

---

---

**GETTING STARTED IN**

# **METALS**

---

---

**Jeffrey Nichols**

# Getting Started in Metals

---

**Jeffrey Nichols**



**JOHN WILEY & SONS, INC.**

**New York ■ Chichester ■ Brisbane ■ Toronto ■ Singapore**

This text is printed on acid-free paper.

Copyright © 1995 by Jeffrey Nichols

Published by John Wiley & Sons, Inc.

All rights reserved. Published simultaneously in Canada.

Reproduction or translation of any part of this work beyond that permitted by Section 107 or 108 of the 1976 United States Copyright Act without the permission of the copyright owner is unlawful. Requests for permission or further information should be addressed to the Permissions Department, John Wiley & Sons, Inc.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional services. If legal advice or other expert assistance is required, the services of a competent professional person should be sought.

***Library of Congress Cataloging-in-Publication Data:***

Nichols, Jeffrey A.

Getting started in metals / Jeffrey Nichols.

p. cm.

ISBN 0-471-55557-6 (pbk. : acid-free paper)

1. Metal trade. 2. Metal trade—Finance. 3. Investments.  
4. Commodity exchanges. 5. Stock options. I. Title.  
HG6047.M48N53 1995  
332.63—dc20

94-23712

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

---

# Contents

<b>PART 1: AN INTRODUCTION TO METALS</b>	<b>1</b>
1. Why Metals?	3
2. How To Analyze Metals Markets	9
<b>PART 2: BASE METALS</b>	<b>17</b>
3. Copper	19
4. Lead	27
5. Zinc	33
6. Tin	39
7. Aluminum	45
8. Nickel	53
<b>PART 3: PRECIOUS METALS</b>	<b>59</b>
9. Gold	61
10. Silver	69
11. Platinum and Palladium	79
12. Special Vehicles for Investing in Precious Metals	89
<b>PART 4: INVESTMENT CHOICES</b>	<b>95</b>
13. The Basics of Futures Markets	97
14. The Basics of the London Metal Exchange	109
15. The Basics of Investing in Mining and Metals Equities	115
16. An Introduction to Options on Equities and Futures	127
<b>Appendix The Top 19 Metals</b>	<b>137</b>
<b>Glossary</b>	<b>139</b>
<b>Index</b>	<b>153</b>

# **AN INTRODUCTION TO METALS**

---



# Why Metals?

---

**I**n all of my years as an economist, researcher, investor, businessman, and entrepreneur, I've never found an investment arena that offers as much intellectual challenge and as much potential financial reward as metals. Metals—copper, aluminum, nickel, platinum, and gold, just to name a few—are the backbone of the world economy. These and other metals are essential components in the capital equipment necessary for the functioning of any modern economy. Metals are key ingredients in many of the items we take for granted—autos, airplanes, telephones, computers, electronics equipment, household appliances, and even ballpoint pens.

## **CHANGE EQUALS OPPORTUNITY FOR INVESTORS**

The 1990s has already been and will continue to be a period of immense economic change. The fall of communism in the former Soviet Union and Eastern Europe and the emergence of market-oriented economies have enormous consequences for both the supply and demand of many metals. But this is only one of many ongoing shifts in the global economy

with significant implications for metals markets. Others include:

- increasing numbers of Asian economies which are major industrial powers,
- the new economic dynamism in China,
- the establishment of democratic governments in Latin America and the renewed growth in output and income throughout the region,
- the continued plight of much of Africa and, in particular, the political changes which have taken place recently in South Africa.

Moreover, after the global economic slowdown/recession of the early 1990s, the world economy is now enjoying renewed expansion. These fundamental changes—and the prospect of moderate economic growth in the mature industrial democracies—have uneven but generally positive implications for metals prices over the medium to long-term.

The premise of this book is that metals investing offers even the beginning investor significant profit opportunities. Meanwhile, the more savvy investor who has an understanding of how changes in the global economy may affect each metal market should be able to profit whether prices are rising or falling.

Metals investing need not be complex or difficult. This book will be your guide, telling you what you need to know to start investing successfully in metals. You don't have to be a beginning investor to benefit from the information and guidelines presented in the following chapters. Whether you are a sophisticated individual investor or a professional



fund manager, you will find ideas in this book that will help you improve your performance and enhance your returns.

Although I believe that global economic and political trends will be generally bullish for metals prices through the end of this decade, the purpose of this book is not to predict or forecast the ups and downs in prices for each of the metals discussed. Nor is it my intention to make specific investment recommendations. In a period of rapid economic transition, smart investors must be capable of continually reassessing the fundamentals of each metal market in light of the changing global economic landscape.

## DO IT YOURSELF

My goal is to provide you with a framework for assessing metals markets and price prospects on your own—so that your short-term and long-term investment strategies need never be out of date. For each metal presented in this book, there is a section titled: *Getting Started*. It will give you a foundation for understanding and analyzing each market—where does the metal come from, what is it used for, how to analyze the supply and demand *fundamentals*, and what factors drive the price.

Investors can choose among a wide range of metals and minerals beginning with aluminum and ending with zirconium. One industry reference book lists about 65 metals and minerals in its table of contents. *Getting Started in Metals* does not propose to cover such a wide gamut. Instead, I've restricted the discussion to a small number of major

**fundamentals:**

refer to the actual supply and demand for a metal or commodity as well as the factors that have a direct bearing on trends in supply and demand.

metals that are easily accessible to the average investor through physical ownership, equities, futures, or options.

Throughout this book, certain words appear in italic type. Definitions of these words appear in the glossary which is intended to serve as a permanent desk reference for the investor. Usually, these words are highlighted in italics the first time they appear—but occasionally they may be highlighted again to remind the reader that additional information on its meaning is available. In addition, a brief definition of some words will appear in the outside margin the first time they are used, but all appear in the glossary.

Just the mention of the word metals to many investors conjures up images of speculators and boiler rooms—but metals investing can be sane and sensible. You *can* speculate in metals by trading commodity futures—and for some investors this may be a legitimate approach. But there are *less speculative* ways to participate in this investment sector that are appropriate for even the faint at heart.

It would be misleading to suggest that one investment strategy is right for everybody. Individual investors—depending on their relative wealth, income, financial obligations, age, investment sophistication, and willingness to accept risk—will have differing approaches to and goals from a metals investment program. Similarly, metals investing can be conservative and risk-averse with a long-term perspective—or it can be aggressive and risk-taking with a short-term trading orientation.

Another objective of this book is to help each investor develop the approach that is right for his or her specific circumstances. A conservative investor

might buy a mining company stock on the New York Stock Exchange as a long-term investment. In contrast, an aggressive investor might trade *futures contracts* on a commodity *futures exchange*. Indeed, the vehicles available for metals investors range from mining company equities on both domestic and foreign stock exchanges to purchasing and holding physical metals to trading futures and options contracts.

A selection of the readily available investment vehicles for each metal will be presented so that you can choose the one that's right for you. All of the metals included in this book are readily accessible to the average investor through one or another conventional investment instrument. Later in *Getting Started in Metals*, I'll discuss the basics of investing in the major investment categories and markets—mining and metals equities, U.S. futures markets, the *London Metal Exchange*, *options* on equities and futures, and for precious metals buying coins and *bullion*.

**futures exchange:**

a membership association organized to facilitate the trading of futures contracts.

**London Metal Exchange:**

the physical market in London, England—established in 1882—where a number of metals, including lead, copper, tin, aluminum,—are traded. Also known as the LME, metals prices set by free and open trading on this exchange often serve as benchmark prices around the world.



---

# How to Analyze Metals Markets

---

**T**horough market analysis is a prerequisite to profitable investing and speculating in metals. Fortunately, the economics of metals markets are simpler than most economists admit. And, for the average investor, common sense and firsthand observation of U.S. and worldwide business trends should be the starting point. Moreover, a watchful eye on technological and other trends that may affect consumption of metals often can provide the basis for the right investment decision.

Remember, the underlying principal of market economics is that *price is a function of supply and demand*—and, when analyzing metals markets, we are also interested in supply and demand. An investor must first understand the recent historical and prospective trends in both supply and demand. I always look for markets where total supply will likely grow more slowly than total industrial demand. Slow growth in supply (or declining supply) and more rapid growth in industry demand most often point to a rising price.

**secondary supply:**

metal that is recovered and recycled from junked metal-bearing items, such as old printed circuit boards, copper plumbing, or scrapped automobiles.

**primary supply:**

refers to metal that enters the market directly from mining activities.

**concentrate:** mine ore or other metal-containing material which has been treated to remove certain unwanted constituents prior to refining to produce metal of high purity.

**smelter:** a company or industrial complex that processes metal-bearing ores or scrap.

We will discuss some basic questions you should be able to answer before investing in any metal market.

## **SUPPLY PROSPECTS**

What are the major sources of supply? In what countries is the bulk of mine production located? Is mining activity in any of these countries currently or potentially affected by local political, economic, or labor problems? For example, at times in the past, copper prices have sometimes rallied sharply because of strikes and labor disruptions in Chile. The future of gold and platinum is already being influenced by political developments in South Africa.

In addition to mine production, *scrap recovery* (that is the recycling of junked metal-bearing items such as aluminum cans or copper electrical wire and contacts) is an important source of metal to the market. In the jargon of market analysts, scrap is often referred to as *secondary supply* while mine production is *primary supply*. In some markets, scrap flows are very sensitive to the metal's price with higher prices encouraging more recycling. In other markets, scrap may never amount to much or it may be a regular and significant component of supply.

In many metals markets—copper, lead, and zinc, for example—mine output is not in marketable form. These mines produce a semi-finished product called *concentrate* which must be smelted and/or refined before it can be sold as usable metal. Hence, the supply of marketable metal may be dependent not only on mining activity (and secondary supply) but on *smelter* and *refiner* capacity and output.

## INDUSTRIAL USAGE

What are the recent and prospective trends on the demand side? How will business conditions and other factors influence offtake in the future? Metals consumption is usually related to trends in industrial production and business activity in the major consuming economies. But changes in technology, environmental regulations, consumer preferences, relative costs, and other factors can also have a significant influence on demand trends. Are any of these developments leading to substitution to or away from the use of one metal or another? Is the intensity of metals usage in any important application changing?

For example, the introduction of auto *catalytic converters* (which require unleaded gasoline) beginning in the 1970s and the drive to remove the metal from paint erased two major end-use markets for lead. At the same time, the catalytic converter created a major new use for platinum and palladium. The rise in silver prices in 1980 led to efforts by the photographic film industry, the largest consuming sector, to reduce the intensity of usage, contributing to the subsequent long-term bear market for silver. Developments of this sort can have a dramatic influence on metals price trends—and they may be as visible to the informed individual investor as they are to the professional market analyst.

As with mine production, geography and regional trends in consumption also can be important. One important development, in recent years, has been the emergence of several Asian nations as important manufacturing centers. This has made them consumers of raw materials—and the rise in

**refiner** or **refinery:** a company or industrial complex that processes raw metals in order to separate the constituents of alloys and/or to remove impurities.

**approved refiner:** a commercial refiner whose branded bars (or product in other forms) are accepted as good delivery by one or another metals or futures exchange.

**catalytic converters:** the pollution control devices used in the exhaust system of most automobiles. Platinum and palladium serve as the catalysts in the chemical conversion of harmful auto emissions to nontoxic gases.

business activity and, hence, personal income has also created new markets for finished consumer and capital goods. Rapid industrialization of many previously backward or developing countries is now a key factor in the analysis of metals markets and the forecasting of metals prices.

### **FACTORING IN THE EAST BLOC**

Over the next decade, developments in the former Soviet Union, other former East Bloc countries, and China undoubtedly will also have an important bearing on metals markets and prices. These countries are both big miners and big consumers of many metals. The breakdown in the economies of Russia and the other members of the former Soviet Republic is already disrupting mine production of gold, platinum, nickel, and other metals with probable medium- to long-term consequences. In the short run, however, the need for hard currency led to accelerated sales of many metals in 1990 and 1991, inflating world supplies and depressing prices early in the decade.

Industrial production in the former Soviet Union has also collapsed, leading to a sharp drop in domestic metal consumption, freeing up additional supplies for export or reducing import demand for metals which are not mined in sufficient quantities. Over the years, depending on the pace of economic recovery and reconstruction, demand for many metals will revive—and eventually could surpass previous requirements.

China is another “wild card” in the supply/demand equation for many metals. The country’s



huge population and its relatively rapid pace of economic growth and industrialization makes the People's Republic of China a very important consumer of many metals. Imports and sometimes big buying binges have occasionally in the past had a profound influence on world metals markets and prices. Sometimes when prices are rising—for copper, as an example—one need look no further than China for the explanation.

## THE BOTTOM LINE

The bottom line for metal market analysts is the *surplus* or *deficit*. By definition, a surplus arises during a given time period when total supplies entering the market from mine production, scrap, and net sales exceed industrial consumption. The result is a buildup in stocks or inventories held by dealers, refiners, speculators, or other investors. At other times, total supplies may be insufficient to satisfy current consumption and the market is in deficit. The gap between industrial demand and current supply is met by drawing down stocks or inventories.

Professional metals analysts often measure estimated worldwide stocks in terms of the number of weeks of consumption that can be supported by these inventories. As a do-it-yourself analyst, you might do the same thing by simply dividing annual consumption by 52—and then dividing your estimate of stocks by this quotient.

Sometimes these stocks are known and visible in the sense that they appear in exchange warehouses and are reported regularly in published statistics.

**surplus:** in commodity market fundamental analysis, refers to the excess of total supply over industrial or commercial noninvestment demand.

**deficit:** refers to a situation in a commodity market where supplies are insufficient to satisfy industrial noninvestment demand.