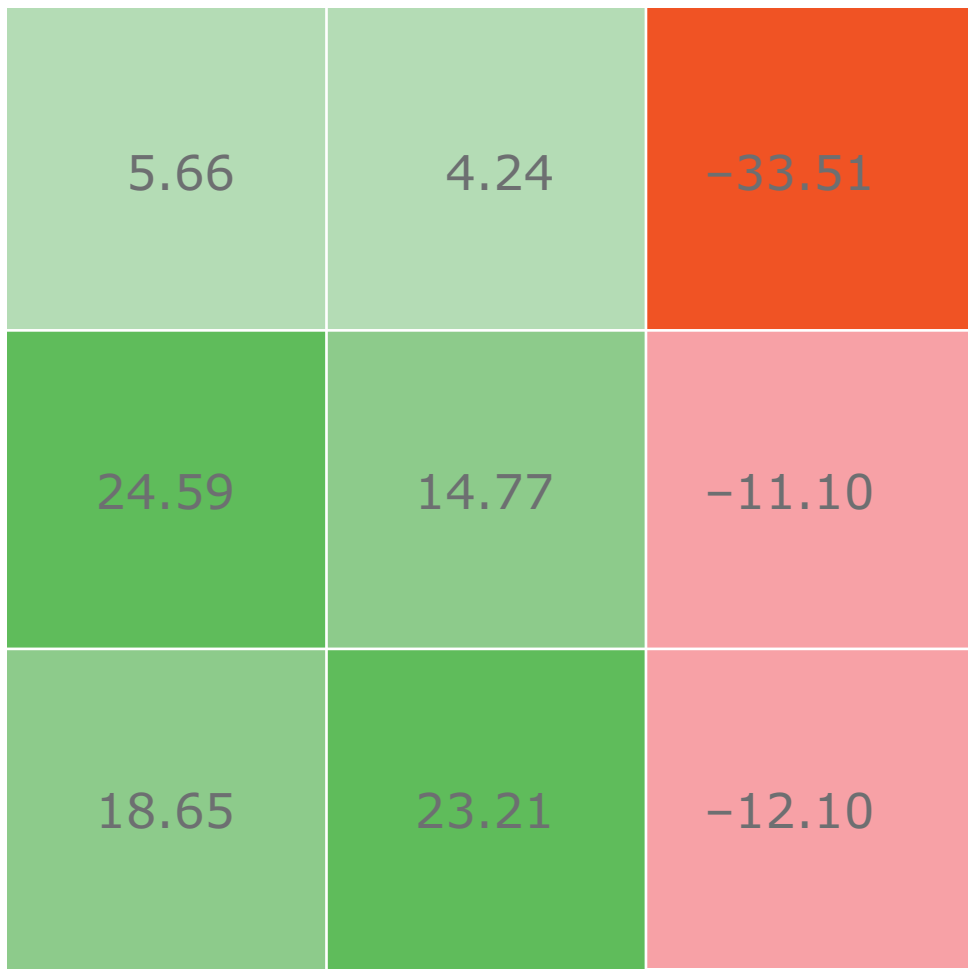
## Morningstar® Indexes



# A New Approach to Indexes



The Morningstar Market Barometer on the cover represents calendar year returns (in percent) for 2000 and 2001.



The U.S. Equity Universe is represented on the back cover.

**Early Indexes**

The earliest stock indexes were created to assess the market's general direction. These gauges moved from very basic indexes like the Dow to more-inclusive market measures such as the S&P 500. Eventually, more broad-based measures of the entire market emerged, such as the Wilshire 5000. Broad indexes work well for simply tracking (or holding) the entire market. But they're insufficient for investors seeking to evaluate more narrow areas of the market or those who desire greater control over their portfolios.

**The Second Generation**

The next wave of indexes included those based on investment style and capitalization characteristics. These indexes allowed for more precise evaluation of the market and portfolio managers. In many cases, they were designed to reflect the behavior of portfolio managers. For example, an index provider might include a "middle-of-the-road" stock in both its value and growth index, or split the company's market cap between two indexes. The rationale is that indexes should represent broader opportunity sets for stock selection, to reflect the way money managers actually invest.

But how sound is the logic of using the collective decisions of managers to define divisions of the market? As a group, managers don't follow a shared discipline, so trying to incorporate their varied approaches will inevitably lead to indexes that represent broad, overlapping opportunity sets. In practice, such benchmarks have diluted the overall distinction between growth and value (especially when a stock's market cap is split between two indexes). The "sameness" of the most commonly used style indexes not only reduces the true diversification potential available to investors, but also makes it harder to discern what portfolio managers are doing.

**Better Mousetrap**

Morningstar believes that investors would be better served by distinct indexes based on the most meaningful differences in stock style and capitalization. This new approach first defines the "playing field" by identifying which fundamental traits of individual securities are associated with which performance patterns. Once defined, the players can be tracked to see which managers add value and, more importantly, how they do so.

Such a system works for all audiences—from individual investors to asset managers. It gives advisors and individuals tools for assessing the performance and characteristics of stocks and funds, and provides a logical basis for precise portfolio construction without unintended gaps or overlap. It also allows for market analysis that investors can easily understand and place in context. Finally, it creates a consistent, common language for these different audiences.

# Presenting the Morningstar Indexes

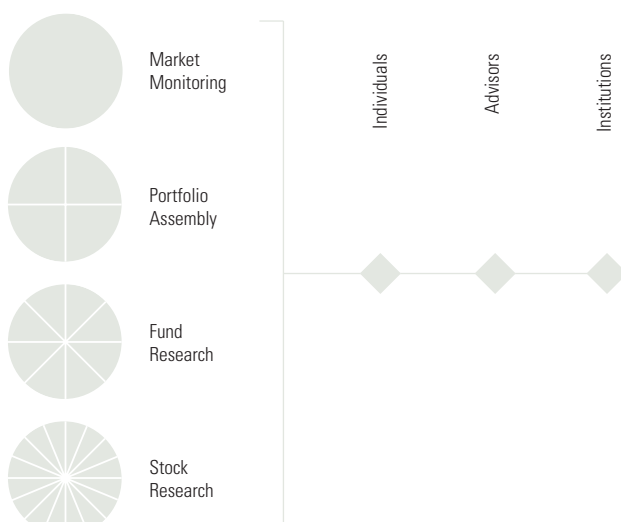
The Morningstar Index family consists of 16 U.S. equity indexes that track the U.S. market by capitalization and investment style. They were built using a comprehensive and non-overlapping approach, based on the methodology of the Morningstar Style Box™.

**Pure, Precise Style Definition**

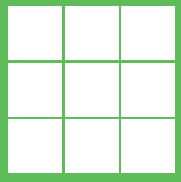
The investment style of each security is determined by using a 10-factor methodology that separately measures both the value and growth characteristics of each security, on the basis of historical and forward-looking elements. Stocks for which neither value nor growth characteristics dominate are assigned to their own category. This treatment permits the creation of value and growth indexes that are both precise and "stylistically pure," better reflecting the accepted definitions of these different metrics to security evaluation and selection.

**A Complete System**

The Morningstar Index family is also designed as an integrated system, providing a framework that links what are generally considered to be separate practices—stock research, fund research, portfolio assembly, and market monitoring. For the first time, a universal index system can be used for all stages of the investment process.



Broad Market Index
U.S. Market

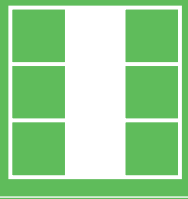


Composite Style Indexes

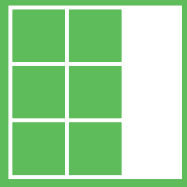
Value



Core



Growth



Cap Indexes

Large

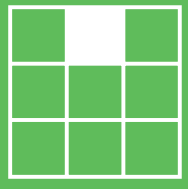


Style Indexes

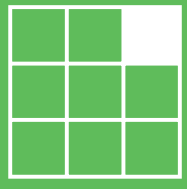
Large Value



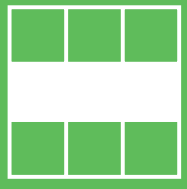
Large Core



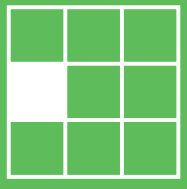
Large Growth



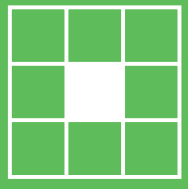
Medium



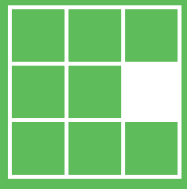
Mid Value



Mid Core



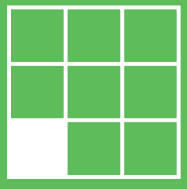
Mid Growth



Small



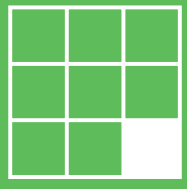
Small Value



Small Core



Small Growth



# How We Built Them

We started by defining the "investable portion" of the U.S. equity market to include all U.S. domiciled companies listed on the major exchanges. Next, we applied liquidity screens to create the Morningstar US Market Index, which targets 97% of the total capitalization of the U.S. market. Finally, applying the methodology used to build Morningstar Style Box we divided this universe by market capitalization and style.

This process creates market cap bands based on percentages of the overall market, rather than a fixed number of stocks or targeted dollar amounts. Investment style is determined by separately measuring the value and growth characteristics of individual stocks. After calculating value and growth scores, each based on five factors, the scores are compared to determine whether value or growth characteristics dominate. If neither dominates, the stock is deemed to be "core."

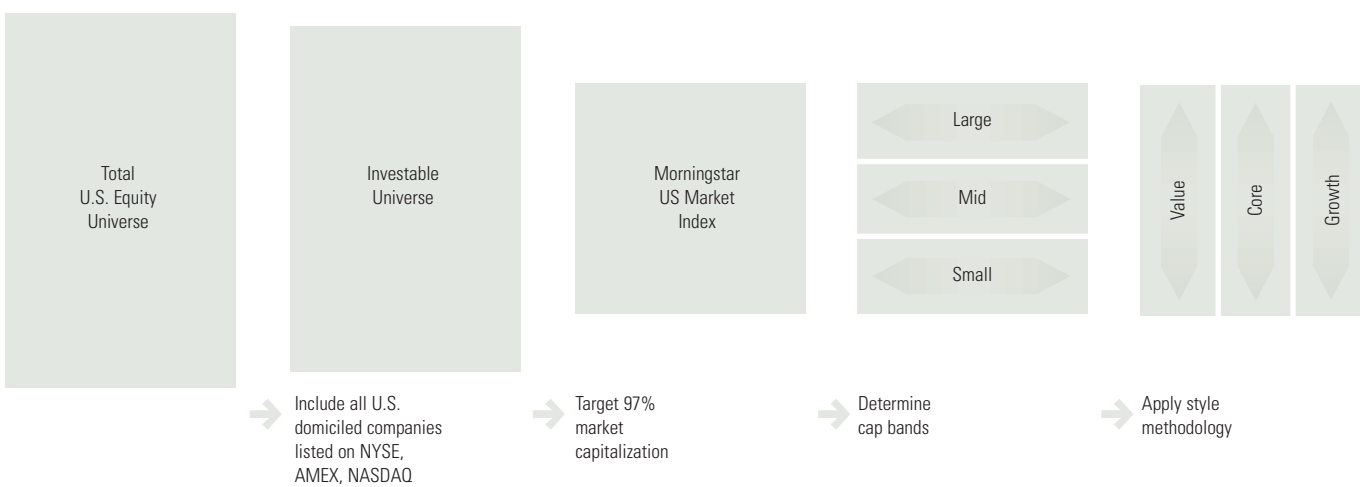
For a complete explanation of Morningstar's index methodology, please see "Construction Rules for Morningstar Indexes" at http://indexes.morningstar.com/Index/PDF/Rulebook.pdf.

Value Score Factors

| | | Weight% |
|---|---|---|
| Forward-Looking | Price-to-Projected Earnings | 50.0 |
| Historical | Price-to-Book | 12.5 |
| | Price-to-Sales | 12.5 |
| | Price-to-Cash Flow | 12.5 |
| | Dividend Yield | 12.5 |

Growth Score Factors

| | | Weight% |
|---|---|---|
| Forward-Looking | Long Term Projected Earnings Growth | 50.0 |
| Historical | Earnings Growth | 12.5 |
| | Sales Growth | 12.5 |
| | Cash Flow Growth | 12.5 |
| | Book Value Growth | 12.5 |



# Best of Breed

The Morningstar Indexes incorporate the best practices of index construction, including:

**Transparent Methodology**
Morningstar Indexes are entirely rules-based, governed by transparent, objective, and clear published rules for security selection and exclusion, rebalancing, and adjustments for corporate actions.

**Broad Market Coverage**
The Morningstar US Market Index achieves broadest possible market representation—approximately 97% of the U.S. market—without sacrificing liquidity and "investability."

**Free-Float Weighted**
Stock weights within each index are based on the available free float of shares outstanding, with total shares outstanding adjusted for institutional holdings and cross-ownership.

**Enhanced Liquidity**
Index liquidity is enhanced by eliminating stocks that have had more than 10 non-trading days in the past quarter or that have a "liquidity score" that falls below the 75th percentile.

**Optimal Rebalancing & Reconstitution**
Quarterly rebalancing and semi-annual reconstitution allow for close mirroring of the market without causing any market disruption or price distortion commonly associated with annual reconstitution.

**Minimal Turnover**
To eliminate unnecessary index turnover caused by short-term variations in security style, stocks are reclassified only if their style or capitalization moves sufficiently beyond minimum thresholds.

**Flexible Cap Bands**
Market cap break points for large, mid, and small are based on the percentage of the overall market, rather than a fixed number of stocks or targeted dollar amounts. This flexible approach automati-cally adjusts to market expansions or contractions, resulting in labeling of large-, mid-, and small-cap bands that stays in line with market perceptions.

# Powerful Index Tools

**Precise Asset Allocation**

Asset allocation is the most important tool investors have for managing risk. It's a major determinant of both the long-term market risk and the overall risk of a portfolio. Diversification with respect to asset classes and the investment styles within each asset class is essential to long-term risk management.

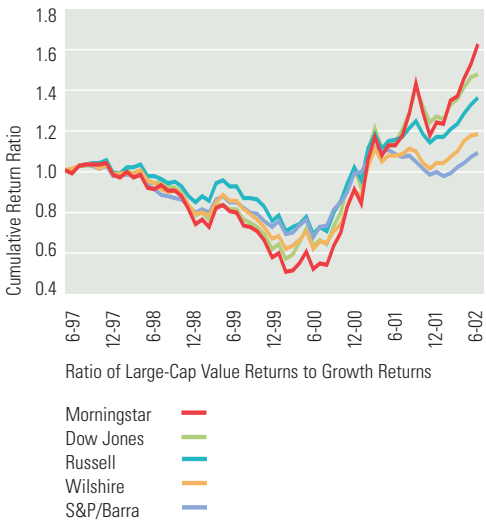
And in the short term, tactical asset allocation—intentional deviations from the long-term asset mix—can create specific style or asset-class risks that must be clearly understood. For example, if portfolio managers believe value will outperform growth over the next month, they might overweight value stocks in an attempt to achieve superior returns.

In such cases, understanding the differences between the relative returns of value and growth stocks is desirable. Morningstar Indexes are designed to draw the strongest possible distinctions between the value and growth styles. Hence, investment vehicles based on them would be ideal tools for implementing all asset allocation strategies.

The chart to the right shows the cumulative value-growth return ratio for large-cap stocks, as defined by five index families, from 1997 to 2002. Across the board, value and growth stocks have generally moved together. However, the strongest distinctions between value and growth stocks were seen with the Morningstar Indexes.

Morningstar Market Barometer: December 6–13, 2002

| Monday | | | Tuesday | | | Wednesday | | | Thursday | | | Friday | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| –1.88 | –1.65 | –3.07 | 1.33 | 1.18 | 1.63 | 0.01 | –0.05 | 0.13 | –0.27 | –0.72 | –0.20 | –0.46 | –1.00 | –2.45 |
| –1.10 | –2.18 | –3.50 | 1.18 | 1.46 | 1.67 | 0.33 | 0.26 | 0.19 | 0.03 | 0.09 | 0.14 | –0.55 | –1.30 | –2.40 |
| –1.53 | –2.20 | –3.83 | 1.37 | 1.84 | 2.09 | 0.19 | –0.03 | 0.09 | 0.42 | 0.54 | 0.19 | –1.23 | –1.56 | –2.54 |




**Robust Attribution Analysis**

Attribution analysis of an equity portfolio requires a classification system that divides stocks into unique and mutually exclusive groups without omissions. Constructed without gaps or overlap, the Morningstar Indexes are perfect for style-based attribution analysis. They can be used to properly assess the role of a manager or fund within a portfolio by allowing precise measurement of performance and gaining insight into how performance was achieved.

**Portfolio Building Blocks**

The Morningstar Indexes are constructed as a complete, non-overlapping system with each index representing a unique opportunity set within a discrete style or capitalization orientation. Investment products based on these indexes form "building blocks" that investors can use to easily construct portfolios without any unintended overlaps or gaps in capitalization or style.

**At-a-Glance Analysis**

The Morningstar Market Barometer provides an innovative, at-a-glance view of the market, allowing instant analysis of performance trends. By rendering each index in varying shades of red and green, according to performance, market movements are clearly revealed. Index performance is easily seen in context and patterns can be quickly discerned.

Morningstar Market Barometer: 3 Years

| 2000 | | | 2001 | | | 2002 | | |
|---|---|---|---|---|---|---|---|---|
| 5.7 | 4.2 | –33.5 | –3.4 | –14.4 | –29.1 | –15.0 | –23.8 | –33.2 |
| 24.6 | 14.8 | –11.1 | 5.1 | 6.1 | –21.6 | –10.0 | –12.4 | –32.5 |
| 18.7 | 23.2 | –12.1 | 18.6 | 14.6 | –12.9 | –8.2 | –14.2 | –36.9 |

Morningstar Market Barometer: 2002

| Q1 | | | Q2 | | | Q3 | | | Q4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.4 | –1.3 | –5.5 | –7.2 | –16.3 | –21.9 | –20.8 | –13.6 | –16.4 | 10.8 | 7.0 | 7.4 |
| 8.6 | 6.1 | –4.9 | –5.4 | –7.2 | –21.2 | –17.2 | –16.9 | –18.1 | 6.5 | 7.2 | 9.3 |
| 12.8 | 6.2 | –6.2 | –3.6 | –7.0 | –20.5 | –16.9 | –19.7 | –25.2 | 2.6 | 6.3 | 11.8 |

# Licensing the Morningstar Indexes

There are a variety of avenues for licencing the Morningstar Indexes:

**Investment Products Creation**

Consistent and stable methodology, objective rules, and a name that evokes trust and confidence among investors worldwide make the Morningstar Indexes perfect vehicles for creating index-linked investment products, such as funds, ETF's and derivatives.

**Data Services and Distribution**

*Real-Time Distribution*

Morningstar offers real-time values for all 16 Morningstar Indexes. Index values are distrib-uted through leading data vendors and can also be found at http://indexes.morningstar.com.

*Back History*

The back history for Morningstar US Market Index and the Cap Indexes are available from December 1991 to the present. The back histories for all other indexes are available from June 1997 to the present.

*Constituent Data Feeds*

Constituent name,weights, prices, market cap as well as free-float values are available daily or monthly. A separate file with details on all corporate actions impacting the index constituents is also available each business day.

*Index Data Feeds*

More than 50 unique data elements including index closing values, total returns, risk statistics, sector breakdown and index level fundamental data are available electronically via FTP downloads or e-mail.

| | |
|---|---|
| Index Values | Price, Total Return |
| Update Frequency | Daily, Monthly |
| Currency | U.S. Dollar, Euro, British Pound and Yen |
| Delivery Formats | XML and ASCII |
| Valuation Ratios | Price/Earnings, Price/Projected Earnings, Price/Book Value, Price/Cash Flow, Price/Sales, Dividend Yield |
| Growth Rates | Historical Earnings, Projected Earnings (I/B/E/S), Sales, Cash Flow, Book Value |

**Internet Tools**

The Morningstar Market Barometer℠ can be incorporated on your website, giving users an intuitive way to understand shifting patterns across the market in real time.

**Contact Information**

To discuss any of these licensing opportunities, please call 312-696-6507.

For more information about Morningstar Indexes visit our website at http:// indexes.morningstar.com.

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