

**BESTSELLING AUTHOR OF *WHAT WORKS ON WALL STREET***

# INVEST

**"One of the year's best  
investing books..."**

**—Forbes Magazine**

**"...excellent reading  
for all stock investors..."**

**—Investor's Business Daily**

# LIKE THE BEST

## USING YOUR COMPUTER TO UNLOCK THE SECRETS OF THE TOP MONEY MANAGERS

- Easy-to-Follow Computer Templates
- Practical Steps to Help You Emulate the Portfolios of Top Managers

**Includes  
FREE  
Value Line  
Software**

# JAMES P. O'SHAUGHNESSY

# **Invest Like the Best**

**Using Your Computer to Unlock the  
Secrets of the Top Money Managers**

**James P. O'Shaughnessy**

**McGraw-Hill**

**New York San Francisco Washington, D.C. Auckland Bogotá  
Caracas Lisbon London Madrid Mexico City Milan  
Montreal New Delhi San Juan Singapore  
Sydney Tokyo Toronto**

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

O'Shaughnessy, James P.

Invest like the best : using your computer to unlock the secrets  
of the top money managers / by James P. O'Shaughnessy.

p. cm.

ISBN 0-07-047984-4 (HC) ISBN 0-07-913754-7 (PBK)

1. Investment analysis—Data processing. 2. Finance, Personal—  
Data processing. 3. Portfolio management—Data processing.

I. Title.

HG4521.O83 1994

332.6'0285'536—dc20

93-41389

CIP

**McGraw-Hill**

*A Division of The McGraw-Hill Companies*



Copyright © 1994 by James P. O'Shaughnessy. All rights reserved.  
Printed in the United States of America. Except as permitted under the  
United States Copyright Act of 1976, no part of this publication may be  
reproduced or distributed in any form or by any means, or stored in a  
data base or retrieval system, without the prior written permission of  
the publisher.

4 5 6 7 8 9 0 DOC/DOC 9 9 8 7 6 5 (HC)  
3 4 5 6 7 8 9 0 DOC/DOC 9 0 2 1 0 9 8 (PBK)

ISBN 0-07-047984-4 (HC)

P/N 048247-0

Part of ISBN 0-07-913754-7 (PBK)

*The sponsoring editor for this book was Caroline Carney, the editing  
supervisor was Fred Dahl, and the production supervisor was Donald F  
Schmidt. It was set in Palatino by McGraw-Hill's Professional Book Group  
composition unit.*

*Printed and bound by R. R. Donnelley & Sons Company*



This book is printed on recycled, acid-free paper containing a  
minimum of 50% recycled, de-inked fiber

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 service. If  
legal advice or other expert assistance is required, the services  
of a competent professional person should be sought.

—From the declaration of principles jointly adopted by a committee of  
the American Bar Association and a committee of publishers.

# Preface

Imagine yourself in a room with the quarterly reports for 1600 companies. Assuming each of the 6400 reports is about an eighth of an inch thick, stacking them up would build a 66-foot-high tower of information! The reports would include myriad data on the companies, such as earnings, dividends, stock prices, and price-to-earnings ratios. If each report covered just 59 individual pieces of information for each of the 1600 stocks, you'd have more than 377,600 different pieces of data, *just for one year*.

Now imagine your response if your boss walks into the room and tells you to sift through each of these reports and isolate all the stocks that meet just four criteria, telling you to make sure that *only* the stocks that meet *each* of the four criteria are included. You'd probably quit on the spot! Isolating a handful of stocks from 1600 is overwhelming for most people.

## **A New Age on Wall Street and Main Street**

But it is not overwhelming for a computer. Scanning the 377,600 bits of information on the 1600 stocks and picking only the stocks that meet all your criteria is simple for a computer. The task is com-

pleted before you can take a sip of water. What used to take armies of stock analysts weeks of research to accomplish can now be executed in minutes by an individual using a computer. The leverage a computer gives an individual is astounding. In the comfort of your home, you can create powerful stock-picking models that are every bit as good as those used by Wall Street's most highly paid and respected professionals.

Top stock pickers do much better than the market because they've discovered a superior stock selection method: Their portfolios beat the market because they are filled with stocks that are *very different* from the market. These stocks are different not necessarily in terms of the types of businesses the issuing companies are engaged in, but very distinct in terms of the factors, or underlying characteristics, like earnings, dividends, and growth rates, that define the stocks in the portfolio.

Let's say your boss walks into the room stacked with quarterly reports, pulls out the reports for 30 companies held by a top-performing mutual fund, and tells you it's your job to demonstrate exactly how those 30 companies differ from the market as a whole.

Without a computer, you couldn't do it. A computer gives you the power to quickly and precisely discover how these 30 stocks differ. By entering the 30 stocks into a database like Value Line's Value/Screen III, you can see exactly how they differ from the market and what rules, or model, guided the person putting the portfolio together.

What works for these 30 stocks works with portfolios built by anyone, including the masters of the trade. *By putting the portfolios of great managers on a computer, you can quickly analyze their stocks to see which factors, or underlying characteristics, they most value. With this information, you can develop a stock-picking model that scans the vast amounts of information in the computer database, selecting only the stocks that consistently meet the master's standards. Indeed, you can simply use their standards as a starting point, moving a step beyond to design models that have a greater clarity, simplicity, and precision than the master's own portfolio.*

## **Do as They Do, Not as They Say**

If you've read other books on the stock market, you know how confusing and conflicting the advice can be. Reading some of

the thousands of books on the market could leave you completely disoriented, thinking the stock market is hopelessly complicated and mysterious. *Invest Like the Best* lets you avoid this confusion by giving you the tools to see exactly how top managers put together portfolios and then showing you how to mirror them by using their favorite factors.

By designing your models around what the pros actually *do*, rather than what they *say* they do, you filter out all extraneous information and superstitions, leaving only relevant data for the purpose at hand: designing a winning portfolio. This is important, since often there's an enormous difference between what someone *says* they do and what they *actually* do. According to studies done by Paul Slovic, a respected researcher of human cognition, the emphasis that brokers and other market professionals initially *said* they put on various inputs varied significantly from what they *actually* used when buying stocks. Moreover, while they said they used a huge number of variables when picking stocks, they actually used only a few. Indeed, if you study the techniques used by the greatest investors throughout time, you'll find that most of them used simple, elegant, and direct strategies *consistently*.

## **Great Managers Act Consistently**

Yet only a handful of investors beat the market over the long term because few have the discipline to consistently implement a superior investment strategy. If you learn only one thing from this book, it should be that all managers with long-term success in the stock market made it to the top by consistently using a superior investment strategy. John Neff built the Windsor fund, one of the most successful value funds, by sticking with his strategy of buying undervalued companies with low price-to-earnings ratios. He never once deviated from what mutual fund rating service Morningstar calls "his extremely disciplined and patient approach ... [even] when huge weightings in financial and cyclical issues led to disastrous results in 1990, he held on."

Neff is a great investor because he has the intelligence to understand that, no matter how superior his investment ideas are, they won't do him any good if he second-guesses them.

## The Four Horsemen

Refusing to act emotionally and second-guess your methods is one of the toughest assignments investors face. Most fail. The four horsemen of the investment apocalypse are Ignorance, Greed, Fear, and Hope. These four are responsible for larger losses than any single economic depression ever caused. Only Ignorance is easily corrected. It's also the only one of the four that isn't an emotion. By understanding exactly how the masters make their stock selections, you'll be well on your way to slaying Ignorance. Removing Ignorance lets you tame the other three and move on to outstanding investment performance.

After reading *Invest Like the Best*, you'll:

- Know how to uncover the strategy of *any* money manager and take what you've learned to create a computerized stock-picking program that consistently beats the market and the portfolios of the nation's top stock-picking gurus.
- Know which factors all top-performing managers of any given style share and how to use them to develop outstanding portfolios.
- Be able to systematically review any investment strategy, be it from a book or a broker. You'll see how it performed in the past and how it's likely to perform in the future. Moreover, you'll understand how risky it is, and whether or not the risk is at a level you can tolerate.
- Know how to use factor profiles to avoid mutual funds or money managers that are headed for disaster.
- Never again make a random, unplanned purchase of a stock or a mutual fund based on a hunch, tip, or untested recommendation. You'll understand immediately if a stock fits your criteria and if it would make a good addition to your portfolio.
- Know how to unite the best of two styles of investing to create a high-yielding portfolio that also has tremendous capital appreciation potential, while keeping risk in line with the market as a whole.
- Have the power of knowledge and the ability to act with conviction. You'll see how it works for the pros, and you'll know it can work for you.

## **Acknowledgments**

I'm deeply indebted to my wife, Melissa, for all her help on this book. Her summa cum laude degree in journalism came in especially handy when it was time to edit and rewrite the manuscript. Without her expert and thorough hand, this book could never have been finished.

Thanks also go to Caroline Carney, my editor at McGraw-Hill, for seeing the promise of this book and championing it at every turn. Thanks also to my office staff, especially Cheryl Clifford and Jennifer O'Doherty, for putting up with me during the many hours I bothered them while combating writer's block.

*James P. O'Shaughnessy*



# Value/Screen III: \* A Quick Start Guide for IBM and Compatibles

This is a quick start “crib sheet” so that you can start using the companion disk right away. This requires a high-density disk drive, a hard disk, and at least 640K of memory.

To use this disk, type VS at the A: > prompt.

## **Main Functions**

- A. Stock Selection (Data Base Screening)
- B. Stock Report
- C. Statistical Analysis
- D. Portfolio Management

\*Value/Screen II was used to prepare this manuscript, but the latest version is Value/Screen III. The methods and system described in the book, however, remain the same.

## Function Keys

- Esc** (ESCAPE) Returns you to the previous screen
- F1** Help.
- F2** Executes a command.
- F3** Save/Recall/Delete Criteria
- F4** Save/Recall/Delete Lists
- F5** View Screening Results
- F6** Produces the User Define Variables from the Screening mode. Merges two selected ticker lists in Create-Edit Ticker List mode.
- F7** Generates a Single Ticker Report
- F8** Produces a histogram showing frequency distribution for selected variable in the Screening mode.
- F9** Allows you to insert a line of data when screening, preparing reports, or editing portfolios.
- F10** Deletes a line of data when screening, preparing reports, or editing portfolios.

## Special Keys

**+ and -** The plus and minus keys toggle through alternative responses while screening the database.

**Home, then Ctrl and F10 simultaneously** Clears all data entered on your screen.

**Alt C** Changes the background color on your screen.

## News About Value/Screen III

Pressing **N** from the Main Menu provides you with information on Value/Screen. This information comes from the README file, which provides a Business Summary on Turner Broadcasting Systems and pricing information on the demonstration disk.

## A Sample Screening

From the Main Menu, press **S** to select Screen Database and type the following:

1. **M1** Recent Price **Enter** The cursor moves to the right.
2. Use the + or – key to select >, and press **Enter**. The cursor moves to the right.
3. Type **20** and press **Enter**.
4. Using the same method enter:  
**M4** Current P-E ratio < (less than) 20.  
**M9** Market Cap. < (less than) 500 (\$mill).  
**G5** Projected EPS Growth > (greater than) 20.
5. Press **F2** to see the number of stocks passing this test. Press **F5** to view the names of the companies. After viewing the list, press **Esc** twice to return to the Main Menu.

## Producing Reports in Value/Screen III

Selecting **R** from the Main Menu allows you to select different reports. Tabular, Portfolio, Statistical Summary, and Comparison reports are all available from the Reports Submenu.

### Reporting on a Screened List Using a Tabular Report R

The Tabular Reports feature allows you to easily construct reports containing columns of stock data.

1. Once in the Tabular Report screen, press the + or – key to toggle through the various report formats. For demonstration purposes select **SCREEN** as the method for the report generation and press **Enter**. The cursor moves to the right.
2. Type the variables for your report as follows:  
**11** Company Name **Enter**  
**12** Ticker Symbol **Enter**  
**M1** Recent Price **Enter**  
**M4** Current P-E Ratio **Enter**  
**H9** 5-year Dividend Growth **Enter**

Once all the variables are selected, choose a "Ticker list" or a "Screened list" to report on. If the top of your screen reads "Tabular Report on: Last Screening," the program will produce the Tabular Report based on the results of the last ticker list used for screening.

You may select a previously saved ticker list by pressing **F4** and recalling a list.

Press **F2** to generate and view this report. After viewing, press **Esc** twice to return to the Main Menu.

## **Obtaining Single-Stock Reports**

Pressing **F7** from the Screen Database function produces a Single Ticker Report. Type the ticker symbol **AAPL** and press **Enter**. The cursor moves up. Toggle to the desired format **SCREEN** or **PRINT** and press **F2**. You may use your arrow keys to view the entire report. After viewing all of the information for Apple Computers, Inc., press **Esc** twice.

## **Exporting Reports as wks and Text Files**

Creating a report in any of these formats will allow you to export information for use in other programs, such as spreadsheet, database, or text editing programs. Use the **+** or **-** key to toggle to **FILE: WKS** and press **Enter**. **WKS** files are commonly used in spreadsheet programs. Press **F2**, name the file, and press **Enter**. After the report has been calculated, the program returns to the Tabular Report screen. A new file has been created, and can be found in the program's directory.

# Contents

Preface	xiii
Value/Screen III: A Quick Start Guide for IBM and Compatibles	xix

## **1. The Underlying Secret of Portfolio Performance** **1**

The School of Investing Determines Which Factors You Value	3
It's Not the Stock, It's the Style and Factors	5
A Manager's Style Determines His Performance	8
A Mutual Fund's Style and Factors Determine Its Performance	9
Portfolios with Similar Factors Have Similar Performance	10
Imitating the Style of a Selected Portfolio	15
Emulating the Best Managers	19

## **2. The Factors That Determine Investment Performance** **21**

The Ratings & Estimates Section	22
Some Factors Coincide	25
The Market Data Section	26
The Historical Measures Section	28
The Fiscal Year Data Section	32
Growth Projections	33

The Identification Section	36
The User Defined Section	37
Additional Uses	40
Factor Profiles Overlap	40

### **3. The Secrets of a Master 43**

A Simple, Easy-to-Use Method	43
Using Morningstar Mutual Funds to Find the Stocks	44
Who Should You Analyze?	44
The Best-Performing Mutual Fund	45
Sizing Up CGM	45
Moving to Value/Screen	46
Creating the Portfolio	47
Opening the Ticker List	47
Doing a Factor Analysis on CGM's Portfolio	48
The Market Data Section	51
The Historical Measures Section	52
The Fiscal Year Data Section	53
The Growth Projections and Identification Sections	54
The User Variables Section	55
Reviewing the Most Important Factors	57
Identifying the Key Factors	57
Secondary Factors	59
Mysterious No Longer	59

### **4. Making the Best Better 61**

Reviewing CGM's Factor Profile	61
Entering the Factors	61
Looking at Our First Clone Portfolio	63
Looking at the Portfolio's Underlying Factors	65
Examining Performance	66
The Need for a More Stable, Simple Model	67
Designing an Alternate Model	69
Designing the Model	70
The First Factor	70
The Second Factor	72
The Third Factor	73
The Fourth Factor	73
Reviewing the Portfolio	75
Examining Performance	76
Looking Backward and Moving Forward	78
1992 Performance	81
The Portfolio for 1993	81
Ever Onward	83

## **5. The Common Characteristics of Growth Managers 85**

Looking at Morningstar's Top Performers	85
The Kaufmann Fund	86
Kaufmann's Stocks	86
The Delaware Trend Fund	87
The Delaware Trend Fund's Stocks	88
Delaware Trend's Underlying Factors	88
Building a Model to Emulate Delaware Trend	91
Testing the Model	92
Experimenting with the Model	95
Changing the Order of the Factors	97
Looking at the Longer Term	97
Pacific Horizon Aggressive Growth Fund	98
PHAG Fund's Underlying Factors the Same as CGM	99
An Underlying Structure to Top Performers	100
Learning More	104

## **6. Building a Winning Growth Portfolio 105**

Institutional Managers Share Primary Factors	105
Testing Two Models	109
Adding a Big-Cap Bias	109
Historical Performance Results	112
Using Standard Deviations to Compare Risk-Adjusted Returns	113
Tested on Mutual Funds	117
The Importance of Multiyear Studies	117
A Mediocre Manager Masquerading as a Star	119
Looking at Historical Results	120
Always Do a Multiyear Review of Risk-Adjusted Returns	123
Identifying the Worst Potential Performers	123
Factor Analysis Confirms Risk-Adjusted Analysis	124
Continually Testing the Style	125
Putting It All Together	126

## **7. Emulating a Top Value Investor 129**

USAA Mutual Income Stock Fund	130
USAA's Stocks	131
USAA's Key Factors	131
Building a Model	133
Industry Concentration	136
Removing the Utilities	137
Comparing Key and Secondary Factors	138
The Model's Performance History	140
Returns Better Than the Other 16 Funds	142
Learning More	143

<b>8. The Most Profitable Value Factors</b>	<b>145</b>
What About Low Price-to-Earnings Ratios?	145
Low PE Alone Can Be Dangerous	146
Looking at a Down Year	148
A Full Test of the Strategy	152
Comparing High Yield and Low Price-to-Earnings Strategies	152
A Graham and Dodd Approach	155
A Simple Way to Create an Excellent Utility Portfolio	156
Learning More	158
<b>9. Factor Profiles of the Rich and Famous</b>	<b>161</b>
The Janus Twenty Fund	161
Janus Has the Same Key Factors as CGM	162
The Windsor Fund	163
Windsor's Key Factors Similar to USAA Mutual Income	165
The Magellan Fund	169
Strong Similarities Between Factors	174
A Consistent Pattern	175
<b>10. Seeing Through a Broker's Advice</b>	<b>177</b>
Ask the Right Questions	177
Pin Them Down	178
Doing a Factor Analysis of the Broker's Suggestions	180
The Aggressive Recommendations	184
No Broker Is Ideal	186
Avoiding Misfortune	191
<b>11. Newsletters, Books, and Individuals—Separating the Good Few from the Mediocre Many</b>	<b>193</b>
First the Sifting	193
Judge a Book by Its Factors, Not by Its Cover	194
William O'Neil's C-A-N S-L-I-M Method	195
Building a Model	195
The Model's Historical Performance	199
Use This Method to Evaluate All Market Advice	199
Factor Analysis of Individual Stocks	201
A Cohesive Framework	202
<b>12. Getting the Best from All Styles</b>	<b>203</b>
Multimodel Stock Selection	203



Selecting Stocks Meeting the Criteria of Several Models	204
Uniting Models	204
Uniting Styles from Different Schools of Investing	207
Making Risk Tolerable	209
The Best Mix	211

### **13. Avoiding Pitfalls: Four Rules for Investment Success** **213**

Never Use a Single Factor on a Broad Universe	214
Anything Can Work for a Few Quarters	215
Testing Single-Factor Portfolios in Down Years	216
Smaller Databases Are Different	223
Never Use "Strange" Factor Combinations	225
Always Do Multiyear Evaluations	227
Always Look at Risk-Adjusted Returns	229
More Rules	230

### **14. The Final Factor** **231**

The Market Is the Master	232
Reviewing Your Knowledge	232
The Final Factor	233
Obstacles to Investment Success	233
Avoiding Emotional Traps	234
Thinking Historically	235
Using Emotions Profitably	236
It's Up to You	236

<i>Bibliography</i>	239
<i>Index</i>	241