



ETF Analysis: Industrials

Industrial sector ETFs offer greater diversification than just “old-economy” companies, and exposure to the sustainable strength of aerospace makes several worth considering.

Top Consideration

Industrial Select Sector SPDR Fund (XLI)

Honorable Mention

Vanguard Industrials ETF (VIS)

Fidelity MSCI Industrials Index ETF (FIDU)

iShares U.S. Aerospace & Defense ETF (ITA)

VALUENTUM SECURITIES

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Industrials ETF Industry Listings (sorted by AUM)

Name	Symbol	Launch	Gross Ex. Ratio %	Net Ex. Ratio %	AUM (\$ - mil)
Industrial Select Sector SPDR Fund	XLI	12/16/1998	0.14	0.14	11,511.0
iShares U.S. Aerospace & Defense ETF	ITA	5/1/2006	0.44	0.43	3,870.3
Vanguard Industrials ETF	VIS	9/23/2004	0.1	0.1	3,400.0
First Trust Industrials/Producer Durables AlphaDEX Fund	FXR	5/8/2007	0.66	0.66	1,388.2
iShares U.S. Industrials ETF	IYJ	6/12/2000	0.44	0.43	932.4
iShares Transportation Average ETF	IYT	10/6/2003	0.44	0.43	840.8
SPDR S&P Aerospace & Defense ETF	XAR	9/28/2011	0.35	0.35	804.4
PowerShares Aerospace & Defense Portfolio	PPA	10/26/2005	0.61	0.61	718.0
Fidelity MSCI Industrials Index ETF	FIDU	10/23/2013	0.084	0.084	350.5
PowerShares Dynamic Building & Construction Portfolio	PKB	10/26/2005	0.63	0.63	282.1
SPDR S&P Transportation ETF	XTN	1/26/2011	0.35	0.35	172.7
PowerShares DWA Industrials Momentum Portfolio	PRN	10/12/2006	0.65	0.6	117.6
Guggenheim S&P 500 Equal Weight Industrials ETF	RGI	11/1/2006	0.4	0.4	106.4
PowerShares S&P SmallCap Industrials Portfolio	PSCI	4/7/2010	0.29	0.29	89.1
ProShares Ultra Industrials ETF	UXI	1/30/2007	1.45	0.95	21.7
ProShares UltraShort Industrials	SIJ	1/30/2007	2.07	0.95	2.9

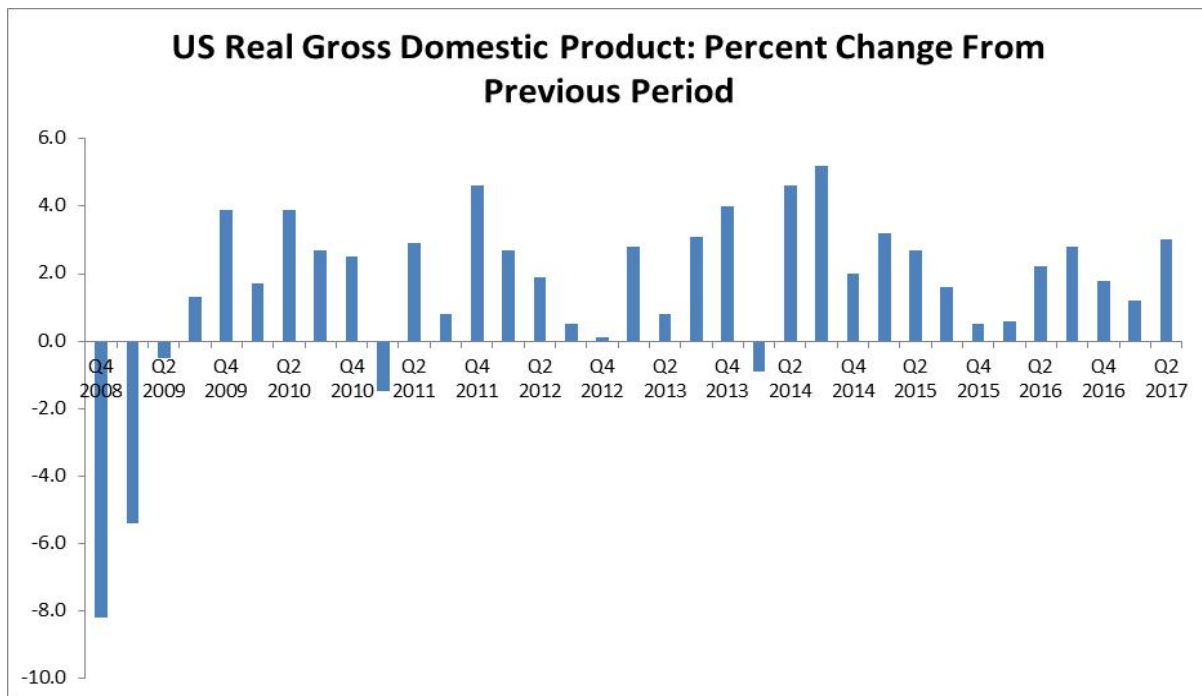
Source: Relevant ETF Documents, State Street

Global Economic Growth and the Tailwind of Aerospace

Portfolio exposure to the largest industrials sector ETFs comes with the acknowledgement that the fundamentals of most underlying companies will move with the ebb and flow of the global economy. Most companies in the industrials sector have large fixed asset bases, material ongoing maintenance capital requirements, and as a result, a high degree of operating leverage. This means that even small changes in revenue will drive large changes in operating profit through the course of the economic cycle.

During healthy global economic upswings, for example, incremental operating margins at some of the best operators could be several times that of firm-wide operating margins, driving exponential increases in profit growth. On the other hand, during downturns, profits could face significant pressure if lean initiatives and cost-cutting endeavors are not pursued to mitigate the weight of fixed-cost

deleveraging. The cyclical nature of the global economy coupled with the concept of operating leverage creates a comparatively large range of profitability from good times to bad times, and vice-versa, even for established industrial entities.



Source: Bureau of Economic Analysis

At the moment, the US economy is more than 8 years removed from the credit crisis that sent shockwaves through the global financial system in the latter years of the past decade. In the fourth quarter of 2008, for example, real GDP in the US tumbled more than 8%, a figure not witnessed since the double-dip recession of the 1980s, and perhaps not surpassed since the time of the Great Depression. The impact on industrial companies, however, should not be forgotten.

During the Financial Crisis of 2008-2009, many industrial entities, particularly those with finance subsidiaries faced dwindling credit health, and several including General Electric (GE) and Harley-Davidson (HOG) cut their dividends to shareholders. Others such as General Motors (GM) even faced the prospect of extinction were it not for government intervention. As a result of the large purchase prices of durable equipment from airplanes to farm implements, the financial and industrial markets will forever be inextricably linked.

More recently, however, economic activity in the US leapt an impressive 5% in the third quarter of 2014, the highest pace of expansion since the recovery started (GDP growth was 3% in the second quarter of 2017, the latest reading prior to the publishing of this work). Though China's economy seems to get most of the

attention, the much larger and more diversified \$18.5+ trillion US economy remains the epicenter of global economic and financial health.

Strong employment rates, muted inflation (lower oil prices), and consumer wealth brought about by robust equity market performance continue to be the main drivers behind the pace of US economic expansion. Actions by Federal Reserve officials to begin raising interest rates may be impacting the trajectory of economic growth in more recent periods, but overall the US economy appears very healthy. The timing of subsequent moves in the credit tightening cycle, which have yet to be determined, could put a bigger damper on the pace of expansion, however, as will any dislocations in the broader equity markets, a key source behind the wealth-effect that may be driving robust consumer spending.

Table 1. Overview of the World Economic Outlook Projections

(Percent change unless noted otherwise)

	Year over Year			
	2015	Estimate	Projections	
		2016	2017	2018
World Output	3.4	3.2	3.5	3.6
Advanced Economies	2.1	1.7	2.0	1.9
United States	2.6	1.6	2.1	2.1
Euro Area	2.0	1.8	1.9	1.7
Germany	1.5	1.8	1.8	1.6
France	1.1	1.2	1.5	1.7
Italy	0.8	0.9	1.3	1.0
Spain	3.2	3.2	3.1	2.4
Japan	1.1	1.0	1.3	0.6
United Kingdom	2.2	1.8	1.7	1.5
Canada	0.9	1.5	2.5	1.9
Other Advanced Economies 3/	2.0	2.2	2.3	2.4
Emerging Market and Developing Economies	4.3	4.3	4.6	4.8
Commonwealth of Independent States	-2.2	0.4	1.7	2.1
Russia	-2.8	-0.2	1.4	1.4
Excluding Russia	-0.5	1.8	2.5	3.5
Emerging and Developing Asia	6.8	6.4	6.5	6.5
China	6.9	6.7	6.7	6.4
India 4/	8.0	7.1	7.2	7.7
ASEAN-5 5/	4.9	4.9	5.1	5.2
Emerging and Developing Europe	4.7	3.0	3.5	3.2
Latin America and the Caribbean	0.1	-1.0	1.0	1.9
Brazil	-3.8	-3.6	0.3	1.3
Mexico	2.6	2.3	1.9	2.0
Middle East, North Africa, Afghanistan, and Pakistan	2.7	5.0	2.6	3.3
Saudi Arabia	4.1	1.7	0.1	1.1
Sub-Saharan Africa	3.4	1.3	2.7	3.5
Nigeria	2.7	-1.6	0.8	1.9
South Africa	1.3	0.3	1.0	1.2

Source: International Monetary Fund

According to the July 2017 *World Economic Outlook* published by the International Monetary Fund, economic growth estimates for the US in the near term reveal expectations for the world's largest economy to continue growing at a ~2% pace, roughly in line with that of other developed economies. On a global scale, growth is expected to expand at a faster pace of ~3.5% in 2017 and 3.6% in 2018 thanks to emerging market strength, even as the annualized rate of activity in China slows. From our perspective, the outlook for the overall global economy remains healthy, particularly in emerging and developing economies, but the pace of growth in advanced economies may not be as robust as many would like.

But Which Industrials ETF May Be Best?

A look at a few of the largest broad industrials sector ETFs, as measured by assets under management, reveals little differentiation. The Industrial Select Sector SPDR Fund (XLI), the Vanguard Industrials ETF (VIS), and the iShares U.S. Industrials ETF (IYJ)--coming in at numbers one, three, and five, respectively, in terms of AUM--have very similar holdings and have the same top 4 holdings in the same order. We would expect these three ETFs to exhibit very high share-price correlation as a result. The Industrial Select Sector SPDR Fund takes the cake with respect to dividend yield, registering a ~1.9% yield at recent price levels compared to ~1.8% and ~1.4% for the Vanguard Industrials ETF and the iShares U.S. Industrials ETF, respectively.

Fund Top Holdings					
Industrial Select Sector SPDR Fund (XLI)		Vanguard Industrials (VIS)		iShares U.S. Industrials ETF (IYJ)	
Name	Weight	Name	Weight	Name	Weight
General Electric	7.07%	General Electric	8.10%	General Electric	7.06%
Boeing	6.33%	Boeing	5.10%	Boeing	4.48%
3M	5.58%	3M	4.40%	3M	4.02%
Honeywell International	4.97%	Honeywell International	3.60%	Honeywell International	3.48%
Union Pacific	4.14%	United Technologies	3.30%	United Technologies	2.93%
United Technologies	4.13%	Union Pacific	3.10%	Union Pacific	2.81%
Lockheed Martin	3.65%	Lockheed Martin	2.80%	Accenture Plc.	2.67%
United Parcel Service	3.62%	United Parcel Service	2.80%	United Parcel Service	2.62%
Caterpillar	3.27%	Caterpillar	2.40%	Lockheed Martin	2.54%
General Dynamics Corp.	2.78%	FedEx	1.90%	Caterpillar	2.27%

Source: Relevant ETF Documents, August 2017

More recently, First Trust Industrials/Producer Durables AlphaDEX Fund (FXR) has made a push into the top four industrials ETFs, registering nearly \$1.4 billion in AUM at last check. This ETF, however, employs the AlphaDEX stock-selection methodology in selecting equities from the Russell 1000 Index, which results in higher weightings in companies with smaller market caps than its peer ETFs. For example, the median market cap of the FXR is just under \$9 billion, compared to ~\$20 billion in the XLI and \$35+ billion in the VIS. The FXR also carries a much higher expense ratio of 0.66% and a meaningfully lower yield at just ~0.5% as of this writing.

The least expensive product of the highest-AUM broad-based industrials ETFs is Vanguard's VIS with an expense ratio of 0.1%, followed by State Street's XLI at 0.14%. Additionally, the XLI's higher weightings across its top 10 holdings may give its offering a slight edge for investors that want heavier exposure to the likes of Boeing (BA), 3M (MMM), Honeywell (HON), and Union Pacific (UNP). We're not seeing the investment angle for iShares' more expensive IYJ relative to the competing products, though it does throw Accenture (ACN) in the top 10 holdings (the other two do not include the company as a top 10 holding). Such moderate differentiation, however, isn't enough for the higher 0.43% expense ratio, in our view.

Though we see many "old economy" companies in the top 10 holdings of these ETFs, they have much better diversification than one might think, in our view. For starters, top weighting GE has effectively achieved the significantly heavier industrial split between its industrials/financials exposure it has been working toward in recent years, and the conglomerate is also quite diversified within the industrials sector itself (with business segments spanning power & water; oil & gas; energy management; aviation; healthcare; and transportation.) Backlog at the industrial giant reached an impressive ~\$327 billion at the end of the second quarter of 2017, up from \$200 billion in 2011, but concerns are growing regarding its doubling-down on energy exposure in the wake of lower energy resource prices. GE's sprawling industrial asset base will undoubtedly play a role in the proliferation of the Industrial Internet of Things, too, as will peer Honeywell.

Furthering the theme of diversified exposure in these ETFs is 3M's several sprawling business segments. Probably best known by consumers for its Post-it notes, 3M has its hands in the safety & graphics, electronics & energy, consumer, and healthcare end markets, in addition to its traditional "industrial" exposure. Geographically, the conglomerate is diversified within each of these segments as well, with the US representing ~40% of total revenue, followed by Asia Pacific accounting for ~30% and the EMEA region at just over 20% of total revenue. Mid-single-digit top-line growth, high-single-digit EPS growth, ~20% ROIC, and strong free cash flow conversion have become baseline expectations for the company.

Union Pacific is no longer benefiting from what was one of the best operating climates for a railroad in some time. Economic growth in the US has slowed in recent periods, though diesel fuel costs remain suppressed as a result of the aforementioned ongoing pressure on energy resource prices. Union Pacific ships everything from agricultural products and automobiles to chemicals and coal, revealing a variety of diverse volume levers in its business model. The railroad has also made progress with respect to the efficiency of its operations, but potentially material volume declines in any one of coal, intermodal, industrial, chemicals, agricultural products, and automotive can impact the firm's operating ratio.

With GE's jet-engine making operations, United Technologies (UTX), Boeing and Honeywell add a very nice tilt in these three broad ETFs to aerospace (those that are involved in making the airplanes, not flying them). According to Boeing's 2017 Current Market Outlook, the world will need 41,000+ new airplanes over the next 20 years, valued at just over \$6 trillion. As many as 17,500+ of these airplanes, or ~43% of total demand, will replace older, less efficient ones, while the balance will be purely for growth, mostly in emerging markets and Asia. The realization of such an outlook will keep aircraft build rates and component part demand elevated for some time.

The commercial aerospace backlogs at the two large airframe makers, Boeing and Airbus, are the biggest they've been in the history of aircraft making, at several times annual revenue. We think this dynamic will make aerospace much more resilient in the face of any economic environment, relative to previous cycles that were beholden to the pace of near-term orders. Aerospace was one of the few segments within the industrials sector that did not experience any material cancellations as a result of plummeting GDP during the Financial Crisis.

Boeing and Airbus will, of course, be the prime beneficiaries of such sustainable strength, but many opportunities in the supply chain are equally robust. United Technologies has exposure to building (elevators) and industrial systems, but its divisions of Pratt & Whitney and UTC Aerospace Systems are ideally suited to capitalize on the secular theme of aerospace. Similarly, Honeywell is diversified via its automation and control solutions and its performance materials and technologies divisions, but aerospace remains a key source of upside for the firm. The aerospace supply chain will benefit for years to come.

For those investors *not* interested in seeking broad industrials exposure, per se, a more concentrated focus on the theme of aerospace may be of particular interest. The iShares U.S. Aerospace & Defense ETF (ITA), the PowerShares Aerospace & Defense Portfolio (PPA) and the SPDR S&P Aerospace & Defense ETF (XAR) are worth considering, but each falls short, in our view, as all three have material exposure to the defense industry. Though this isn't necessarily a demerit in the context of ongoing geopolitical uncertainty and rising tensions across the globe and their healthy dividend payouts, it does limit direct exposure to burgeoning commercial build rates and introduces another dynamic to the ETFs, the budget cycle.

Boeing is top weightings in all three of the aforementioned aerospace-concentrated ETFs, and iShares' ITA and PowerShares' PPA share eight of ten top holdings. State Street's XAR does have a few overlapping top holdings with its peer ETFs--Lockheed Martin (LMT), Rockwell Collins (COL), and Raytheon (RTN), for example--but it chooses higher levels of exposure to the likes of Spirit AeroSystems Holdings (SPR), BWX Technologies (BWXT), and Orbital ATK (OA) in place of names such as United

Technologies and Honeywell. We think the XAR misses the mark, even as its expense ratio is lower than the other two aerospace-themed ETFs.

We're generally less-enthused about the long-term investment prospects of the transportation-focused ETFs, the iShares Transportation Average (IYT) and the SPDR Transportation ETF (XTN). The IYT lists FedEx (FDX) as its top holding and weights a number of railroads highly in the ETF, but its nearly 20% weighting in airlines leaves much to be desired. State Street's XTN holds a similar weighting in airlines. Air fares and jet fuel costs remain among the most difficult dynamics to forecast of any sector, and as a result, we view these ETFs as merely inverse bets on the direction of crude oil, the refined products of which are a key driver, if not the most important driver, behind airlines' profitability.

As we've stated many a time before, long-term investors should be mindful of the risks embedded in ETFs promising returns of the 2x variety, including ProShares Ultra Industrials ETF (UXI) and ProShares UltraShort Industrials (SIJ). These highly-leveraged products provide a return that is several times the return of the benchmark index, but only *for a single day*. These vehicles should not be expected to provide the return of their benchmark's cumulative returns over longer periods of time. Such ETFs could be hazardous to the individual investor that's unaware of price erosion risk brought about by index volatility.

All-in, there's a lot to like about several ETFs in this space. Though there's nothing wrong with Vanguard's VIS or even Fidelity's recent launch, the Fidelity MSCI Industrials Index ETF (FIDU), the latter of which offers the lowest expense ratio in the group (0.084%) and is relatively similar in terms of its top ten holdings to the largest ETFs in the group, if we had to pick our favorite sector industrials ETF, it would be State Street's XLI. We generally like the higher weightings among the top 5 constituents, and the XLI's 0.14% expense ratio is quite reasonable.

We think there's room for the creation of a better and more directly-focused commercial aerospace ETF, but for those looking for the best available aerospace & defense ETF at the moment, iShares' ITA would be it due primarily to its lower expense ratio than the PPA. The ITA does have meaningful defense exposure, but with Boeing and United Technologies at the very top and Rockwell Collins (COL) in the top 10 holdings, investors can do far worse.

Plus, it's really not all that bad with the defense contractors either, as the largest have some of the most competitive dividends on the market today. The ITA lists Lockheed Martin, General Dynamics (GD), Northrop (NOC) and Raytheon in its top holdings, and it would *not* be unusual for these large defense contractors to continue to post solid Dividend Cushion ratios, even as they raise their payouts year after year.

Valuentum Buying Index Ratings

We think the best ETFs are those that have low or reasonable expense ratios, have holdings that are collectively underpriced, and have technical and momentum indicators that are currently exhibiting bullish trends. Similar to how we arrive at the Valuentum Buying Index rating for stocks, we perform a process in arriving at a Valuentum Buying Index rating for each ETF.

The highest-rated ETFs will have best-in-class expense ratios, have undervalued constituents in aggregate, and possess strong technical and momentum indicators. The Valuentum Buying Index rating reflects our assessment of the relative attractiveness of each ETF on a scale from 1 through 10 (10 = best).

An ETF that registers a 5, for example, is relatively more attractive than an ETF that registers a 4 within its defined category based on the three defined parameters of "expense," "valuation," and "technical." That same ETF can also be considered relatively more attractive to an ETF that registers a 4 in another defined category.

ETFs that register a 9 or 10 on the Valuentum Buying Index are not only best-in-class within their respective categories, but also may represent ideas for the opportunistic investor.

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