



Fundamental Stock Screening Systems

By John Bajkowski

While investors are divided as to the best investment approach for long-term success, it is generally agreed that once an investment approach is selected it should be followed with a systematic and disciplined passion. For many investors, screening programs help sort through thousands of stocks and identify securities that possess basic qualities indicating that they merit further attention. Screening is the process of applying a filter that includes one or more quantitative parameters (criteria) against a large group of stocks in order to cull out a small set of stocks that share some common characteristics.

Fundamental screening systems also serve as popular frameworks to investigate investment tips in an organized, consistent fashion. Company and industry data within a stock screening system can provide an initial impression of a company and its prospects.

Here, we examine a wide range of stock screening programs and Web tools: four primarily disk-based systems and 15 Web-based tools. The comparison grid on pages 14 through 20 lists information about subscription costs, program features, and basic database content. Table 1 on pages 10 through 12 details the financial statement elements found on each service. Ratings and program strengths and weaknesses are disclosed on page 24. Reviews begin on page 21.

Comparing Screening Services

The most powerful screening systems for individuals traditionally have been stand-alone software programs running on individual personal computers. While this continues to be true, the line between software and on-line services continues to blur. Disk-based tools such as Value Line Investment Survey can operate in an on-line mode that pulls up-to-the-second data from the Web, while the most powerful Web-based tools download programs

onto your computer that help to construct, manage, and run complex screens over the Web. While compromises are inevitable when selecting a screening system, you should be able to locate a few systems that match your budget and needs.

When comparing stock screening services, you should consider the following critical factors:

- the universe of stocks supported by the database,
- depth of stock information,
- flexibility of screening software,
- update frequency and method, and
- ease of use.

Company Universe

Screening dictates that the search process starts with a broad universe of companies. Better screening programs cover a wide range of companies. Some offer substantial coverage that includes Nasdaq National Market and Small Cap companies. Some services also cover Nasdaq Bulletin Board companies, which may be an important consideration if you follow any companies that have been delisted recently. Screening systems offer one of the easiest ways to gather data about smaller firms.

Depth of Information

Screening services vary in the depth of information provided. Some services, such as Morningstar, provide fewer data items for each company and instead depend on summary statistics such as growth rates, rankings and ratings when providing background data. Other services, such as Multex Investor and CNBC on MSN Money, provide both summary statistics and the raw data behind these numbers.

In considering a data service, look not only at the number of variables but also specifically at which statistics are provided. Morningstar and Value Line have proprietary ratings for company growth, profitability, fi-

ancial health, and valuation, which may be more important for some investors than the completeness of the database. Wall Street City extensively combines technical and fundamental factors for screening, while MarketScreen.com is primarily focused on technical factors.

When performing fundamental screening, the information generally falls into the following categories: multiples, historical growth rates, estimates and recommendations, financial ratios, financial statement data, industry comparisons, price and share data, and company information.

Multiples

Multiples are the core variables of many fundamental screens. They relate the current stock price to a tangible company item such as earnings per share or book value per share. Multiples provide an indication of how the market values the company's future prospects. Companies with brighter futures typically trade with higher multiples.

Look for a broad range of multiples covering items such as earnings, book value, cash flow, and dividends. Historical ratios help indicate normal trading ranges and provide a base from which to compare current multiples. Therefore, historical average multiples are a key element when choosing a service.

Historical Growth Rates

Growth rates paint a picture of past company performance and provide an easy way to compare companies. Investors seek out quickly growing firms with the hope that growth will continue to drive the stock price up. Five-year growth rates are normally presented for sales, earnings, and dividends. The more powerful sites have a wider range of growth rates for various time periods. The grid details if benchmarks are provided to help form

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**Table 1. Financial Data Offered by Stock Screening Systems
Number of Quarters (Q) and Number of Years (Y) of Data**

Internet Services															
	Business Week Online	CBS MarketWatch	CNBC on MSN Money	INVESTools	Multex Investor	MarketScreen.com	Morningstar.com	Nasdaq	Quicken.com	Stockpoint	StockScreener	Thomson Investors Network	Wall Street City Pro	Yahoo! Finance	Zacks.com
Income Statement															
Sales	16Qs, 2Ys	4Qs, 4Ys	12Qs, 10Ys	8Qs, 8Ys	16Qs, 5Ys		4Qs, 5Ys	4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Cost of Sales		4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys			4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Gross Income		4Qs, 4Ys	5Qs, 5Ys		5Qs, 5Ys			4Qs, 4Ys		5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys		5Qs, 5Ys	8Qs, 5Ys
Selling & Administrative Expenses		4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys			4Qs, 4Ys		5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Research & Development Expenses		4Qs, 4Ys		8Qs, 8Ys	5Qs, 5Ys			4Qs, 4Ys		5Qs, 5Ys			4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Depreciation, Amortization	6Ys	4Qs, 4Ys	5Qs, 10Ys	8Qs, 8Ys	5Qs, 5Ys		3Ys			5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Operating Income	2Qs, 2Ys	4Qs, 4Ys	5Qs, 10Ys	8Qs, 8Ys	5Qs, 5Ys		5Ys	4Qs, 4Ys		5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys		5Qs, 5Ys	8Qs, 5Ys
Interest		4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys			4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Non-Operating Income/Expenses	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys			4Qs, 4Ys		5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Pretax Income	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys		5Qs, 5Ys			4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Taxes	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys		5Ys	4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys		2Qs, 4Ys	4Qs, 2Ys	5Qs, 5Ys	8Qs, 5Ys
Extraordinary Items	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys				4Qs, 4Ys	5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Net Income	2Qs, 2Ys	4Qs, 4Ys	5Qs, 10Ys	8Qs, 8Ys	5Qs, 5Ys		4Qs, 5Ys	4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
EPS	24Qs, 6Ys	1Y	12Qs, 10Ys	8Qs, 8Ys	16Qs, 5Ys		4Qs, 5Ys	3Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	8Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Dividends	2Qs, 2Ys	1Y	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys		24Qs, 5Ys		1Y	5Qs, 5Ys		2Qs, 4Ys	2Qs, 2Ys	5Qs, 5Ys	
Balance Sheet															
Cash	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys	1Q	4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Accounts Receivable	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys		4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Inventory		4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys		4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Total Current Assets	2Qs, 2Ys	4Qs, 4Ys	5Qs, 10Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys	1Q	4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Net Plant & Equipment	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys		4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Investments	2Qs, 2Ys			8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys		4Qs, 4Ys		5Qs, 5Ys			4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Deferred Charges		4Qs, 4Ys		8Qs, 8Ys		5Qs, 5Ys							4Qs, 4Ys		8Qs, 5Ys
Intangible Assets		4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys		4Qs, 4Ys		5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Total Long-Term Assets		4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys	1Q	4Qs, 4Ys		5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	
Total Assets	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys	1Q	4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Accounts Payable	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys		4Qs, 4Ys		5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Accrued Expenses		4Qs, 4Ys		8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys				5Qs, 5Ys			4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Notes Payable	2Qs, 2Ys	4Qs, 4Ys		8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys				5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Current Portion of Long-Term Debt	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys		4Qs, 4Ys		5Qs, 5Ys			4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Total Current Liabilities	2Qs, 2Ys	4Qs, 4Ys	5Qs, 10Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys	1Q	4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Long-Term Debt	2Qs, 2Ys	4Qs, 4Ys	5Qs, 10Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys	1Q	4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Total Liabilities	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys		4Qs, 4Ys		5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Preferred Stock	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys			4Qs, 4Ys	5Qs, 5Ys		2Qs, 4Ys		5Qs, 5Ys	8Qs, 5Ys
Total Common Equity	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys	1Q	4Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	5Qs, 3Ys	2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Total Liabilities & Owner's Equity		4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys	5Qs, 5Ys	1Q		4Qs, 4Ys	5Qs, 5Ys		2Qs, 4Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 5Ys
Statement of Cash Flows															
Net Cash from Operations	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys		3Ys	4Qs, 4Ys		5Qs, 5Ys		4Ys	4Qs, 4Ys	5Qs, 5Ys	5Ys
Net Cash from Investing Activities	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys			4Qs, 4Ys		5Qs, 5Ys		4Ys	4Qs, 4Ys	5Qs, 5Ys	5Ys
Capital Expenditures	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys		3Ys	4Qs, 4Ys		5Qs, 5Ys		4Ys	4Qs, 4Ys	5Qs, 5Ys	5Ys
Net Cash From Financial Activities	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys			4Qs, 4Ys		5Qs, 5Ys		4Ys	4Qs, 4Ys	5Qs, 5Ys	5Ys
Cash Flow	2Qs, 2Ys	4Qs, 4Ys	5Qs, 5Ys	8Qs, 8Ys	5Qs, 5Ys			4Qs, 4Ys		5Qs, 5Ys		4Ys	4Qs, 4Ys	5Qs, 5Ys	
Free Cash Flow			5Qs, 5Ys				3Ys								5Ys

**Table 1. Financial Data Offered by Stock Screening Systems (con't)
Number of Quarters (Q) and Number of Years (Y) of Data**

	Software Programs			
	Principia Pro for Stocks	Stock Investor	Stock Investor Pro	Value Line
Income Statement				
Sales	8Qs, 5Ys	8Qs, 5Ys	8Qs, 7Ys	20Qs, 11Ys
Cost of Sales		8Qs, 5Ys	8Qs, 7Ys	
Gross Income		8Qs, 5Ys	8Qs, 7Ys	
Selling & Administrative Expenses				
Research & Development Expenses		8Qs, 5Ys	8Qs, 7Ys	
Depreciation, Amortization			8Qs, 7Ys	11Ys
Operating Income		8Qs, 5Ys	8Qs, 7Ys	11Ys
Interest			8Qs, 7Ys	
Non-Operating Income/Expenses				
Pretax Income		8Qs, 5Ys	8Qs, 7Ys	
Taxes			8Qs, 7Ys	
Extraordinary Items			8Qs, 7Ys	
Net Income	8Qs, 5Ys	8Qs, 5Ys	8Qs, 7Ys	11Ys
EPS	8Qs, 5Ys	8Qs, 5Ys	8Qs, 7Ys	20Qs, 11Ys
Dividends	5Ys	8Qs, 5Ys	8Qs, 7Ys	20Qs, 11Ys
Balance Sheet				
Cash	1Q, 2Ys	8Qs, 3Ys	8Qs, 7Ys	1Q, 4Ys
Accounts Receivable			8Qs, 7Ys	1Q, 4Ys
Inventory	1Q, 2Ys		8Qs, 7Ys	1Q, 4Ys
Total Current Assets	1Q, 2Ys	8Qs, 3Ys	8Qs, 7Ys	1Q, 4Ys
Net Plant & Equipment		8Qs, 3Ys	8Qs, 7Ys	
Investments		8Qs, 3Ys	8Qs, 7Ys	
Deferred Charges				
Intangible Assets		8Qs, 3Ys	8Qs, 7Ys	
Total Long-Term Assets	1Q, 2Ys	8Qs, 3Ys	8Qs, 7Ys	
Total Assets	1Q, 2Ys	8Qs, 3Ys	8Qs, 7Ys	11Ys
Accounts Payable			8Qs, 7Ys	1Q, 4Ys
Accrued Expenses				
Notes Payable				
Current Portion of Long-Term Debt				
Total Current Liabilities	1Q, 2Ys	8Qs, 3Ys	8Qs, 7Ys	1Q, 4Ys
Long-Term Debt	1Q, 2Ys	8Qs, 3Ys	8Qs, 7Ys	11Ys
Total Liabilities	1Q, 2Ys	8Qs, 3Ys	8Qs, 7Ys	
Preferred Stock		8Qs, 3Ys	8Qs, 7Ys	11Ys
Total Common Equity	1Q, 2Ys	8Qs, 3Ys	8Qs, 7Ys	11Ys
Total Liabilities & Owner's Equity	1Q, 2Ys	8Qs, 3Ys	8Qs, 7Ys	
Statement of Cash Flows				
Net Cash from Operations	3Ys	8Qs, 5Ys	8Qs, 7Ys	
Net Cash from Investing Activities		8Qs, 5Ys	8Qs, 7Ys	
Capital Expenditures	3Ys		8Qs, 7Ys	11Ys
Net Cash From Financial Activities		8Qs, 5Ys	8Qs, 7Ys	
Cash Flow		8Qs, 5Ys	8Qs, 7Ys	11Ys
Free Cash Flow	3Ys	8Qs, 5Ys	8Qs, 7Ys	

reasonable comparisons and screens.

Estimates & Recommendations

The market is driven by expectations. Display of consensus earnings estimates and buy/hold/sell recommendations are now common, while some services are trying to differentiate themselves with proprietary ratings and valuations.

Consensus estimates are calculated by polling thousands of analysts for earnings estimates of the companies they cover. Services also poll analysts to report their ratings on the overall attractiveness of stocks in an attempt to derive uniform consensus recommendations. These estimates and recommendations allow investors to directly gauge the expectations built into the stock price.

Changes to recommendations and earnings estimates may be as important to study as the actual figures themselves. Look for an indication of recent revisions or surprises.

Valuations try to measure the price attractiveness of a given stock. Some services provide numerical valuation ratings, while others provide price targets. When using valuations it is important to look beyond the actual valuation and determine the assumptions, rationale, and reasonableness behind each company's rating.

Financial Ratios

Ratios help you summarize financial statement data into a format that can be easily manipulated to compare year-to-year changes for a company or to compare one company against another.

Leverage ratios examine the company's use of debt in its financial structure. Effective use of debt can enhance shareholder profitability at the risk of saddling the company with an interest payment that must be made in good times and bad. Common leverage ratios include debt to equity, liabilities as a percentage of assets, and long-term debt as a percentage of capital.

Liquidity ratios try to gauge a firm's ability to meet its short-term obliga-

Key to Abbreviations in Comparison Grid

Ratios:

Leverage:

assets/eq = assets to equity
debt/cap = debt to capital
debt/eq = debt to equity
lt debt/cap = long-term debt to capital
lt debt/eq = long-term debt to equity
liab/assets = liabilities to assets

Profitability:

GM = gross margin
NM = net margin
OM = operating margin
PM = profit margin

ROA = return on assets
ROE = return on equity

Multiples:

P/E = price-earnings ratio
P/B = price-to-book-value ratio
P/S = price-to-sales ratio
P/CF = price-to-cash-flow ratio
P/FCF = price-to-free-cash-flow ratio

Growth Rate Elements:

NI = net income
EPS = earnings per share
BV = book value

tions. While liquidity measures are of greater interest to creditors than equity investors, you may want to glance at these ratios if you are looking for high-yielding stocks. Typical liquidity ratios include the quick ratio and current ratio.

Profitability ratios benchmark company performance and highlight trends when examined over time—as well as indicate strong and weak performance when compared to other firms. Common profitability ratios include return on assets (ROA), return on equity (ROE), gross margin, operating margin, and net profit margin.

Industry Comparisons

Industry comparisons are useful in identifying standout firms. Multiples, growth rates and ratios give you an added measure of information when analyzed in the context of industry norms. Many ratios cannot be examined outside an industry context. Look for programs that provide industry statistics or at least allow you to screen for companies in a similar industry and then analyze those firms as a group. Some systems even allow you to screen for companies outperforming industry norms. Industry multiples may highlight out-of-favor sectors ready for a rebound.

Financial Statement Data

The raw data serves as the basis for the calculation of ratios, growth rates, and multiples. Financial statement data is useful for analyzing a single

firm, but is more difficult to use directly in screening and ranking. Nevertheless, the better sites include enough information from the income statement, balance sheet, and cash flow statement to judge whether the ratios and growth rates properly reflect the company's prospects. Some sites offer practically no raw data, while others provide a rich history. Table 1 details the financial statement information provided by each service. By examining the year-by-year earnings of a firm you can gain a feel for performance consistency and earnings trends (which growth rates often mask).

Price & Share Data

The price and share data describe various market-related aspects of the company's common stock. The extent and detail of historical price data as well as volume data is listed in the comparison grid. Other measures such as beta, relative strength, market capitalization and holdings by insiders and institutions are also noted. If you focus on price momentum, look for enough price data to examine price movement or summary statistics such as relative strength.

Company Information

Company information consists of basic data such as the firm's Web address and phone number, so you can request financial statements or speak to the investor relations department for clarification. Basic company de-

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PRODUCT COMPARISON: FUNDAMENTAL STOCK SCREENING SYSTEMS

	Principia Pro for Stocks	Stock Investor v 3.6	Stock Investor Pro v 3.6	Value Line	Business Week Online	CBS MarketWatch		
Company	Morningstar, Inc.	AAll	AAll	Value Line, Inc.	The McGraw-Hill Companies, Inc.	MarketWatch.com		
Web Address	www.morningstar.com	www.aaii.com	www.aaii.com	www.valueline.com	www.businessweek.com	cbs.marketwatch.com		
Update Schedule	monthly/quarterly	quarterly	monthly CD (weekly Web)	monthly CD, (daily Web)	daily	daily		
Price	\$545/yr./\$395/yr.	\$99/yr. (\$148/yr. non-members)	\$198/yr. (\$247/yr. non-members)	\$570/yr. (1,700), \$995/yr. (6,000)	free	free		
Demo (Cost)	✓ (\$105)	✓ (\$35, \$49 non-members)	✓ (\$50, \$65 non-members)	✓ (free)				
Data Source	Morningstar, Zacks	MarketGuide, I/B/E/S	MarketGuide, I/B/E/S	Value Line	Market Guide, S&P, Telescan, Zacks	BigCharts, Thomson		
Database Content	Number of Stocks/Data Fields	8,000 stocks/600 fields	9,400 stocks/1,300 fields	9,400 stocks/2,200 fields	1,700 or 6,000 stocks/400+ fields	9,000+ stocks/400+ fields	12,000+ stocks/200+ fields	
	Create Custom Data Fields	✓	✓	✓	✓			
	Number of Data Fields for Sorting	600	1,300	2,200	200+	75	10	
	Company Information	Company Web link	✓	✓	✓	✓		
		ADR	✓	✓	✓	✓	✓	
		DRP Plan	✓	✓	✓			
		Industry Grouping	✓	✓ (Market Guide)	✓ (Market Guide, SIC)	✓ (SIC, Value Line-based)	✓	✓
		Description Length	600 characters	75 word avg.	75 word avg.	200 words+	100 words	100 words
	Earnings Estimates	Source	Zacks	I/B/E/S	I/B/E/S	Value Line	Zacks	I/B/E/S
		Quarterly	✓ (2 quarters)	✓ (2 quarters)	✓ (2 quarters)	✓ (4 quarters)	✓ (2 quarters)	✓ (2 quarters)
		Annual	✓ (2 years)	✓ (3 years)	✓ (3 years)	✓ (2 years)	✓ (2 years)	✓ (2 years)
		Growth—Long Term	✓ (5 years)	✓ (5 years)	✓ (5 years)	✓	✓ (5 years)	
		Surprise		✓	✓		✓	
		Revisions	✓	✓	✓		✓	
		Valuation (Source)	✓ (Morningstar)	✓ (program)	✓ (program)	✓ (Value Line)	✓ (S&P, Zacks)	
		Consensus Analyst Recommendations				✓	✓	
		Consensus Analyst Rec.—Changes				✓	✓	
	Ratios	Leverage	debt/eq, debt/cap	debt/eq, lt debt/cap, liab/assets	debt/eq, lt debt/cap, liab/assets	lt debt/eq, lt debt/cap, liab/assets	lt debt/cap, debt/eq	
		Liquidity	current, quick	current, quick	current, quick	current, quick, working capital	current	
		Profitability	ROE, ROA, PM,	ROE, ROA, NM, GM	ROE, ROA, NM, GM	ROA, ROE, PM, NM PM, GM	ROE, PM	ROA, ROE, GM, OM, PM
		Multiples	P/E, P/B, P/S, P/CF, yield	P/E, P/B, P/S, P/CF, P/FCF, yield	P/E, P/B, P/S, P/CF, P/FCF, yield	P/B, P/S, yield	P/E, P/B, P/S, P/CF, yield	P/E, P/B, P/CF
	Growth Rates	Elements	sales, NI, EPS, BV, dividend	sales, GI, NI, EPS, cash flow, div.	sales, GI, NI, EPS, cash flow, div.	sales, cash flow, EPS, bk val., div.	sales, EPS, dividend	
		Periods (Benchmarks)	1-, 3-yr. (industry, S&P)	1-, 3-, 5-, 7-yr. (universe, industry)	1-, 3-, 5-, 7-yr. (universe, industry)	1-, 5-yr. (industry)	1-, 3-, 5-yr.	
		Total/Annualized	✓ (annualized)	✓ (annualized)	✓ (annualized)	✓ (annualized)	✓ (annualized)	
	Price & Share Data	High/Low/Close/Volume	✓ (52-wk.; 5-yr. chart)	✓ (annual 5-yr.)	✓ (monthly 10-yrs.)	✓ (52-wk. high/low/close; 11-yr. avg)	✓ (5 yrs.)	
		Average Volume	✓	✓	✓		✓	✓
		Relative Strength	✓ (1-, 3-mo.; 1-, 3-yr.)	✓ (4-, 13-, 26-, 52-wk.)	✓ (4-, 13-, 26-, 52-wk.)		✓	✓
		MPT Stats	mean, std. dev.	beta, mean, std.dev.	beta, mean, std.dev.	beta, alpha, std. dev.	beta	
Short			✓ (interest, ratio, % float, % out)	✓ (interest, ratio, % float, % out)				
	Market Cap/Float/Employees	✓	✓	✓	✓ (market cap/employees only)	✓ (market cap/employees only)	✓ (market cap only)	
	Insider Holdings	✓ (%)	✓ (%)	✓ (%)	✓	✓		
	Insider Trading		✓ (transactions, shares)	✓ (transactions, shares)	✓ (transactions)	✓	✓	
	Institutional Holdings	✓ (% , number held by funds)	✓ (% , number)	✓ (% , number)	✓ (number)	✓ (% , number)		
	Institutional Trading		✓ (shares)	✓ (shares)	✓ (shares)	✓ (shares)		
Screening	Number of Data Fields for Screening	160	1,300	2,200	350	75	12	
	Any Data Field		✓	✓				
	Against Constant Values	✓	✓	✓	✓	✓	✓	
	Against Other Data Fields		✓	✓	✓			
	Against Industry		✓	✓	✓			
	Save Custom Screens	✓	✓	✓	✓			
	# of Predefined Screens		40	40	35			
Viewing	Browse Table	✓	✓	✓	✓	✓	✓	
	Financial Statement Presentation	total \$, per share, % chg., com. size	total \$, per share, % chg., com. size	total \$, per share, % chg., com. size	total \$, per share	total \$, per share	total \$	
	Individual Company Summaries	✓	✓	✓	✓	✓	✓	
	Charts/Graphs	✓	✓	✓	✓	✓	✓	
Reports	Export to a File	✓	✓	✓				
	Statistical Summaries	mean	high, low, mean, median, std. dev.	high, low, mean, median, std. dev.	high, low, mean			

PRODUCT COMPARISON: FUNDAMENTAL STOCK SCREENING SYSTEMS

	CNBC on MSN Money	INVESTools	Multex Investor	MarketScreen.com	Morningstar.com—Free	Morningstar.com—Premium	
Company	CNBC/Microsoft, Inc.	INVESTools, Inc.	Multex	Hyperfeed	Morningstar, Inc.	Morningstar, Inc.	
Web Address	moneycentral.msn.com/investor	www.investools.com	www.multexinvestor.com	www.marketscreen.com	www.morningstar.com	www.morningstar.com	
Update Schedule	daily	weekly	daily	daily	daily	daily	
Price	free	predefined—free; advanced—\$9.95/mo.	free	\$19.95/mo. or \$199.95/yr.	free with any Internet access	\$11.95/mo. or \$99/yr.	
Demo (Cost)		✓		✓ (screen archives free)		✓ (1 month free)	
Data Source	Disclosure, Hoovers, Media General, Zacks	Market Guide, SimplyStocks.com, Zacks	Market Guide, Multex, Stockpoint	Hyperfeed, Zacks	Morningstar, S&P, Zacks, Disclosure	Morningstar, S&P, Zacks, Dow Jones, Disclosure	
Number of Stocks/Data Fields	8,000+ stocks/1,500 fields	9,400 stocks/68 fields	9,000 stocks/1,000+ fields	12,000+ stocks/200+ fields	8,000+ stocks/400+ fields	8,000+ stocks/600 fields	
Create Custom Data Fields			✓				
Number of Data Fields for Sorting	200	68	84	70	19	125	
Company Information	Company Web link	✓	✓		✓	✓	
	ADR	✓		✓	✓	✓	
	DRP Plan				✓	✓	
	Industry Grouping	✓ (Media General)	✓	✓ (Market Guide, SIC)		✓ (Morningstar)	✓ (Morningstar)
	Description Length	500 words	100 words	6 sentences	100 words	100 words	500 words
Earnings Estimates	Source	Zacks	Zacks	Multex	Zacks	Zacks	
	Quarterly	✓ (2 quarters)	✓ (1 quarter)	✓ (2 quarters)	✓ (2 quarters)	✓ (2 quarters)	
	Annual	✓ (2 years)	✓ (2 years)	✓ (2 years)	✓ (2 years)	✓ (2 years)	
	Growth—Long Term	✓ (5 years)	✓ (5 years)	✓ (5 years)		✓ (5 years)	✓ (5 years)
	Surprise	✓		✓	✓	✓	✓
	Revisions	✓		✓	✓	✓	✓
Valuation (Source)	✓ (Camelback Research)					✓ (Morningstar)	
Consensus Analyst Recommendations	✓	✓	✓		✓	✓	
Consensus Analyst Rec.—Changes	✓		✓		✓	✓	
Ratios	Leverage	debt/eq	debt/eq, liab/assets	debt/eq, lt debt/eq		debt/eq	debt/eq
	Liquidity	current, quick	current, quick	current, quick		current	current
	Profitability	ROE, PM, NM, GM	ROE, ROI, PM, GM	ROE, ROA, GM, OM, PM		ROE, ROA, PM	ROE, ROA, PM
	Multiples	P/E, P/B, P/S, P/CF, yield	P/E, P/B, P/S, P/CF, yield	P/E, P/B, P/S, P/CF, P/FCF, yield	P/E, yield	P/E, P/B, P/S, P/CF, P/FCF, yield	P/E, P/B, P/S, P/CF, P/FCF, yield
Growth Rates	Elements	sales, EPS, book value, dividends	sales, EPS, profit margin	sales, EPS, dividends, cap spending	EPS	sales, EPS, book value, dividends	sales, EPS, book value, dividends
	Periods (Benchmarks)	1-, 5-yr.	✓ (TTM; 3-, 5-yr.)	Qtrly.; TTM; 3-, 5-yr. (industry)	1, 5-yr.	5 yrs. of year-by-year; 3 yr. (indexes)	5 yrs. of year-by-year; 3 yr. (indexes)
	Total/Annualized	✓ (annualized)	✓ (annualized)	✓ (annualized)	✓ (annualized)	✓ (annualized)	✓ (annualized)
Price & Share Data	High/Low/Close/Volume	✓ (daily for up to 30 yrs.)	✓ (latest close)	✓ (5-yr. chart)	✓ (5 yrs.)	✓ (chart 30 yrs.)	✓ (chart 30 yrs.)
	Average Volume	✓	✓	✓	✓		
	Relative Strength	✓ (1-wk.; 1-, 3-, 6-, 12-mo.)	✓ (4-, 52-wk.)	✓ (4-, 13-, 26-, 52-wk.)	✓	✓	✓
	MPT Stats	beta		✓			
	Short			✓ (interest, ratio)			
Market Cap/Float/Employees	✓ (market cap/employees only)	✓ (market cap only)	✓	✓ (market cap only)	✓	✓	
Insider Holdings	✓	✓ (%)	✓ (%)	✓ (%)	✓ (% , number)	✓ (% , number)	
Insider Trading	✓	✓ (buy, sell, net trades)	✓ (net trades)	✓	✓	✓	
Institutional Holdings	✓	✓ (name, %, number)	✓ (% , number)	✓ (%)	✓ (% inst'l held by mutual funds)	✓ (% , number)	
Institutional Trading		✓ (net trades)	✓ (net trades)			✓	
Screening	Number of Data Fields for Screening	200	68	84	70	19	125
	Any Data Field		✓	✓			
	Against Constant Values	✓	✓	✓	✓	✓	✓
	Against Other Data Fields	✓		✓			
	Against Industry	✓			✓		✓ (S&P 500)
	Save Custom Screens	✓	✓	✓	✓		
	# of Predefined Screens	12	9	10	80+	7	7
Viewing	Browse Table	✓	✓	✓	✓	✓	
	Financial Statement Presentation	total \$, per share	total \$	total \$, per share, % change	total \$	total \$, per share, % chg., com. size	total \$, per share, % chg, com. size
	Individual Company Summaries	✓	✓	✓	✓	✓	✓
Reports	Charts/Graphs	✓	✓ (extra cost)	✓	✓	✓	
	Export to a File	✓		✓		✓	
Statistical Summaries	✓		✓			✓	

PRODUCT COMPARISON: FUNDAMENTAL STOCK SCREENING SYSTEMS

	Nasdaq	Quicken.com	Stockpoint	StockScreener	Thomson Investors Network	Wall Street City Pro
Company	Nasdaq	Intuit Inc.	Stockpoint	Hoover's, Inc.	Thomson Financial Services, Inc.	Telescan, Inc.
Web Address	www.nasdaq.com	www.quicken.com	investor.stockpoint.com	www.stockscreener.com	www.thomsoninvest.net	www.wallstreetcity.com
Update Schedule	daily	daily	daily	daily	monthly	daily
Price	free	free	free	free	\$34.95/yr.	free to \$9.95/mo.
Demo (Cost)						✓ (first 30 days free)
Data Source	DataJungle, Financial Insight, I/B/E/S, Thomson, Validea	Media General, S&P, Zacks, Bus. Wire, PR News, Reuters, Vickers	Market Guide, Multex	Hoover's, Media General	First Call, CDA, Spectrum, Media General	S&P Comstock, Zacks, Market Guide
Number of Stocks/Data Fields	8,000+ stocks/1,000+ fields	9,600+ stocks/1,000 fields	9,600+ stocks/1,000 fields	9,000+ stocks/22 fields	9,000+ stocks/500+ fields	14,000 stocks/1,000 fields
Create Custom Data Fields						
Number of Data Fields for Sorting		8	34	22		1
Company Information	Company Web link	✓	✓	✓		
	ADR	✓				
	DRP Plan				✓	
	Industry Grouping	✓	✓ (S&P)	✓	✓	✓
	Description Length	100 words	40 words	100 words	100 words	one line
Earnings Estimates	Source	I/B/E/S	Zacks	Multex	First Call	Zacks
	Quarterly	✓ (6 quarters)	✓ (2 quarters)	✓ (2 quarters)		✓ (last and current)
	Annual	✓ (2 years)	✓ (2 years)	✓ (2 years)		✓ (2 years)
	Growth—Long Term	✓ (5 years)	✓ (5 years)	✓ (5 years)		✓ (1 year)
	Surprise	✓	✓	✓		✓
	Revisions	✓	✓	✓		✓
Valuation (Source)	✓ (I/B/E/S)	✓ (Media General)				✓ (Telescan)
Consensus Analyst Recommendations	✓	✓	✓		✓	✓
Consensus Analyst Rec.—Changes		✓	✓		✓	✓
Ratios	Leverage	liab/assets, liab/eq, liab/cap	debt/eq, assets/eq	debt/eq, lt debt/eq	debt/eq	lt debt/eq
	Liquidity	current, quick, cash	current, quick	current, quick	current	current, quick
	Profitability	ROE, GM, OM, PM	ROE, ROA	ROA, ROE, GM, OM, PM	ROE, PM	ROE, PM, NM, GM
	Multiples	P/E	P/E, P/S, yield	P/E, P/S, P/B, P/CF, yield	P/E, P/B, yield	P/E, P/B, P/S, P/CF, yield
Growth Rates	Elements	sales, net income	sales, EPS, book value, dividends	sales, EPS, dividends	sales, EPS, dividends	sales, EPS, book value, dividends
	Periods (Benchmarks)	5-yr. (industry)	1-, 3-, 5-, 10-yr. (industry)	1-, 3-, 5-yr. (industry, S&P)	✓ (5-yr.)	5-yr. (industry)
	Total/Annualized	✓ (annualized)	✓ (annualized)	✓ (annualized)		✓ (annualized)
Price & Share Data	High/Low/Close/Volume	✓ (chart 10 yrs.)	✓ (5-yr. chart)	✓ (5-yr.)		✓ (52-wk. high, low/daily close)
	Average Volume			✓		✓
	Relative Strength		✓	✓ (4-, 13-, 26-, 52-wk.)		✓ (5-, 200-day; 10-wk.)
	MPT Stats	beta		beta		beta
	Short		✓	✓		✓
	Market Cap/Float/Employees	✓ (market cap only)	✓ (market cap only)	✓ (market cap/employees only)	✓ (market cap/employees only)	✓ (market cap/employees only)
Insider Holdings	✓ (% , number)	✓	✓ (% , number)		✓	✓
Insider Trading	✓	✓	✓		✓	✓
Institutional Holdings	✓ (% , number)	✓	✓ (% , number)		✓	✓
Institutional Trading			✓		✓	✓
Screening	Number of Data Fields for Screening	9	41	34	22	18
	Any Data Field				✓	
	Against Constant Values		✓	✓		✓
	Against Other Data Fields					
	Against Industry					
	Save Custom Screens			✓		
	# of Predefined Screens	9	6	10	7	10
Viewing	Browse Table	✓	✓	✓		✓
	Financial Statement Presentation	total \$	total \$	total \$		total \$, per share, % change
	Individual Company Summaries	✓	✓	✓		✓
Reports	Charts/Graphs	✓	✓	✓		✓
	Export to a File					✓
Statistical Summaries						✓

PRODUCT COMPARISON: FUNDAMENTAL STOCK SCREENING SYSTEMS

	Yahoo! Finance	Zacks.com		
Company	Yahoo! Inc.	Zacks.com		
Web Address	quote.yahoo.com	www.zacks.com		
Update Schedule	daily	daily		
Price	free	\$249/yr.		
Demo (Cost)		✓ (2 weeks free)		
Data Source	Market Guide, Zacks	Zacks		
Database Content	Number of Stocks/Data Fields	9,000+ stocks/200+ fields	9,000 stocks/1,500 fields	
	Create Custom Data Fields			
	Number of Data Fields for Sorting	8		
	Company Information	Company Web link	✓	
		ADR		✓
		DRP Plan		
		Industry Grouping	✓	✓
	Earnings Estimates	Description Length	6 sentences	50 words
		Source	Zacks	Zacks
		Quarterly	✓ (2 quarters)	✓ (2 quarters)
		Annual	✓ (2 years)	✓ (2 years)
		Growth—Long Term	✓ (1, 5 year)	✓ (5 years)
		Surprise	✓	✓
		Revisions	✓	✓
	Valuation (Source)		✓ (Zacks)	
	Consensus Analyst Recommendations	✓	✓	
	Consensus Analyst Rec.—Changes	✓	✓	
	Ratios	Leverage	debt/eq	debt/eq, lt debt/eq
		Liquidity	current	current, quick
		Profitability	ROE, ROA, PM	ROE, ROA, PM
		Multiples	P/E, P/B, P/S, yield	P/E, P/B, yield
	Growth Rates	Elements	sales, EPS, book value, dividends	sales, EPS, book value, dividends
		Periods (Benchmarks)	✓ (5-yr.)	✓
		Total/Annualized	✓ (annualized)	✓
	Price & Share Data	High/Low/Close/Volume	✓ (chart 1960+)	✓ (high/low/close)
		Average Volume	✓	
		Relative Strength	✓	✓ (YTD)
		MPT Stats	beta	beta
Short		✓		
Market Cap/Float/Employees		✓	✓ (market cap only)	
Insider Holdings	✓	✓		
Insider Trading	✓	✓		
Institutional Holdings	✓	✓		
Institutional Trading	✓			
Screening	Number of Data Fields for Screening	8	100	
	Any Data Field			
	Against Constant Values	✓	✓	
	Against Other Data Fields			
	Against Industry			
	Save Custom Screens		✓	
	# of Predefined Screens		13	
Reports Viewing	Browse Table	✓	✓	
	Financial Statement Presentation	total \$, per share	total \$, per share, % change	
	Individual Company Summaries	✓	✓	
	Charts/Graphs	✓	✓	
	Export to a File			
Statistical Summaries				

scriptions are also common. The inclusion of expanded descriptions, which also cover recent operating results, is another trend among the screening services.

Screening Power & Flexibility

The core feature of any screening system is its set of screening capabilities. The comparison grid includes several categories that describe the screening features provided by the services. When designing screening criteria, the system should allow you to screen against a constant value or another field. Some services even allow you to compare a value against industry norms. Services such as Morningstar's Premium Stock Selector provide benchmark figures for each field to help you construct reasonable screening criteria. The screening system should also keep track of the number of companies passing each filter.

Most Web-based screening tools do not allow you to save a set of screening criteria for use in a later session. This will force you to reconstruct the entire screen every time you wish to apply it.

Custom Variables

The disk-based programs and one Web-based service allow user-defined variables for analysis, so you can evaluate companies according to your own formulas. With these custom variables, you can elect to create ratios omitted by the program developers or even enter valuation models that attempt to determine a fair market price. Once a user-defined variable is created, you can screen with that variable and export the information.

Reporting Capabilities

A single company report will typically detail all of the information provided by the database for a company. Tabular reports allow you to compare specific data items for a group of companies. Less common, but still useful, is an industry report that lists the statistics for a particular industry.

Ease of Use

Typically, the more feature-rich the program is, the more difficult it is to learn how to operate the system. These systems are generally written for sophisticated audiences. However, ease of use does vary among the programs. The individual program reviews in Table 2 deal with this issue.

Update Frequency & Methods

The fundamental screening services basically use two different types of data access and distribution techniques—you must either acquire the complete database and store it on your computer for screening or connect to the Internet to perform the screen and view the results.

AII's *Stock Investor* is an example of a system that ships the complete database to you, while Business Week Online performs the screening on-line. The advantage of having the complete database on your computer is that you can perform as many screens as you want, wherever you are, whenever you want, and typically with much more flexible software. When the screening is performed on-line, the data tends to be fresher. With Web-based programs, you do not need to devote a great deal of hard disk space to the data, but screening tends to be more cumbersome and less powerful and you must be on-line to perform a screen.

Disk-based systems traditionally distribute their programs via CD, but now many offer the option of updating all or a segment of the data on-line. For example, Value Line uses CDs to distribute the program and the complete data set, but allows subscribers to receive weekly and real-time data updates on-line.

For those who plan to perform screens infrequently, but require up-to-date data, Web services offer a good alternative to disk-based services. For investors who wish to perform sophisticated screening and want the ability to manipulate the complete data directly, the disk-based services tend to be a better choice.

Screening Is a First Step

Remember when working with fundamental screening programs, data errors will exist. The wider the usage of the data, the more likely it is that data errors will be found quickly and corrected. Screening is merely the first step in the security analysis process. After screening, further in-depth analysis is required. However, a good screening system should help point you in the right direction.

Disk-Based Services

Principia Pro for Stocks

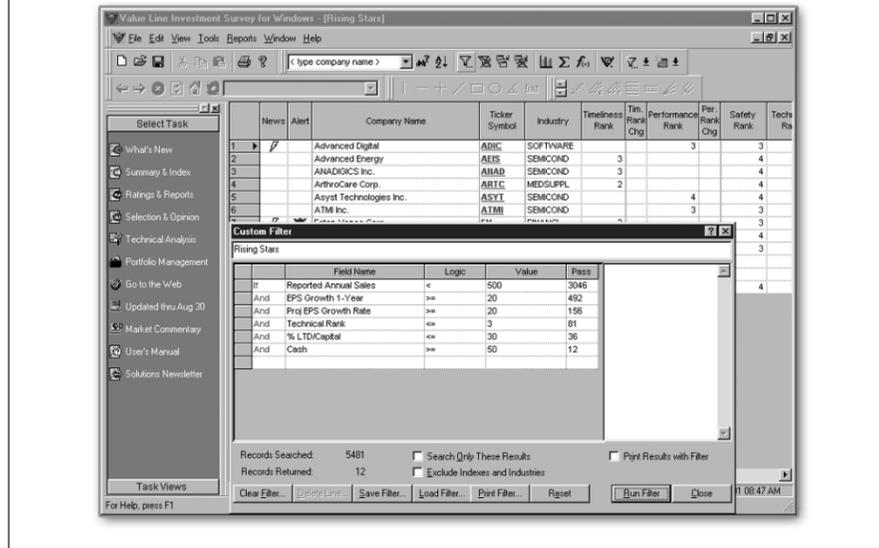
Morningstar's stock screening and analysis tool, Principia Pro for Stocks, is positioned toward the professional financial advisor analyzing and constructing a portfolio of stocks. The program also integrates with Morningstar's mutual fund and annuity offerings, which are available at additional cost.

The program provides 600 data fields on over 8,000 listed companies. One hundred and sixty of the fields can be used in screens. Notably, the program only allows these fields to be compared against hand-entered constants; you cannot make direct comparisons of one field to another. Morningstar tries to work around this limitation by offering additional screening variables for elements such as year-to-year earnings per share changes.

The database provides a standard set of information for screening and basic analysis. In addition to the program features and data fields displayed, Principia Pro for Stocks provides the industry and sector breakdown of each company. The program also provides a listing of the mutual funds that are the largest holders of a particular stock, along with the Morningstar mutual fund ratings of those listed.

Most programs only track lists of stocks in their portfolio module. Principia Pro features a portfolio analysis tool that can combine the holdings of a stock, mutual fund, and variable annuity portfolio and exam-

**Figure 1.
Value Line**



ine the portfolio characteristics. Note that investors must subscribe to a specific asset module in order to analyze its security type in the portfolio module.

Overall, while Principia Pro for Stocks is an above-average company research tool, the program's emphasis is on portfolio construction and analysis. Principia Pro for Stocks is best suited for the investor holding both stocks and mutual funds and looking for a tool that can seamlessly tie these research modules.

Stock Investor Standard

Editor's note: Stock Investor is published by the American Association of Individual Investors. Because of the potential conflict of interest, we do not feel it appropriate to rate our program, and hence provide only a factual description.

Stock Investor is a quarterly updated program containing fundamental financial data on over 9,000 companies. Comparison information for 12 sectors and 100 industry groups is included. The program allows you to look up, analyze and screen for companies meeting specific criteria on over 600 variables. Consensus earnings estimates are provided by I/B/E/S and fundamental data is provided by Market Guide. The income statement

data supplied by the program includes eight quarters of sales, earnings and dividend data, and five years of sales, cash flow, earnings and dividend figures. The balance sheet data covers eight quarters and three years of operations.

Stock Investor provides over 300 ratios and growth rates and allows the creation of 60 custom variables. Also included is detailed information on company dividend reinvestment plans (DRPs). The screening function enables searches for companies meeting up to 30 criteria using any data field. Screening filters can be performed against constants, other fields, or industry norms. You can create portfolios and print out predefined or custom reports.

Stock Investor Professional

Editor's note: Stock Investor Pro is published by the American Association of Individual Investors. Because of the potential conflict of interest, we do not feel it appropriate to rate our program, and hence provide only a factual description.

Stock Investor Pro is a disk-based program with monthly CD updates and weekly Web updates of price sensitive data. The program contains fundamental data elements on over 9,000 companies. Comparison information

for 12 sectors and 100 industry groups is included. The program allows you to look up, analyze and screen for companies meeting specific criteria on over 2,000 variables. Consensus earnings estimates are provided by I/B/E/S and fundamental data is provided by Market Guide.

The program includes detailed income statements, balance sheets and cash flow statements for seven years and eight quarters. Financial statements can be viewed as reported, on a per share basis, on a period-by-period percent change basis, and on a common size basis. Stock Investor Pro provides over 300 ratios and growth rates and allows the creation of 60 custom variables. Also included is detailed information on company dividend reinvestment plans (DRPs).

The screening function enables screening for companies meeting criteria using any data field in the program, along with comparisons to database or industry norms. Forty predefined screens following the techniques of well-known investors are included in the program. You can create portfolios and print out predefined or custom reports. Stock Investor Pro also comes with SSG-formatted files that can be used in InvestWare's Investor's Toolkit analysis program.

Value Line Investment Survey

Investment Survey by Value Line is a strong entry from a company known for its in-depth reports of common stocks (Figure 1). You can select from two subscription options—\$570 per year gives you access to the 1,700 companies tracked in the paper-based Value Line Investment Survey, while \$995 per year provides you with a 6,000-company database, narrower than the more typical 8,000+ universe found in other data services. However, it still covers a wide range of firms, including many small-capitalization firms. Both subscription options offer monthly CD-ROM updates by mail, coupled with the option to update data through the Internet. Ongoing subscribers to the print version of The Value Line Investment

Survey receive a special discounted price of \$195 per year for the 1,700-stock version and \$495 per year for the 6,000-stock version.

As the comparison grid reveals, Investment Survey provides a rich database including proprietary Value Line rankings. However, not all data fields displayed in the program are available for screening or export. Notably, screens are limited to using financial statement data items from the current reporting period. While historical and projected growth rates are options in constructing screens, investors who like to construct filters requiring year-by-year increases in earnings or sales will have to look elsewhere. Recent program updates tie the program more closely to the Internet, making it easier to update current market, industry and stock reports. With the current version of the program, Value Line reports and pre-defined screens are emphasized over the custom screening module. The on-line tutorial does a good job of helping the user locate and use the basic functions of the program.

As a research tool, the program is above average when judged on the breadth and depth of its database. The ability to access and print the paper-based Value Line reports is a valuable option. The screening tool is a slight disappointment, but overall the program remains a good general-purpose screening and research tool.

Web-Based Services

Business Week Online

Business Week Online combines elements of the Business Week publication, Standard & Poor's data and analysis, and financial data and tools from Telescan and Zacks. Business Week Online is primarily a free market news site that also features some nice investment analysis tools.

Business Week Online provides three Telescan-based stock screening tools within the Tools & Scoreboards segment of the site. The BW 50/S&P 500 Screener provides access to annual magazine rankings of the S&P

500 stocks. The quick stock search and advanced stock search share a similar interface but vary in the number of screening fields supported—20 versus 75. Users can establish minimum or maximum values for a given criterion or specify that the passing value be as high or low as possible. Screening results can be displayed in a table or spreadsheet file. Spreadsheet results are displayed in the Web browser with a comma-separated format limited to a few fields that must be copied manually into a spreadsheet program. Screening results feature a backtested performance report of the strategy. The screening editor is basic, but covers the major elements used for screening.

The site has two primary news sections—a daily briefing devoted to current market, economic, and political news as well as a similar section focused on news affecting the global business marketplace. Additional market news stories and headlines are also available from Reuters. A technology section provides news and special reports on the tech sector and technology-driven issues involving the markets. Within this section there are additional news stories on science & technology and biotech developments.

A combined annual subscription to Business Week magazine and the Business Week Online Web site costs \$39.95. Subscribers gain access to magazine content on-line and receive two free S&P reports each month. Site-only users who register for free have access to all areas—including the investing tools—except those tied to current and archived magazine content.

CBS MarketWatch

CBS MarketWatch began by combining the newsroom of CBS with the financial data of Data Broadcasting Corp. It has developed into a very strong resource for company and market news coupled with a growing set of company and mutual fund data and analysis tools.

CBS MarketWatch tries to set itself

apart from other information services with its staff of reporters who provide headlines, stories, and analysis throughout the trading day. Regular columns cover topics such as IPOs, earnings surprises, and technology stocks. Tables provide details on events such as stock splits, volume alerts, insider stock sales, and share buybacks.

Beyond news, the service offers free multiple portfolios, market and company research, stock screening, charting, and mutual fund data. The stock screener is very basic with support for only 12 criteria geared toward identifying stocks with recent price and volume action. Detailed financial statements and news assist in researching stocks that pass filters.

CNBC on MSN Money

Microsoft and CNBC offer a complete personal finance and investing site through their free Web offering. The investing section offers portfolio tracking, charts, news, educational articles, stock and mutual fund research, and brokerage services. Access to articles, news, screens, company and mutual fund data, and portfolio tracking is free to all Internet users.

The research and screening module on the site is top-notch. As revealed in the comparison grid, the company coverage is both broad and deep. The site pulls together the content of Disclosure, Hoover's, Media General and Zacks into a comprehensive company report.

Navigation between the various modules is easy and logical. The screening flexibility is above average among Internet vendors, even stronger than some of the disk-based services. The screening editor is an ActiveX program that we were able to run on Windows-based systems using either Internet Explorer or Netscape browsers. On Mac systems, however, MSN displays a more basic Web-based screening module.

The research wizard walks an investor through the factors to consider when looking at a stock, including its

Table 2.
Fundamental Screening System Ratings

Criteria are rated on a scale of one to five, with five denoting the best score. Performance rates how well the program or service accomplishes its stated objectives; Documentation rates the quality of the printed materials, on-line help, and manufacturer support; and Ease of Use rates how simple the program is to install, learn, and operate.

	Performance (Screening)	Performance (Stock Data)	Documentation	Ease of Use	Price	Pros	Cons
Principia Pro for Stocks www.morningstar.com	4	4	5	5	\$545/yr. or \$395/yr.	+Integrates with funds & annuities +Proprietary appraisals & styles +Company segment analysis	-Limited screening flexibility -Financial statements not detailed
Stock Investor v 3.6 www.aqii.com	na	na	na	na	\$99/yr. (\$148/yr. for non-mem.)	+40 predefined screens +Flexible screening system +Detailed financials	-Limited to quarterly data updates -Flexibility leads to slower filtering
Stock Investor Pro v 3.6 www.aqii.com	na	na	na	na	\$198/yr. (\$247/yr. for non-mem.)	+40 predefined screens +Weekly Web data updates +Includes SSG data files	-Slower filtering due to flexibility -Weekly Web updates are partial
Value Line www.valueline.com	4	4	5	4	\$570/yr. or \$995/yr.	+ Current data & reports on-line +Detailed financials by industry +Proprietary rankings & ratings	-Screening on only some data fields
Business Week Online www.businessweek.com	4	3	5	3	free	+Screen results show backtests +Diverse set of screen factors +Free S&P reports to mag. subscrib.	-Screening criteria cannot be saved -Screen build & results not together
CBS MarketWatch cbs.marketwatch.com	3	4	5	4	free	+Detailed financials +Strong on firm & market news +After-hours screening	-Screening criteria cannot be saved -Limited screening criteria -Filters cannot compare firm & indus
CNBC on MSN Money moneycentral.msn.com/investor	5	5	5	5	free	+Diverse screening factors +Very flexible screening system +Detailed stats & valuation	-Screening limited on Mac systems
INVESTools www.investools.com	4	4	2	3	predef. free; advan. \$9.95/mo.	+Detailed financials +Diverse set of screening factors +Easy to rank results of screen +Very flexible screening system +Support for user-defined fields +Detailed financials & data	-Filters cannot compare firm & indus -Research & screen not well integrated
Multex Investor www.multexinvestor.com	5	5	5	3	free	+Detailed financials & data	-Filters cannot compare firm & indus
MarketScreen.com www.marketscreen.com	4	2	4	3	\$19.95/mo. or \$199.95/yr.	+Diverse techn'l screen factors +Unique table of passing firms +Backtesting results	-Limited fundamentals in screen -Limited financial stock data
Morningstar.com—Free www.morningstar.com	2	3	5	5	free with Internet	+Proprietary appraisals & styles +Company segment analysis +Stock picks newsletter	-Limited screening criteria -Filters cannot compare firm & indus -Screening criteria cannot be saved
Morningstar.com—Prem. www.morningstar.com	4	3	5	5	\$11.95/mo. or \$99/yr.	+Proprietary appraisals & styles +Company segment analysis +Interactive stock screen	-Screening criteria cannot be saved
Nasdaq www.nasdaq.com	2	4	3	3	free	+Diverse research data +Guru ranking & screening +Extended trading information	-Data elements not well integrated -No custom screening
Quicken.com www.quicken.com	4	4	5	5	free	+Evaluator & scorecard +Some industry comparisons +Useful screening variables	-Screening criteria cannot be saved
Stockpoint investor.stockpoint.com	3	5	4	5	free	+Detailed financials & data +Interactive stock screen +Screens can be saved	-Filters cannot compare firm & indus
StockScreener www.stockscreener.com	2	2	4	5	free	+Interactive predefined screens +Easy site navigation	-Filters cannot compare firm & indus -Screening criteria cannot be saved -Limited screen criteria & data
Thomson Investors Network www.thomsoninvest.net	1	5	4	5	\$34.95/yr.	+Detailed financials & data +Strong analyst consensus data +Insider buy & sell chart	-Filters cannot compare firm & indus -Limited screening criteria -Screening criteria cannot be saved
Wall Street City Pro www.wallstreetcity.com	5	5	5	4	free to \$9.95/mo.	+Detailed financials & data +Strong technical factors +Very flexible screen & backtest	-Screening criteria cannot be saved -Filters cannot compare firm & indus
Yahoo! Finance quote.yahoo.com	2	3	3	4	free	+Detailed financials & data +Strong analyst consensus data	-Filters cannot compare firm & indus -Limited screening criteria -Screening criteria cannot be saved
Zacks.com www.zacks.com	4	5	4	5	\$249/yr.	+Detailed financials & data +Strong analyst consensus data +Zacks Advisor newsletter	-Screening criteria cannot be saved -Filters cannot compare firm & indus

fundamentals, price history, valuations, catalysts, and competition. New "StockScouter" ratings provide risk/reward recommendations for stocks. MSN has made steady improvements to its investment Web site since its introduction and the site is one of the strongest stock research and screening services on the Web. (See page 7 for more on the features of this site.)

INVESTools

INVESTools offers a range of screening and subscription options on its Web site covering basic portfolio management tools, stock and mutual fund analysis, and even on-line versions of investment newsletters. Three levels of screening are available through INVESTools—predefined, basic, and advanced.

INVESTools offers nine predefined filters that can be accessed by all Internet users. The free predefined screens cover a reasonable range of growth, value, and capitalization screens. Screening results include company information on each of the variables used in the screen along with links to fundamental data on the companies.

Basic screening is included with INVESTools' \$9.95 per month portfolio workshop subscription, which includes portfolio monitoring, news, charts, Zacks earnings estimates, and SimplyStocks.com reports. The basic screening service allows you to modify the predefined screens to fine-tune their results.

The advanced screening module (\$9.95 per month) gives access to 68 different variables spread across a wide range of company statistics, growth rates, and ratios. Comparison can only be made against constants. For some fields, users are given the option of specifying minimum and maximum values, but the majority of the criteria allow for only one comparison value. Notably, screens can be saved for later use.

Results of screens are presented in a table consisting of the companies passing the filter and the values for each of the variables used in the screen. The

results can be sorted by any of the variables used in the screen.

Multex Investor

Multex Investor offers a full range of free stock data including company snapshots, real-time quotes, fundamental data, earnings estimates, charts, and analyst recommendations. Registered users gain access to the free, Java-based screening tool called NetScreen.

NetScreen is a powerful tool that provides access to over 80 data items. Users can even create their own custom fields, a unique feature for Web-based tools. While more cumbersome than most systems, NetScreen allows for the creation of fairly complex screening criteria. A single line in a filter can include mathematical and logical manipulation. Screening results are displayed in a table that includes the variables used in the filter and links to company reports on the passing companies. The results table can even be saved as a spreadsheet file. Screens can be saved for use at a later time.

Company research steals the show on the Web site by providing free reports covering earnings estimates, ratio comparisons, insider trading, institutional ownership, company financials, and dividend reinvestment plan details.

The "What's Hot" segment of the Web site is also worthy of mention. It provides daily rankings of the best- and worst-performing stocks, industries and sectors. Links are provided to the stocks within a given industry or sector for additional research.

The detailed company and industry data coupled with the free NetScreen offering makes the Multex Investor Web site worth checking out.

MarketScreen.com

MarketScreen.com separates itself from the crowd by offering real-time screening of price, volume, and news. The site allows its subscribers to seek out companies with price gaps, volume spikes, or even suffering from "exhaustion." Over 80 predefined

screens are available including those seeking companies with a "potential bounce" or "gap down recovery play." The screening system also covers more traditional elements such as price-earnings ratios and market cap. Charts, news, and company snapshots help to examine companies passing filters, but fundamental data is weak for a subscription-based service.

MarketScreen.com offers the day trader and active investor unique and helpful real-time tools. Its offerings are not as broad as some of the general-purpose investment sites, but it meets the needs of its targeted audience.

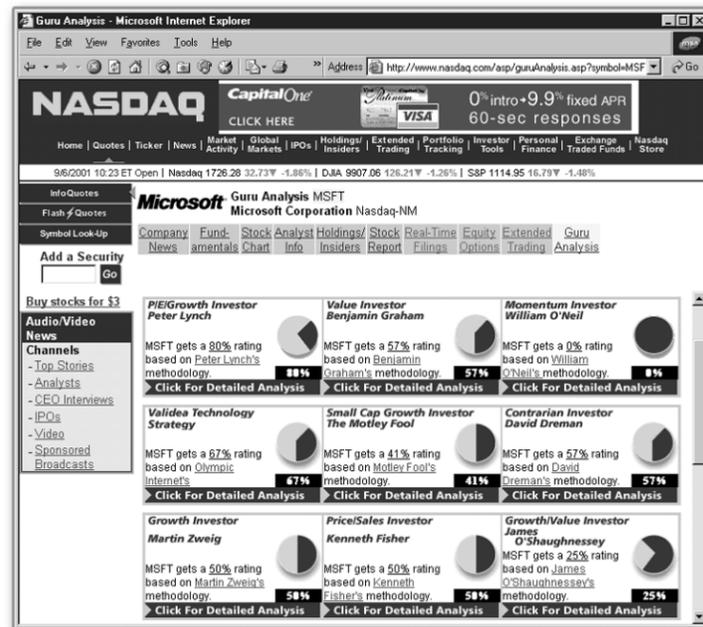
Morningstar.com

Morningstar.com is a full-featured investment Web site providing portfolio tracking, market monitoring, stock and fund screening and research, educational articles and message boards. Much of the site is free, with additional research and screening available with an \$11.95 per month subscription.

Research on the site consists of stock screening coupled with research reports. Morningstar grades stocks on their growth, profitability, financial health, and valuation, and the emphasis within the free screening module is on these elements along with the stock's style characteristics. Free screening covers 19 basic elements while the premium screening module covers 125 criteria. Screening is limited to performing comparisons against user-entered constant values, and the screens cannot be saved for use at a later time.

Comprehensive stock reports start with an overview snapshot and lead to a detailed company profile, financial statements and ratios, charting, stock price performance statistics, stock, industry and market multiples, earnings estimates and analyst opinions, industry snapshot, insider and institutional shareholder activity, SEC filings, and news. Five years of income statement items and current balance sheet data are provided. The premium reports add commentary

Figure 2.
Nasdaq



from Morningstar analysts and explanations behind stock grades and ratings.

Articles with a focus on current market issues, interviews and detailed educational features are located throughout the site. Message boards provide a forum for discussion of the many issues brought up in the articles.

Morningstar.com is a well-organized Web site that provides a diverse and useful set of tools for the stock investor.

Nasdaq

The Nasdaq offers a comprehensive investment site that contains a wide variety of investment news and tools (Figure 2). Comprehensive company information is collected from a number of sources, which sometimes leads to duplicated company data from different suppliers. The "InfoQuote" is the starting point for collecting company and industry data with links provided to news, fundamentals, charts, analyst info, insider holdings, stock reports, SEC filings, and Guru

Analysis reports.

Validea.com supplies the "Guru Analysis," which attempts to measure how a stock rates using Validea's interpretations of the strategies of noted investment managers such as Peter Lynch, Benjamin Graham, William O'Neil, and Kenneth Fisher. The Guru Analysis module also serves as the screening engine allowing investors to identify companies passing a given number of guru screens with either strong or some interest.

Quicken.com

Quicken.com is a free site offering investors a central place to manage many aspects of personal finance, including banking, insurance, retirement planning, and investing. Quicken.com offers six predefined screens covering basic growth, value, momentum, and market-capitalization approaches. Results are displayed in a standard table view, but Quicken has a nice feature that allows users to switch between different views, such as financials or growth rates.

The "Full Search" screening mod-

ule allows users to construct custom screens using any of 41 well-chosen elements. Users can select predefined ranges for each element or specify a minimum and maximum range.

The site includes all the basic tools required to research those companies passing screens, including quotes, news, portfolio tracking, company fundamentals, links to full SEC filings, insider transactions, and analyst ratings and earnings estimates. Unique features include consensus stock ratings by Quicken.com users and a stock evaluator that highlights elements affecting a company's stock price. The "one-click scorecard" analyzes how a company rates using the investment philosophy of Warren Buffett, the NAIC, Geraldine Weiss, or the Motley Fool.

The site is well organized and presents information available for each stock clearly. Quicken.com's features and data exceed those found on a number of fee-based sites. Most investors will find this free site adequate for their needs.

Stockpoint

Stockpoint, Inc., offers a portfolio manager, news, stock and mutual fund research, and a stock and fund screening package for free at its Web site. The site provides advanced charting and supplies detailed fundamental data stock data from Multex/Market Guide.

Stockpoint offers basic and advanced screening tools. The basic stock screener allows you to construct a screen using 23 data fields, while the advanced stock screener provides access to 34 data fields. The advanced stock screen is also more interactive and allows you to modify screening criteria and view the results on one Web page. Both versions allow you to save your criteria. Stockpoint offers a well-organized collection of detailed data and basic but helpful tools.

StockScreener

Hoover's, Inc., has grown to become a good source of company descriptions and financial data. StockScreener

is a free service from Hoover's offering screening on approximately 9,000 companies.

The service includes the typical elements expected in a basic screening service. Minimum and maximum elements can be specified for 22 factors such as multiples, ratios, company size and growth rates. Screening results are displayed in a table that also shows the factors used for the screen. StockScreener is best suited for the investor looking to perform basic screening.

Thomson Investors Network

Thomson Investors Network is a comprehensive investment Web site providing portfolio management, quotes, news, E-mail alerts, stock, mutual fund and municipal bond data, screening tools, and even basic investment education. The site is primarily a subscription-based service costing \$34.95 per year, although certain elements, such as the stock screening, can be used for free.

The screening available on the site is weaker than most of the other online and Internet systems. For example, screening is limited to selecting six criteria from the 18 available fields, and comparisons can only be made in relative context (i.e., strong, above average, below average or weak).

Separately, Thomson provides results of basic screens such as low price-earnings companies broken down by market capitalization. As revealed in the comparison grid and table, the site is above average in terms of the data available for researching companies—exceeding company information found in most free Web sites. The site is best suited for investors looking for individual company research tools, but who don't need strong screening.

Wall Street City Pro

Wall Street City is a comprehensive investment Web site providing a wide

range of data and services: everything from free portfolio tracking, news, market updates and basic search tools to a rich array of charting, screening and company research tools.

The site offers the greatest range of screening tools among the Internet sites. You can opt for a rich collection of predefined screens using both fundamental and technical approaches, or you can create and test your own screens.

Wall Street City includes a flexible and powerful Java-based screening module that covers a wide range of fundamental and technical factors. Up to 40 criteria can be combined at one time from the 700 technical and fundamental screening criteria. Criteria can be weighted to create custom company scores.

Wall Street City includes a unique backtesting feature that analyzes the historical success of a screen using various holding periods and market capitalization concentrations. Telescan tracks its predefined screens and reports on, the performance of these strategies. "What's Working Now" identifies the best- and worst-performing stock group and predefined stock screens. The predefined screens cover a wide range of fundamental and technical screening strategies. They also display the filters that make up the screen, a list of passing companies, historical performance charts, and statistics for the strategy.

Overall, Wall Street City is a feature- and data-rich site of interest to a wide range of investors.

Yahoo! Finance

Yahoo! Finance brings together a simple but reasonable set of free tools for the investor. A very basic stock screening tool is provided: Users can screen on any of the eight available criteria, but are forced to pick criteria from within preset levels.

The site is able to leverage its linking expertise to bring together a reasonable collection of news and re-

search data. Fundamental stock data comes from Market Guide, while Zacks provides earnings estimates and brokerage recommendations. Even insider transactions from Thomson are available for free, which also provides the mutual fund profiles.

Overall, Yahoo! Finance is a good site for keeping track of your portfolio and performing basic company research, but is weak on screening.

Zacks.com

Zacks.com offers a wide range of investment information and screening options. With the service, you have access to daily E-mail alerts covering items such as analysts' changes, detailed company financials, brokerage research reports, predefined screens, and custom screening. Zacks offers 13 predefined screens that can be further broken down into market-cap ranges. Custom screening offers control over 100 variables covering the usual range of screening options, along with earnings estimates and brokerage recommendation figures that are not available through most services. Zacks also allows users to save custom screens for later use.

Zacks provides detailed reports on a company's financials, ratios, industry comparisons, consensus earnings estimates, and analyst recommendations. Detailed analyst estimate reports go so far as to list a record of each estimate and recommendation for a given company.

Overall, Zacks offers a wide range of useful tools for those with a stock portfolio. Screening and research is above average and the basic tools necessary to construct a stock portfolio are provided, while the portfolio management module helps keep investors abreast of their holdings.

John Bajkowski is editor of Computerized Investing and AAI's vice president of financial analysis.