

### VTCAx - Very Dangerous Rating



#### Vanguard World Funds: Vanguard Telecommunication Services Index Fund

★☆☆☆☆	<b>Predictive Rating</b>	Very Dangerous
★☆☆☆☆	<b>Portfolio Management</b>	Very Dangerous
★★★★★	<b>Total Annual Costs</b>	Very Attractive

- [Predictive Ratings](#) are based on aggregating our stock ratings on each of the fund's holdings and all of the fund's expenses.
- Stock-picking ([Portfolio Management](#)) and fund expenses ([Total Annual Costs](#)) drive fund performance.

#### Investment Recommendation

- We strongly recommend investors avoid VTCAx.
- We expect the fund to continue underperforming the market.
- VTCAx's Portfolio Management rating does not justify its Total Annual Costs.

#### Fund Rankings

- 8th percentile of the 7000+ equity funds we cover.
- 5 out of 12 Telecom Services funds.
- 3 of 5 ETFs in the same category rank better.
- See rankings for all US equity funds on our free [fund screener](#).

#### Portfolio Management Rating Details

- VTCAx receives our Very Dangerous rating because it overweights Dangerous-or-worse-rated stocks.
- IYZ, VTCAx's benchmark, receives our Very Dangerous rating.
- Our fund analytics are based on aggregating our models and ratings for each fund's holdings.
- Our [top-ranked](#) stock ratings leverage key data from the financial footnotes for unrivaled research quality.

#### Portfolio Management Rating Breakdown

##### Business Strength

★★☆☆☆	Quality of Earnings	Dangerous
★★☆☆☆	Return on Invested Capital (ROIC)	5.99%

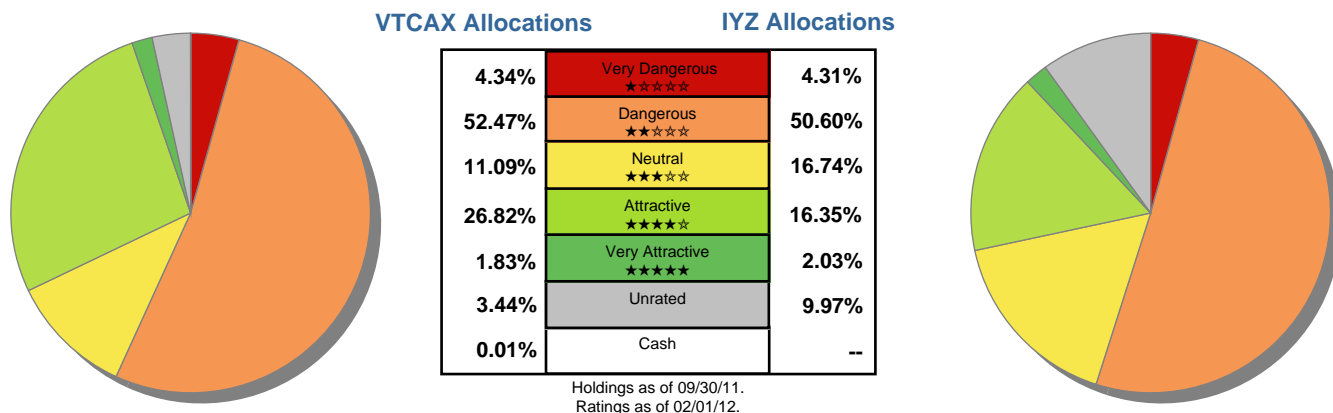
##### Valuation

★★★★☆	Free Cash Flow Yield	4.87%
★☆☆☆☆	Price to Economic Book Value	4.65
★★☆☆☆	Market-Implied Duration of Growth	26 year(s)

##### Fund Asset Allocation

★★★★★	Cash Allocation	0.01% cash
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#### Stock and Cash Rating Allocations vs Benchmark - iShares Dow Jones U.S. Telecommunications Index Fund (IYZ)



#### Passive Management Commentary

- VTCAx allocates 56.81% of its value to Dangerous-or-worse-rated stocks while IYZ allocates 54.91%.
- VTCAx allocates 28.65% of its value to Attractive-or-better-rated stocks while IYZ allocates 18.38%.
- Investors should expect funds with higher Total Annual Costs to allocate more value to Attractive and Very Attractive Stocks and less to Dangerous and Very Dangerous stocks than alternative funds with lower costs.
- VTCAx and IYZ offer exposure to Telecom Services stocks.

#### Return - Annual

Year to Date	0.25%
1 Year	-1.92%
3 Year	17.28%
5 Year	-1.25%
Inception	5.29%

#### Top 5 Holdings

Verizon Communications Inc
AT&T Inc
American Tower Corp
CenturyLink Inc
Crown Castle International Corp

#### Key Mutual Fund Statistics

VZ	Net Assets(mm)	Category	Telecom Services
T	NAV	Mgmt Co	Vanguard Group Inc
AMT	Benchmark	Manager	Ryan E. Ludt
CTL	# of Holdings	Tenure	2005
CCI	Initial Min	Inception	03/11/05

## Total Annual Costs Rating and Ranking

Rating	Total Annual Costs	Fund Universe % Rank	Category Rank
★★★★★	0.25%	98.56%	1 of 12

This rating reflects all expenses, loads, fees, and transaction costs in a single value that is comparable across all funds.

## Reported Costs vs Benchmark: as of 12/20/11

	VTCAx	Benchmark: IYZ
Front-End Load	0.00%	--
Expense Ratio	0.19%	0.48%
Back-End Load	0.00%	--
Redemption Fee	0.00%	--

## Total Annual Costs Breakdown

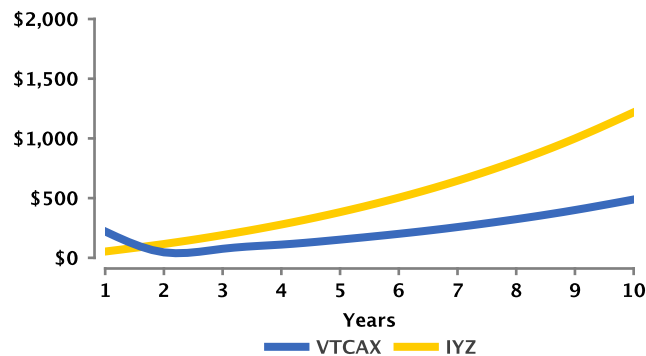
All Cost Types	Annualized Values	
	VTCAx	Benchmark: IYZ
Front-End Load	0.00%	--
Expense Ratio	0.21%	0.53%
Back-End Load	0.00%	--
Redemption Fee	0.00%	--
Transaction Costs	0.04%	--
<b>Total Annual Costs</b>	<b>0.25%</b>	<b>0.53%</b>

- Because VTCAx has lower Total Annual Costs, it can underperform its ETF benchmark by 0.28% annually over any holding period and still produce the same return.
- This analysis assumes a 3-year holding period, the average for all funds.
- Transaction costs are estimated using the fund's annual portfolio turnover ratio of 21%.

Data from Lipper, a Thomson Reuters Company, and New Constructs, LLC.

## Accumulated Total Costs vs Benchmark

Accumulated Total Costs represent the dollar value of costs investors incur during a 10-yr holding period. Assumes a \$10,000 investment and a 10% annual return for the fund and its benchmark.



- 3-year Accumulated Total Costs are \$75.72 for VTCAx and \$190.75 for IYZ. 10-year Accumulated Total Costs are \$488.62 for VTCAx and \$1,218.45 for IYZ.

## Overview of Our Predictive Mutual Fund Rating System

New Constructs' [Predictive Fund Ratings](#) enable smarter investing by assessing the key drivers of future fund performance. We start by analyzing every fund holding based on New Constructs' stock ratings, which are regularly featured as among the [best by Barron's](#). Next, we measure and rank the all-in costs of investing in a fund.

Intuitively, there are two drivers of future fund performance.

- 1) New stock-picking ([Portfolio Management Rating](#)) and
- 2) Fund expenses ([Total Annual Costs Rating](#)) drive investment performance

The figure below details the criteria that drive our Predictive Rating system for funds. The two drivers of our predictive rating system are Portfolio Management and Total Annual Costs. The Portfolio Management Rating (details [here](#)) is the same as our Stock Rating (details [here](#)) except that we incorporate Asset Allocation (details [here](#)) in the Portfolio Management Rating. The Total Annual Costs Rating (details [here](#)) captures the all-in cost of being in a fund over a 3-year holding period, the average period for all mutual fund investors.

Predictive Rating	Portfolio Management Rating						Total Annual Costs Rating
	Business Strength		Valuation			Asset Allocation	
	Quality of Earnings	Return on Invested Capital	FCF Yield	Price to Econ Book Value	Mkt-Imp Duration of Growth	Cash %	
Very Dangerous ★☆☆☆	Misleading Trend	Bottom Quintile	< -5%	> 3.5 or -1 < 0	> 50	> 20%	> 4%
Dangerous ★★☆☆	False Positive	4th Quintile	-5% < -1%	2.4 < 3.5 or < -1	20 < 50	8% < 20%	2% < 4%
Neutral ★★★☆☆	Neutral EE	3rd Quintile	-1% < 3%	1.6 < 2.4	10 < 20	2.5% < 8%	1% < 2%
Attractive ★★★★☆	Positive EE	2nd Quintile	3% < 10%	1.1 < 1.6	3 < 10	1% < 2.5%	0.5% < 1%
Very Attractive ★★★★★	Rising EE	Top Quintile	> 10%	0 < 1.1	0 < 3	< 1%	< 0.5%

## New Constructs® - Profile

Incorporated in July 2002, [New Constructs](#) is an independent publisher of investment research that provides clients with consulting, advisory and research services. We specialize in quality-of-earnings, forensic accounting and discounted cash flow valuation analyses for all U.S. public companies.

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1. **Superior Recommendations** - Our [stock-picks](#) consistently outperform. See our track record in our [stock-picking accolades](#) and [Proof Is In Performance](#) reports.
2. **More Accurate Research** - Our [patented Research Platform](#) for [reversing accounting distortions](#) and [discounted cash flow analysis](#) leverages better data to deliver smarter research.
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5. **Objectivity** - New Constructs is an independent research firm, not tied to Wall Street or investment banking services. See our [presentation to the Senate Banking Committee](#), the SEC and many others in DC.

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Accounting data is not designed for equity investors, but for debt investors. [Accounting data must be translated into economic earnings](#) to understand the profitability and valuation relevant to equity investors. Respected investors (e.g. Adam Smith, Warren Buffett and Ben Graham) have repeatedly emphasized that accounting results should not be used to value stocks. [Economic earnings](#) are what matter because they are:

1. Based on the complete set of financial information available.
2. Standard for all companies.
3. A more accurate representation of the true underlying cash flows of the business.

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