NDRG GUIDE TO

Equity Rating and Report

Ned Davis Research Group

Generate Alpha. Identify risk. Choose Ned Davis Research.
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EQUITY FOCUS RANKS

Each week, the NDRG Equity Focus Ranks product sorts a U.S. multi-cap universe by fundamental and technical metrics. Over time we believe that this quantitative model relative ranking system will assist in finding profitable, undervalued companies with strong technicals. This system is intended to assist investors with a two-to-three month time horizon.

UNIVERSE

The NDRG Broad Market Equity Series source universe consists of companies with one or more stocks on the NYSE, NASDAQ, and AMEX stock exchanges. Only companies incorporated in the United States or its territories are considered (ADRs and GDRs are ineligible). Furthermore, stocks must also meet additional selection criteria in the total source universe: top 99% of market capitalization and top 95% of liquidity based on NDRG’s dollar volume factor. The NDRG Broad Market Equity Series Universe is re-selected semi-annually (March and September).

The NDRG Broad Market Equity Series Multi-Cap universe includes all of the NDRG Broad Market Equity Series Large-Cap and Mid-Cap segments and the top portion of the Small-Cap segment, representing the top 97% of capitalization in the source universe. On average, the Multi-Cap universe consists of approximately 1,600 stocks.

RATING A STOCK BASED ON THE NDR EQUITY FOCUS RANK

The NDRG Equity Rating classifies stocks as Buy, Neutral, or Sell based on the Equity Focus Ranks. After combining the Fundamental and Technical components (page 2), we rank the stocks from 0 (worst) to 100 (best). Stocks with a rank greater than 90 receive a Buy rating, while stocks with a rank of less than 10 receive a Sell rating. All other stocks in the universe get a Neutral rating.
CONSTRUCTION

The NDRG Equity Focus Ranks consists of half Fundamentals, half Technicals. This fusion approach combines stock potential (Fundamentals) with stock behavior (Technical).

50% Fundamental Component

To select the fundamental factors, we backtested a pool of approximately 70 characteristics. The fundamental rank component uses lowly correlated factors with positive risk/return (magnitude and consistency) profiles. We classify the chosen factors as profitability or valuation metrics and equally weight the two groups.

50% Technical Component

The Technical Component Rank applies a technical regime flag to the NDRG U.S. Momentum Rank to determine whether to use the momentum ranks as is or to invert them (mean-reverting).

The Momentum Rank consists of: 40% sub-industry price momentum, 30% sector price momentum, and 30% stock price momentum.
BENEFITS OF PRICE MOMENTUM

Price is a unique variable. Unlike valuation variables and economic fundamentals, which all have the potential to diverge from the market’s primary trend, price is unique in that it cannot diverge from itself. As a result, the price momentum-based ranks attempt to “lock” onto major leadership trends, allowing profits to run, and losses to be cut short.

DRAWBACKS OF PRICE MOMENTUM

Highly Concentrated Portfolios & Event Risk — A key property of momentum-based ranking systems is their tendency to produce highly concentrated portfolios. As a result, when a surprise event occurs such as an unanticipated rate hike, a whiff of inflation, an unexpected political outcome, etc., these ranking systems will tend to produce temporary drawdowns until they can adjust to the new leadership.

SHIFTING BETWEEN MOMENTUM AND MEAN REVERSION

In order to mitigate the large drawdowns suffered by momentum systems around market turning points, we have developed a momentum-reversion regime flag. When the Momentum Rank long top decile, short bottom decile performance equity line declines by 10%, we categorize the environment as mean-reverting. The environment retains the reverting classification until the equity line rises by 5%. During the mean-reverting environment, we invert the momentum-based ranks to make them mean-reverting. Our studies have found that the momentum-reversion regime flag helps reduce the momentum strategy’s drawdowns.
The NDRG Equity report provides information regarding a stock’s NDRG rating, share information, classifications, earnings estimates, fundamentals, and technicals.

(1) **Market Capitalization**
The price of a stock multiplied by the number of shares outstanding.

(2) **Dividend Yield**
The annual indicated dividend divided by the price.

(3) **Price-to-earnings (P/E) Ratio**
The price of the stock divided by earnings (ttm). Also known as Price Multiple.

(4) **ttm**
An accumulation over the trailing twelve months.

(5) **Market Beta**
The relative measure of an asset’s risk against the market portfolio. A beta greater than one means the asset is riskier than the market, a beta of one means equally risky, and a beta less than one means less risky than the market.

(6) **NDRG Insider Rating**
Stock classification of corporate insider activity. The NDRG Insider Rating consists of the following categories: Heavy Selling, Light Selling, Neutral, Light Buying, and Heavy Buying.

(7) **Buy Rating**
A recommendation to buy a stock due to a NDRG Equity Focus Rank greater than 90. Stocks on a buy rating are expected to rise over the life of the signal.

(8) **Neutral Rating**
Neither a positive or negative outlook. No expectation regarding a stock’s price trend.

(9) **Sell Rating**
A recommendation to sell a stock due to a NDRG Equity Focus Rank less than 10. Stocks on a sell rating are expected to decline over the life of the signal.

(10) **Equity Focus Rank (EFR)**
A 0-100 score constructed using static (constant) weights on the EFR Technical, Profitability, and Valuation ranks. A higher rank is better.
(11) EFR Technical Rank
A component of the NDRG Equity Focus Rank that combines return on assets, asset turnover, ebit/assets, retained earnings/assets, and standardized unexpected earnings. This 0-100 rank uses a static (constant) weighting scheme on the individual profitability metrics. A higher rank is better.

(12) EFR Profitability Rank
A component of the NDRG Equity Focus Rank that compares earnings, sales, free cash flow, and operating cash flow to market value. This 0-100 rank uses a static (constant) weighting scheme on the individual valuation metrics. A higher rank is better.

(13) EFR Valuation Rank
A component of the NDRG Equity Focus Rank that compares earnings, cash flow, and sales to market value. This 0-100 rank uses a static (constant) weighting scheme on the individual valuation metrics. A higher rank is better.

(14) NDRG Sector Coverage
Sectors constructed based upon S&P/MSCI Global Industry Classification Standard (GICS) within the NDRG Multi-Cap universe.

(15) NDRG Sub-Industry Coverage
Sub-Industry constructed based upon the S&P/MSCI Global Industry Classification Standard (GICS) within the NDRG Multi-Cap universe.

(16) Capitalization Classification
NDRG size classification (Large-, Mid-, Small-Cap) where the top 80% of capitalization falls in the Large-Cap universe and the bottom 10% of capitalization resides in the Small-Cap universe.

(17) Style Classification
NDRG Growth, Value, or Core classification determined by a unique process using widely accepted valuation measures with four distinct factors (each for value and growth).
(18) Quality Classification
A stock’s inclusion in the NDRG High Quality Index requires an S&P Quality Rating of B+ and above, while inclusion in the NDRG Low Quality Index requires a S&P Quality Rating of B and below.

(19) Dividend Classification
NDRG classification based on whether the company pays a dividend.

(20) Overweight
Hold more than the benchmark weight allocation for the asset.

(21) Marketweight
Maintain the benchmark weight allocation for the asset.

(22) Underweight
Hold less than the benchmark weight allocation for the asset.

(23) Candlestick Chart
A time series plot of a stock’s open, high, low, and close prices. For a period where the stock’s close is greater (smaller) than its open, the bar shows green (red). The chart’s light green and red background shading corresponds to NDRG Buy and Sell ratings.

(24) Volume
The number of shares traded in a period. Higher volume during a price change indicates more significant movement than lower volume.

(25) Moving Average
The average price of a security over a period of time. Moving averages are used to smooth out price and volume fluctuations (noise) in order to view trends.

(26) Bullish
A positive outlook or an expected upward price trend.

(27) Bearish
A negative outlook or an expected downward price trend.

(28) Deviation From Trend
A ratio comparing a shorter-term moving average to a longer-term moving average. The ratio shows potential divergences from longer-term trends.
(29) YTD
Year-to-date. A calculation from the beginning of the year to the current date.

(30) Percent Return
A value represented as the percentage of an earlier value.

(31) Volume Turnover
Total volume divided by common shares outstanding.

(32) Short Interest Ratio
Short interest divided by average daily volume. Short Interest is the number of shares borrowed from brokerage firms and sold (which the sellers expect to buy back at lower prices). The ratio indicates the number of days, on average, for short sellers to cover their positions.

(33) Earnings Estimates Table
The current fiscal year’s and the next two fiscal year’s average, high, low, and number of analyst earnings estimates.

(34) Mean
Average. Sum of the values in the data set divided by the number of values in the data set.

(35) Forward Price/Earnings
Price divided by the perpetual 12-months forward mean earnings estimate. The perpetual 12-months forward calculation uses both the FY1 and FY2 estimates, blended together with a weight applied to each based upon the number of weeks remaining until FY1.
(36) Historical Growth Rates Of Per Share Values (%)

Shows the full history, five-year, 12-month, and previous quarter per share growth rates for earnings, sales, book value, cash flow, and dividends.

(37) Seasonal Cycle Chart

Shows the current year’s price (rescaled to start at 100), the historical cycle pattern (scaled to start at 100), the percentage of time for each month in which the stock outperformed the S&P 500 Index, and the average magnitude of the excess gain.
**EQUITY REPORT DEFINITIONS (ALPHABETICAL LISTING)**

**B**

**Bearish**
A negative outlook or an expected downward price trend.

**Bullish**
A positive outlook or an expected upward price trend.

**Buy Rating**
A recommendation to buy a stock due to a NDRG Equity Focus Rank greater than 90. Stocks on a buy rating are expected to rise over the life of the signal.

**C**

**Candlestick Chart**
A time series plot of a stock’s open, high, low, and close prices. For a period where the stock’s close is greater (smaller) than its open, the bar shows green (red). The chart’s light green and red background shading corresponds to NDRG Buy and Sell ratings.

**Capitalization Classification**
NDRG size classification (Large-, Mid-, Small-Cap) where the top 80% of capitalization falls in the Large-Cap universe and the bottom 10% of capitalization resides in the Small-Cap universe.

**D**

**Deviation From Trend**
A ratio comparing a shorter-term moving average to a longer-term moving average. The ratio shows potential divergences from longer-term trends.

**Dividend Classification**
NDRG classification based on whether the company pays a dividend.

**Dividend Yield**
The annual indicated dividend divided by the price.

**E**

**Earnings Estimates Table**
The current fiscal year’s and the next two fiscal year’s average, high, low, and number of analyst earnings estimates.

**Equity Focus Rank (EFR)**
A 0-100 score constructed using static (constant) weights on the EFR Technical, Profitability, and Valuation ranks. A higher rank is better.

**F**

**Forward Price/Earnings**
Price divided by the perpetual 12-months forward mean earnings estimate. The perpetual 12-months forward calculation uses both the FY1 and FY2 estimates, blended together with a weight applied to each based upon the number of weeks remaining until FY1.

**G**

**GICS Industry**
Assignment according to the S&P/MSCI Global Industry Classification Standard (GICS).

**GICS Industry Group**
Assignment according to the S&P/MSCI Global Industry Classification Standard (GICS).

**GICS Sector**
Assignment according to the S&P/MSCI Global Industry Classification Standard (GICS).

**GICS Sub-Industry**
Assignment according to the S&P/MSCI Global Industry Classification Standard (GICS).

**H**

**Historical Growth Rates Of Per Share Values (%) Chart**
Shows the full history, five-year, 12-month, and previous quarter per share growth rates for earnings, sales, book value, cash flow, and dividends.
**Market Beta**
The relative measure of an asset’s risk against the market portfolio. A beta greater than one means the asset is riskier than the market, a beta of one means equally risky, and a beta less than one means less risky than the market.

**Market Capitalization**
The price of a stock multiplied by the number of shares outstanding.

**Marketweight**
Maintain the benchmark weight allocation for the asset.

**Mean**
Average. Sum of the values in the data set divided by the number of values in the data set.

**Moving Average**
The average price of a security over a period of time. Moving averages are used to smooth out price and volume fluctuations (noise) in order to view trends.

**NDRG Insider Rating**
Stock classification of corporate insider activity. The NDRG Insider Rating consists of the following categories: Heavy Selling, Light Selling, Neutral, Light Buying, and Heavy Buying.

**Neutral Rating**
Neither a positive or negative outlook. No expectation regarding a stock’s price trend.

**Price-to-book Ratio**
The price of the stock divided by book value.

**Price-to-cash flow Ratio**
The price of the stock divided by cash flow (ttm).

**Price-to-earnings (P/E) Ratio**
The price of the stock divided by earnings (ttm). Also known as Price Multiple.

**Price-to-sales Ratio**
The price of the stock divided by sales (ttm).

**EFR Profitability Rank**
A component of the NDRG Composite Rank that combines return on assets, asset turnover, ebit/assets, retained earnings/assets, and standardized unexpected earnings. This 0-100 rank uses a static (constant) weighting scheme on the individual profitability metrics. A higher rank is better.

**Quality Classification**
A stock’s inclusion in the NDRG High Quality Index requires an S&P Quality Rating of B+ and above, while inclusion in the NDRG Low Quality Index requires a S&P Quality Rating of B and below.

**Quintile**
A subset of a population containing 20% of the values.

**Seasonal Cycle Chart**
Shows the current year’s price (rescaled to start at 100), the historical cycle pattern (scaled to start at 100), the percentage of time for each month in which the stock outperformed the S&P 500 Index, and the average magnitude of the excess gain.

**Sell Rating**
A recommendation to sell a stock due to a NDRG Equity Focus Rank less than 10. Stocks on a sell rating are expected to decline over the life of the signal.
**Short Interest Ratio**
Short interest divided by average daily volume. Short Interest is the number of shares borrowed from brokerage firms and sold (which the sellers expect to buy back at lower prices). The ratio indicates the number of days, on average, for short sellers to cover their positions.

**Style Classification**
NDRG Growth, Value, or Core classification determined by a unique process using widely accepted valuation measures with four distinct factors (each for value and growth).

**EFR Technical Rank**
A component of the NDRG Equity Focus Rank that consists of sector, sub-industry, and firm-specific statically (constant) weighted variables. This 0-100 rank typically favors a trend-following approach, but inverts when mean reversion outpaces momentum. A higher rank is better.

**ttm**
An accumulation over the trailing twelve months.

**Underweight**
Hold less than the benchmark weight allocation for the asset.

**EFR Valuation Rank**
A component of the NDRG Equity Focus Rank that compares earnings, sales, free cash flow, and operating cash flow to market value. This 0-100 rank uses a static (constant) weighting scheme on the individual valuation metrics. A higher rank is better.

**Volume**
The number of shares traded in a period. Higher volume during a price change indicates more significant movement than lower volume.

**Volume Turnover**
Total volume divided by common shares outstanding.

**W**
**Weeks Down**
The number of weeks in which the price closed lower.

**Weeks Up**
The number of weeks in which the price closed higher.

**Y**
**YTD**
Year-to-date. A calculation from the beginning of the year to the current date.
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