

Buffalo Discovery BUFTX

Solid team with a good record earns an upgrade.

Morningstar's Take BUFTX

Morningstar Rating ★★★★★

Morningstar Analyst Rating Bronze

Morningstar Pillars

Process		Neutral
Performance		Positive
People		Positive
Parent		Neutral
Price		Neutral

Role In Portfolio

Supporting

Fund Performance BUFTX

Year	Total Return (%)	+/- Category
YTD	0.37	-1.18
2017	25.44	1.52
2016	5.56	-0.46
2015	5.64	6.59
2014	10.68	3.68

Data through 4-30-18

4-27-18 | by Tony Thomas

The ability of Buffalo Discovery's management team to adapt as this fund's mandate has expanded earns it a Morningstar Analyst Rating upgrade to Bronze from Neutral.

The team of Clay Brethour, Dave Carlsen, and Elizabeth Jones is experienced and complementary. They took the helm together on Jan. 1, 2004, when the fund was known as Buffalo Science & Technology. For eight years, they managed the fund successfully while focusing on innovative healthcare and technology firms. Over time the fund broadened its mandate beyond those areas to innovative firms regardless of sector. Brethour, who is also Buffalo Funds' president, primarily covers consumer services and industrial technology; Carlsen is a technology expert with wide-ranging research interests; and Jones is a former public-health professional who analyzes healthcare, biotech, and financial firms.

Though "innovation" encompasses many businesses, the managers try to whittle down their universe using a combination of top-down and bottom-up research. They hunt for companies that stand to benefit from one of the firm's 26 "Buffalo Secular Growth Trends," such as the rise of e-commerce or the increasing use of robotics. They zero in on prospects that have proven management teams, strong revenue growth, little or no debt, and consistent free cash flow. Though they're market-cap-agnostic, they prefer mid-cap innovators that haven't been fully appreciated by the market. Headline-grabbing large-caps such as Facebook FB and Amazon AMZN are here, too, but they don't dominate the portfolio.

Since officially adopting its broader mandate in June 2012, the fund has continued to perform respectably. Its 15.2% annualized total return through March 2018 tops both its benchmark Russell Mid-cap Growth Index's 15% rise and its 13.1% mid-growth Morningstar Category average. The focus on smaller innovators hasn't made the fund much more volatile than the index, and the fund as a whole has even offered modest downside protection. It's an intriguing risk/reward profile for an innovation-seeking fund.

Process Pillar Neutral | Tony Thomas
04/27/2018

This fund's approach is too wide-ranging for a small team of manager-analysts to employ distinctively, earning the fund a Neutral Process rating.

An interest in innovation grounds the team's investment philosophy. The managers want companies with commercially viable ideas, products, or services that can create value and grow market share. Many companies have such innovations, so the managers home in on companies whose innovations can capitalize on one or more of 26 top-down "secular growth trends" such as demographic changes, the rise of e-commerce, and the increasing use of robotics. Though they are not bound by market-cap or sector-weight considerations, the managers

use their sector expertise to focus their search. That ties the fund's process to these specific managers, making consistency less likely should one of them depart.

The team turns to bottom-up analysis to examine prospects' fundamentals. Companies are scored using a five-factor model that assesses growth opportunities, industry cyclicality, management quality, competitive foothold, and balance sheet strength. The highest-scoring stocks are given a forward-looking valuation. The highest-conviction names with the greatest upside potential enter the portfolio. Position sizes are usually 1%-3% and are trimmed or reviewed as they approach price targets or as their fundamentals change.

The fund's diversified portfolio reflects its broad mandate. The managers usually hold 65-85 names, and their preference for mid-cap companies allows them to find some relatively under-the-radar prospects. As of December 2017, more than half of the fund's assets were in mid-caps, with another 15% in small caps. Yet the managers also have giant-cap innovators such as Alphabet GOOG, Facebook FB, Apple APPL, and Amazon.com AMZN. These positions are relatively small, however, and are not among the fund's top 15 holdings.

The portfolio is further diversified by sector, a welcome change from the fund's earlier incarnation. Prior to 2012, the fund was known as Buffalo Science & Technology, and its holdings were mostly confined to tech and healthcare. But the managers moved into other areas as they expanded their search for innovative companies. Technology remains the largest sector weighting (at 26% of total assets) as of December 2017, but industrials are next (24%), followed by healthcare (14%), consumer cyclicals (12%), and financials (10%). The prospectus caps industry concentrations at 25%, aiding diversification.

One industry now getting the team's attention is the capital markets. The managers acknowledged the passive-investing trend and in early 2016 added MSCI MSCI, S&P Global SPGI, SEI Investments SEIC, and Nasdaq NDAQ. All four were top 20 holdings at the end of 2017.

Performance Pillar + Positive | Tony Thomas
04/27/2018

This fund's respectable risk/reward profile over its team's tenure, which covers a mandate change, earns a Positive Performance rating.

Managers Clay Brethour, Dave Carlsen, and Elizabeth Jones posted a solid record running the fund under a narrower science-and-technology mandate from January 2004 through June 2012. The fund's 8.5% annualized total return during that period bested the 4.7% average of its then-category, technology, and topped the Morningstar U.S. Technology Index's 5.7% gain. The fund's middling volatility and attractive downside capture—it fell only 78% as far as the category index in down markets during that time—gave it solid risk-adjusted returns as measured by its Sortino ratio.

The fund has produced competitive, albeit less dominating, performance since adopting its broader innovation mandate. The fund's 15.2% annualized total return from July 2012 through March 2018 edged the 15% tally of its current benchmark, the Russell Mid Cap Growth Index, and fared even better against the 13.1% mid-growth category average. The fund retained some of its downside protection, but risk-adjusted returns fell back to par with the benchmark. One area where the fund still dominates is its rolling three-year returns. The fund beat the index in 90% of periods from July 2012 through March 2018 while besting the category average in every period.

People Pillar + Positive | Tony Thomas
04/27/2018

This long-tenured team's experience and ability to execute a broad mandate justify a People rating upgrade to Positive from Neutral.

Comanagers Clay Brethour, Dave Carlsen, and Elizabeth Jones took over this fund at the start of 2004. Brethour has the longest tenure at the firm, having arrived at Kornitzer Capital Management in 2000 after stints at Security Benefit Group and Dain Rauscher Wessels. His research covers consumer services and industrial technology. He is also the president of Buffalo Funds and comanages Buffalo Growth BUFGX with Carlsen. Carlsen came to KCM in 2004 after working as a senior analyst at Strong Capital Management. He monitors technology companies. Elizabeth Jones, a former physician, joined KCM in late 2003 to research healthcare and financial stocks. She's also the sole manager of Buffalo Large Cap BUFEX.

The managers each perform investment analysis, and their respective areas of expertise help them search for innovative companies broadly construed. They have built upon their success managing this fund's predecessor, Buffalo Science & Technology, by leading this more-diversified version to top-quartile results in its category from July 2012 through March 2018.

The team members are invested alongside shareholders: Brethour invests more than \$1 million in the fund, and Jones and Carlsen invest \$100,001-\$500,000 each.

Parent Pillar ● Neutral | Tony Thomas
04/25/2018

Kornitzer Capital Management (KCM) offers a well-rounded mutual fund lineup, but concerns about succession planning, personnel turnover, and outflows on key products keep the firm's Parent rating at Neutral.

Based in Shawnee Mission, Kansas, KCM manages \$7.0 billion in assets, including \$4.1 billion in the 10 Buffalo mutual funds. The equity funds look for domestic or international growth stocks across the market-cap spectrum. Allocation and fixed-income products round out the slate. Twenty-six "Buffalo Secular Growth Trends" give portfolio managers a shared investment approach.

Yet the firm faces its share of questions and challenges. Founder John Kornitzer, who is in his 70s, controls more than 75% of the firm. There is no clear,

public succession plan and no plans to extend ownership beyond the firm's 17 owners. This is worrisome because prior personnel turnover has met with problems at times. For example, after Kent Gasaway stepped back from Buffalo Small Cap BUFSX and Buffalo Mid Cap BUFMX in 2015 to focus on the firm's private-client business, both funds saw a stampede of outflows. Buffalo Small Cap, once the firm's largest fund at nearly \$4 billion, has shrunk by more than 85% since the end of 2013. Although staffing and flows have mostly stabilized as other managers have taken center stage—such as the team on Buffalo Discovery BUFTX—these issues have rattled the firm.

Price Pillar ● Neutral | Tony Thomas
04/27/2018

Average fees earn the fund a Neutral Price rating.

The expense ratio on this fund's sole share class is 1.03%, a notch below the 1.04% median for mid-cap, no-load funds. Fees have been relatively stable at the fund, with little change since 2012. That is disappointing given that the strategy's total assets more than quadrupled from the end of 2011 through December 2017. Increased economies of scale have yet to be passed on to investors.



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Average Annual Returns (%)

As of 3/31/18	1 YR	5 YR	10 YR	15 YR
Buffalo Discovery Fund	17.35	14.55	13.44	14.40
Russell Midcap Growth Index	19.74	13.31	10.61	12.12
Morningstar U.S. Technology Index	26.43	19.70	13.96	13.10
Morningstar Mid-Cap Growth Category	18.34	11.94	9.39	11.02
Morningstar Technology Category	27.75	19.08	12.81	12.80

The Buffalo Discovery Fund expense ratio is 1.03%; inception date is 4/16/01. Average annual total return represents past performance and is no guarantee of future results. Investment return and principal value will fluctuate and redemption value may be more or less than original cost. Fund performance current to the most recent month-end may be lower or higher than the performance quoted and can be obtained by visiting buffalofunds.com. The Morningstar category averages represent a universe of funds with similar objectives.

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For more detailed information about Morningstar's Analyst Rating, including its methodology, go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause Analyst expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

The Morningstar Rating™ for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end funds, and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating™ for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating™ metrics. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods. The Buffalo Discovery Fund received 4 stars among 549 for the three-year, 5 stars among 485 for the five-year, and 5 stars among 352 Mid-Cap Growth funds for the ten-year period ending 3/31/18.

The Morningstar percentile ranking is based on the fund's total-return percentile rank relative to all funds that have the same category for the same time period. The highest (or most favorable) percentile rank is 1%, and the lowest (or least favorable) percentile rank is 100%. Morningstar total return includes both income and capital gains or losses and is not adjusted for sales charges. Morningstar ranked the Buffalo Discovery Fund in the top 31%, 11%, and 2% out of 549, 485, and 352 mid-cap growth funds for the 3-, 5-, and 10-year periods ending 3/31/18, respectively, based on total returns.

Free cash flow is a measure of the cash produced by the firm in a given period on behalf of equity holders. The true measure of the value of a firm's equity is considered to be the present value of all free cash flows. The Sortino Ratio a variation of the Sharpe ratio that differentiates harmful volatility from total overall volatility by using the asset's standard deviation of negative asset returns, called downside deviation. The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk. Downside protection on an investment occurs when the investor or fund manager uses techniques to prevent a decrease in the value of the investment. The Russell Mid Cap Growth Index is an unmanaged index that measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The Morningstar U.S. Technology Index is an unmanaged index that consists of companies engaged in the design, development, and support of computer operating systems and applications. It is not possible to invest directly in an index.

Diversification does not assure a profit, nor does it protect against a loss in a declining market.

The Fund's investment objectives, risks, charges and expenses must be considered carefully before investing. The Prospectus contains this and other important information about the investment company, and it may be obtained by calling (800) 49-BUFFALO or visiting buffalofunds.com. Read it carefully before investing.

Mutual Fund investing involves risk. Principal loss is possible. The Fund invests in small and mid-cap companies, which involve additional risks such as limited liquidity and greater volatility than large-cap companies. The Fund invests in foreign securities which involve greater volatility and political, economic, and currency risks as well as differences in accounting methods.

The Fund is no load, there are management fees and operating expenses that do apply. Such fees and expenses are described in the Fund's Prospectus. Fund holdings and sector allocations are subject to change and are not recommendations to buy or sell any securities. As of 12/31/17 the Buffalo Discovery Fund's top ten equity holdings were: Align Technology 2.09%, Xylem 1.90%, MSCI 1.81%, FMC 1.81%, BlackBerry 1.74%, Praxair 1.70%, Verisk Analytics 1.68%, Intercontinental Exchange 1.66%, MasterCard 1.64%, Danaher 1.64%. Top 10 holdings for the quarter are not disclosed until 60 days after quarter end. Those listed are for the previous quarter.

Kornitzer Capital Management is the advisor to the Buffalo Funds, which are distributed by Quasar Distributors, LLC.