is applicable for analyzing any global sector, regardless of the current macroeconomic environment.

Why a top-down method? Vast evidence shows high-level, or “macro,” investment decisions are ultimately more important portfolio performance drivers than individual stocks. In other words, before picking stocks, investors can benefit greatly by first deciding if stocks are the best investment relative to other assets (like bonds or cash), and then choosing categories of stocks most likely to perform best on a forward-looking basis.

For example, a Technology sector stock picker in 1998 and 1999 probably saw his picks soar as investors cheered the so-called “New Economy.” However, from 2000 to 2002, he probably lost his shirt. Was he just smarter in 1998 and 1999? Did his analysis turn bad somehow? Unlikely. What mattered most was stocks in general, and especially US technology stocks, did great in the late 1990s and poorly entering the new century. In other words, a top-down perspective on the broader economy was key to navigating markets—stock picking just wasn’t as important.

*Fisher Investments on Industrials* will help guide you in making top-down investment decisions specifically for the Industrials sector. It shows how to determine better times to invest in Industrials, what Industrials industries and sub-industries are likelier to do best, and how individual stocks can benefit in various environments. The global Industrials sector is complex, covering many sub-industries and countries with unique characteristics. Using our framework, you will be better equipped to identify their differences, spot opportunities, and avoid major pitfalls.

This book takes a global approach to Industrials investing. Most US investors typically invest the majority of their assets in domestic securities; they forget America is less than half of the world stock market by weight—over 50 percent of investment opportunities are outside our borders. This is especially true in Industrials as many of the world’s largest firms are based in foreign nations. Even domestic Industrials are relying more on manufacturing outside of the US and are deriving a significant portion of their profits overseas. Given the vast market landscape and diverse geographic operations, it’s vital to have a global perspective when investing in Industrials today.

## **USING YOUR INDUSTRIALS GUIDE**

This guide is designed in three parts. Part I, “Getting Started in Industrials,” discusses vital sector basics and Industrials’ high-level drivers. Here we’ll discuss Industrials’ main drivers—government and corporate spending—and explain how to capitalize on a wide array of macro conditions and industry-specific features to help you form an opinion on each of the industries within the sector. We’ll also discuss additional drivers affecting the sector that ultimately drive Industrials’ stock prices.

Part I also includes a discussion on the history of modern manufacturing since 1950 and what has shaped the world's current manufacturing landscape. Topics discussed include globalization, the rise of Asia, and the importance of manufacturing in the US today.

Part II, "Next Steps: Industrials Details," walks through the next step of sector analysis. We'll take you through the global Industrials sector investment universe and its diverse components. The Industrials sector is arguably the most diverse sector, which makes a thorough analysis challenging, but also increases your chances of finding successful investment opportunities and profitable segments of the market.

There are currently 14 industries within the Industrials sector. We will take you through the major components of the sector in detail, including a discussion on their end-markets, how they operate, and what drives profitability—to give you the tools to determine which industry will most likely outperform or underperform looking forward. Note: We spend less time on the Commercial Services & Supplies industry group, as it makes up a very small portion of the sector and the global stock market.

Part II also details where to find and how to interpret publicly available industry data. There are ample free resources, websites, and data sources to help in making better forward-looking sector, industry, and stock decisions.

Part II concludes with a discussion about the global infrastructure markets including the drivers and risks behind investment, the benefits to the Industrials sector, and ways to participate in the infrastructure boom.

Part III, "Thinking Like a Portfolio Manager," delves into a top-down investment methodology and individual security analysis. You'll learn to ask important questions like: What

are the most important elements to consider when analyzing Machinery and Defense? What are the greatest risks and red flags? This book gives you a five-step process to help differentiate firms so you can identify ones with a greater probability of outperforming. We'll also discuss a few investment strategies to help determine when and how to overweight specific industries within the sector.

Note: We've specifically kept the strategies presented here high level so you can return to the book for guidance no matter the market conditions. But we also can't possibly address every market scenario and how markets may change over time. Many additional considerations should also be taken into account when crafting a portfolio strategy, including your own investing goals, your time horizon, and other factors unique to you. Therefore, you shouldn't rely solely on the strategies and pointers addressed here, as they won't always apply. Rather, this book is intended to provide general guidance and help you begin thinking critically not only about the Industrials sector, but about investing in general.

Further, *Fisher Investments on Industrials* won't give you a "silver bullet" for picking the right Industrials stocks. The fact is the "right" Industrials stocks will be different in different times and situations. Instead, this guide provides a framework for understanding the sector and its industries so that you can be dynamic and find information the market hasn't yet priced in. There won't be any stock recommendations, target prices, or even a suggestion whether now is a good time to be invested in the Industrials sector. The goal is to provide you with tools to make these decisions for yourself, now and in the future. Ultimately, our aim is to give you the framework for repeated, successful investing. Enjoy.

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**I**

# **GETTING STARTED IN INDUSTRIALS**

# 1

## INDUSTRIALS BASICS

*Mr. Grant started his Sunday morning with some housework—taking out the trash, mowing the lawn, cleaning the pool, changing light bulbs, installing cabinets, and fixing the air conditioner.*

*It was a productive day until 2:00 PM when his shoulder cushioned a fall off his ladder, requiring a trip to the ER. Making matters worse, Mr. Grant's normal route was getting re-paved, forcing him to take the long way through a \$5 toll road to the hospital.*

*The bad news: He needed an MRI and a shoulder specialist—the closest was an hour's plane flight away.*

*Early Monday, he took the train to the airport and boarded a jet. At the hospital, he got his MRI, and the doctor told Mr. Grant his shoulder would be fine in time. Mr. Grant celebrated with a shopping spree through the airline's gift catalogue, fixing Post-it notes on everything he wanted to buy.*

This is more than a simple anecdote with a happy ending—it's an illustration of the importance of Industrials products in our everyday lives. Every event, action, and item in Mr. Grant's travails used products and services, from the Industrials sector. [Table 1.1](#) lists just some of the Industrials products and services Mr. Grant encountered.

**Table 1.1 Industrials Sector Impact on Mr. Grant**

Action	Industrials Sector Involvement
Taking out the trash	Pick-up service provided by a Commercial Services & Supplies company
Mowing the lawn	Lawnmower made by a Machinery company
Changing light bulbs	Light bulb manufactured by an Electrical Equipment company
Installing cabinets	Cabinets manufactured by a Building Products company
Fixing the air conditioner	Air conditioner manufactured by an Aerospace & Defense company
Road getting re-paved	Road paving equipment manufactured by a Machinery company
Paying \$5 on the toll road	Toll road operated by a Transportation Infrastructure company
Taking the train to the airport	Train manufactured by a Machinery company and operated by a Road & Rail company
Taking the plane flight	Plane manufactured by an Aerospace & Defense company and operated by an Airline
Getting an MRI	MRI machine manufactured by an Industrial Conglomerate
Shopping from an airplane catalogue	Package delivery services provided by a Air Freight & Logistics company

The Industrials sector, arguably more than any other, is vastly diverse. Because it's not focused on a particular product or service, myriad drivers, end markets, and operating conditions can impact profitability of Industrials firms. And, while diverse, Industrials have played a very important role in global economic development. The sector has progressed globalization and global trade, it has built the world's infrastructure and boosted quality of life, and it has driven significant gains in productivity and manufacturing efficiency.

## **INDUSTRIALS BASICS**

What does the Industrials sector look like from a high level? Because it has many diverse industries, it's split into three broad categories (as defined by the Global Industry Classification Standard [GICS] classification system). Firms in these categories primarily serve governments and corporations, but in some cases serve consumers as well:

- Capital Goods
- Transportation
- Commercial Services & Supplies

Capital Goods, the largest sector component, consists primarily of firms involved in production and making machinery and industrial goods including airplanes, tractors, power generators, and defense and transportation equipment. Globally, there are over 4,300 publicly traded Capital Goods firms.<sup>[1](#)</sup>

Transportation firms, the second largest weight within the sector, mostly ship goods rather than make them. Most forms of transportation are included in this group, including planes, trucks, ships, and railroads. Globally, there are nearly 900 publicly traded Transportation firms.<sup>[2](#)</sup>

Last, Commercial and Professional Services are a mixed bag, including commercial printing, data processing, environmental waste and garbage pickup, janitorial services, and staffing services. While seemingly disparate, these firms are generally service focused. Globally, there are over 1,000 publicly traded firms classified as Commercial and Professional Services.<sup>[3](#)</sup>

## **Industrials by the Numbers**

The 200 largest Industrials companies employ over 11.5 million people globally—greater than the

populations of Greece, Sweden, Switzerland, Hong Kong, Israel, or Denmark.

These firms generated over \$3.1 trillion in revenues in 2007—larger than the size of the entire economy of every country in the world except the US, Japan, Germany, and China. And they had over \$5.1 trillion worth of assets—more than the value of all durable goods (goods meant to last more than three years) owned by US households and nonprofit organizations.

*Source:* Bloomberg Finance L.P.; CIA 2008 World Fact Book; US Federal Reserve; IMF World Economic Outlook Database.

### **Table 1.2 World's Largest Industrials Companies as of 12/31/08**

*Source:* Thomson Datastream.

Name	US Ticker	Country	Industry	Market Value
General Electric	GE	US	Industrial Conglomerates	\$161,278
Siemens	SI	Germany	Industrial Conglomerates	\$67,087
United Technologies	UTX	US	Aerospace & Defense	\$50,953
3M	MMM	US	Industrial Conglomerates	\$39,873
United Parcel Services	UPS	US	Air Freight & Logistics	\$37,372
ABB	ABB	Switzerland	Electrical Equipment	\$34,000
Lockheed Martin	LMT	US	Aerospace & Defense	\$33,683
Boeing	BA	US	Aerospace & Defense	\$31,270
East Japan Railway	EJPRY	Japan	Road & Rail	\$30,403
Emerson Electric	EMR	US	Electrical Equipment	\$28,082

## **Industrials Leaders**

Industrials firms can play a vital role in the global economy because of the functions they serve, the markets they affect, and the scope and scale of their operations. But who are these firms? [Table 1.2](#) shows the world's largest Industrials firms (by market cap). GE, one of the world's largest firms, nearly triples the size of the next biggest. Seven of the ten largest are US-domiciled, but they vary greatly by industry. And all operate in multiple markets and industries, producing goods ranging from Post-it notes to power generation equipment.

Over time, these firms have grown via mergers, product extensions, and growth into new markets—the result being significant economies of scale, highly recognizable brand names, and global diversification. These firms are generally considered industry “bellwethers” and are good firms to analyze to understand their industries.

## **INDUSTRIALS CHARACTERISTICS**

There's no denying Industrials firms can be massive with a broad scale of operations. And while they are a diverse group, they do have a few more unifying characteristics and attributes. Generally, the Industrials sector as a whole:

- Is diverse—both in where the firms are domiciled and in the end markets served,
- Tends to be economically sensitive,
- Is highly correlated to broad markets, and
- Tends to have lower profit margins.

Let's look at each of these characteristics in a bit more detail.

### **A Diverse World**

The Industrials sector is diverse—including where they're domiciled and the end markets served. These firms manufacture equipment and provide services—factory equipment, machinery, and transportation and supply chain services, to name a few—to a wide range of other sectors and government branches. Most manufacturing industries—from food production to car manufacturing—require production equipment that is often produced by an Industrials firm. These equipment manufacturers fall into a select number of industries (whether in Industrials or another sector), but the number of industries and end markets served is significantly more.

Freight transportation firms are responsible for shipping other industries' products globally, giving these industries exposure to multiple drivers and providing them with significant diversification. For example, railroads generate revenue from myriad markets like food, clothing, coal, lumber, motor vehicles, and metals.

Unlike most sectors, Industrials industries are not always cohesively linked. It's easy to see why oil exploration firms might be classified in the same sector as an oil refiner, but the link isn't as clear among a machinery producer, a staffing firm, and a railroad—all classified as Industrials.

Larger Industrials firms serve regionally diverse end markets as well. In some cases, firms have a greater portion of foreign sales than domestic. Among other factors, improved technology and communication abilities, increased globalization, and the liberalization of trade, investment, and the financial markets have driven significant changes in revenue distribution and the potential to penetrate foreign markets. [Table 1.3](#) highlights a few firms whose revenue distribution has changed significantly in just 15 years. While not every firm's gains are as remarkable as these, greater regional diversification is

common for many Industrials. And with this diversification comes a host of new market opportunities and the ability to access new and potentially cheaper labor and suppliers.

This diversification is not solely a US phenomenon either as many non-US firms share similar changes in revenue distribution. The ability and the need to focus globally to grow—whether through new joint ventures, mergers, investment in distribution channels, or other initiatives—has enhanced the competitive landscape of the Industrials sector. New, smaller regional players have also increased their market presence, driving increased competition as well.

### **Economically Sensitive**

Another commonality is Industrials are generally considered economically sensitive. Firms tend to buy new equipment or ship more goods when the economy is strong, profitability is rising, and future market expectations are positive. Industrials are generally driven by broad macro factors—corporate profitability, access to credit, increased spending, and so on—all of which are positive drivers for the economy as a whole. As a result, Industrials tend to move in cycles closely aligned with the broader economy and the end markets served (which are often cyclical industries themselves).

#### **Table 1.3 Percent of Foreign Revenues for Leading US Industrials Firms (1992-2007)**

*Source:* SEC, Standard & Poor's Research Insight.

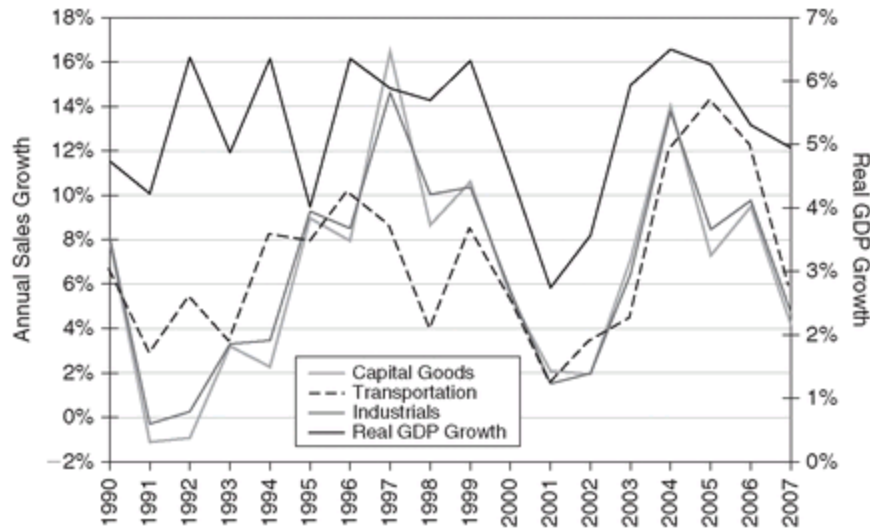
Company	1992	2007	Difference
Paccar	21%	64%	43%
General Electric	17%	51%	34%
3M	43%	63%	20%
Emerson Electric	33%	52%	19%
United Technologies	40%	51%	11%

Industrials tend to manufacture and provide services for expensive big-ticket items that can typically run for years. This can increase sales volatility as firms tend to delay making expensive purchases when times are tough. (Note, firms do generate a portion of revenues from selling spare parts and service, which is more stable.) Contrast this with a sector like Consumer Staples where demand can be fairly constant. For example, demand for food isn't as economically sensitive as that for a mining truck.

Industrials' economic sensitivity is exhibited in [Figure 1.1](#), comparing Industrials' annual sales growth as a whole, as well as the Transportation and Capital Goods industry groups (left axis), to the annual US GDP growth (right axis) from 1990 through 2007. While the magnitude of growth and the rate of change are greater for Industrials than the overall economy, the overall direction and inflection points are generally similar.

**[Figure 1.1](#) S&P 500 Industrials Sector Sales Growth vs. GDP Growth**

*Source:* Standard & Poor's and Bloomberg Finance L.P.



Why does economic sensitivity matter? The sector’s leverage to the economy and a diverse set of drivers can allow it to disproportionately benefit when economic conditions are generally good. For example, look at [Figure 1.1](#) again—when GDP growth hit 5.9 percent in 1997, Industrials’ sales growth was nearly 15 percent.

Industrials can benefit from many facets of economic growth—increased manufacturing, increased construction, increased corporate, consumer, and government spending, etc. For this reason, many of the larger Industrials firms—FedEx, UPS, General Electric, United Technologies, and Union Pacific, to name a few—are generally considered good barometers for the US economy.

But volatile product demand can lead to operational challenges, market uncertainty, and increased business risks, like the following:

- **Forecasting challenges.** Volatile demand can make capital budgeting decisions, project profitability expectations, and growth estimates a challenge.
- **Ill-conceived production changes.** Expanding production can prove problematic and be a poor use

of capital. Conversely, not producing enough leaves profits on the table and may lead to competitors taking market share.

- **Excess inventory issues.** No firm wants to be left with excess inventories when economic growth and product demand fade. There is money tied up in inventory, and product price reductions may become necessary.

From an investor's standpoint, the challenge is forecasting sales and earnings in consideration of ever-changing market conditions and how effective management will be in countering such operational challenges. What might be true today may not be true in a year. This is one reason Industrials tends to have lower valuations than other sectors.

### **High Correlation to Broad Markets**

Economic sensitivity is one reason Industrials tend to be strongly correlated to broader markets. Industrials historically have the highest correlation of any sector to the S&P 500 and very near the highest correlation to the MSCI World (a global stock market index). [Table 1.4](#) shows the monthly correlation between the S&P 500 and the MSCI World for standard investing sectors from 1995 through 2008. During this period, Industrials had a 0.9 correlation to both the US and the world stock markets.

Note that two of the most economically sensitive sectors—Industrials and Consumer Discretionary—have among the highest correlations, while sectors considered less economically sensitive—Health Care and Consumer Staples—rank among the lowest.