



U.S. Investment Sciences

Trade Data Points to a Buy Signal for EXPD

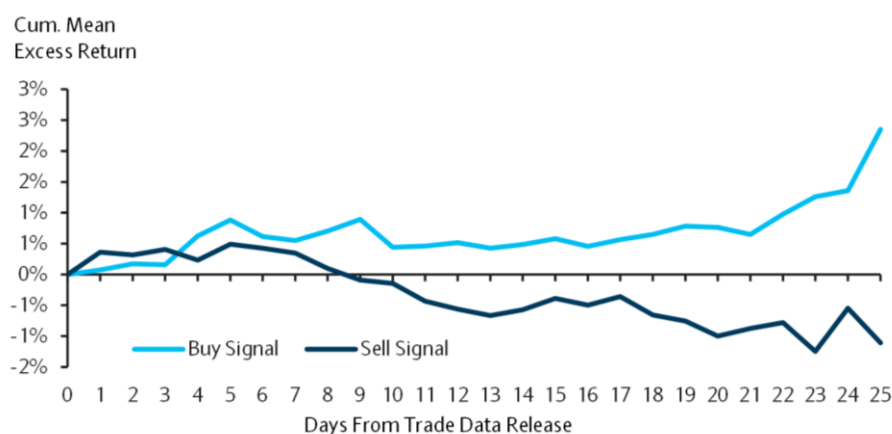
We believe early trade data releases allow for greater accuracy in forecasting actual sales growth for Expeditors International of Washington, Inc. (EXPD) than consensus alone. EXPD is in the business of arranging and facilitating international shipments for its customers, and therefore the company's revenues are closely tied to international trade growth. Barclays U.S. Transports equity research team led by Brandon Oglenski has gathered U.S. trade data history from the U.S. Census department that includes 128 million records of U.S. monthly imports and exports.

Consensus error predictions based on trade data releases generated useful signals for relative returns between EXPD and the S&P 500 Index since 2009 (Figure 1). The U.S. Census reports the earliest data for each quarter three weeks before the quarter ends and usually two months or more before EXPD reports results, which offers the potential for some time to construct and implement a trade.

Our model is generating a buy signal using the most recent trade data release on December 6, 2018. At this moment, the model's positive direction is notable because the company is subject to concerns around demand for its services amidst ongoing trade tensions and rising anxiety about global growth. Despite these risks, the signal suggests that consensus may have become too negative (at least relative to the state of the broader market) before the latest trade data release.

FIGURE 1

Using Early Quarter Reports on U.S. Trade Volumes as a Trading Signal for EXPD vs. S&P 500 Appears To Effectively Separate Periods of Better and Worse Performance



Source: U.S. Census, Refinitiv, Barclays Research

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PLEASE SEE ANALYST CERTIFICATION(S) AND IMPORTANT DISCLOSURES BEGINNING ON PAGE 6.

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Imports and Exports Data Releases Provide Incremental Information About EXPD Sales

The Trump administration moves to raise tariffs on a swath of goods over the past year have prompted concerns about the potential for a global trade war. Although the conflict would likely need to expand significantly to impact global economic growth meaningfully (see *Thinking Macro: 'Trade War' in perspective*; June 1, 2018 for an assessment), even a narrow disruption to trade growth could be a risk for companies with direct exposure to trade flows.

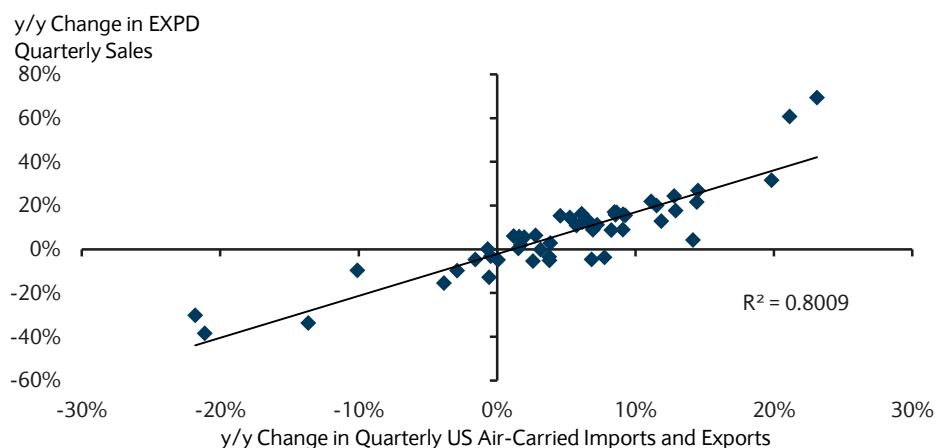
Expeditors International of Washington, Inc. (EXPD) is a logistics company that arranges international shipments and handles the customs process for importers and exporters globally. Unlike other companies in the logistics space, EXPD runs an asset-light model, opting to procure capacity on ships and planes owned by other operators for the shipments they arrange. The company is covered by Brandon Oglenski's North America Transportation team, who have written extensively about it. For a deep dive into the equity team's views on the name, see *North America Transportation: Time to Get Defensive? A Quick Look at Asset Light Margins*; November 19, 2018.

Given that the company is a relatively pure play on international trade, it's long been understood that trade data could provide insights into the name (see, for example, Barclays U.S. Transportation equity team's data book *A State of Transport, March 2018*; March 16, 2018). U.S. trade data is available from the U.S. Census, and we used two sets of data in conducting our analysis:

- The Transportation team maintains a large database of detailed merchandise trade. That dataset includes 56mn export records and 72mn import records (for 128mn total), dating back to 2014.
- USA Trade Online allows free access to a longer history of aggregate data.

FIGURE 2

EXPD's Sales Are Closely Tied to US Imports and Exports



Source: US Census, Refinitiv, Barclays Research

Figure 2 demonstrates how tightly EXPD's quarterly sales growth is aligned to total growth of U.S. imports and exports. More than 70% of the company's quarterly y/y sales growth since 2014 can be explained by changes in U.S. imports and exports. The details also make a difference here. For example, EXPD is more exposed to trade that moves by air (80% R-squared) and less to sea-based trade growth (65% R-squared).

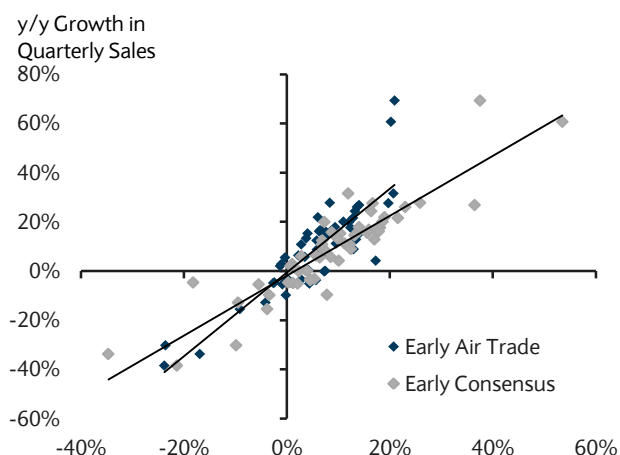
The schedule of monthly trade data reporting provides a view of quarterly trade volumes about 6-8 weeks before EXPD's quarterly numbers are reported. That suggests there is potential for using preliminary in-quarter data reports to inform our views about the company.

For the purposes of our analysis, we define 'early trade data' as the monthly releases of trade data for a quarter, prior to EXPD reporting earnings (because the final release is often close in time to the actual results reporting date, we limit the analysis to the first and second month releases). This data is reported by the U.S. Census with a time lag of 5-6 weeks after the month ends; for example, the data for January 2018 was reported on March 7, 2018. Early trade data tells us a lot about the full quarter performance: there is about a 90% correlation between y/y growth the first month of the quarter, and y/y growth of the full quarter.

By the time the early trade data is released, consensus estimates suggest that fundamental analysts already know a substantial amount about how things are trending. As Figure 4 shows, there is a strong correlation between the early trade data and the 'early consensus', which we define as the IBES consensus quarterly growth estimate for EXPD at the time the early trade data is reported.

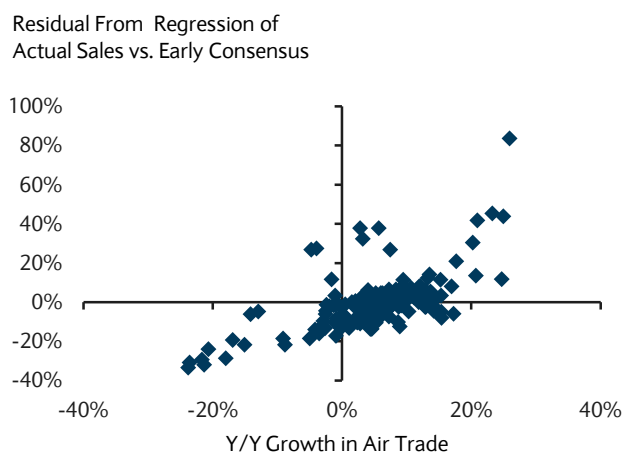
But those don't overlap entirely, so we think there is additional information in the early trade data that isn't already perfectly captured by the market. We look at how much incremental information there is using a two-step process. First, a regression of early consensus vs. actual sales growth has an R-squared of about 37%. Then, a second regression of early trade data (specifically air-carried trade) on the errors from the first regression explains about 44% of the residual variation. In essence, that tells us that consensus has predictive power, but when the 'early trade data' is released it can tell us about the direction and magnitude that the consensus is likely to miss.

FIGURE 3
Early Consensus and Early Trade Data Both Are Closely Correlated to Actual Sales Growth ...



Source: US Census, Refinitiv, Barclays Research

FIGURE 4
But Even After Accounting for Consensus, There Is Residual Information from Air Trade



Source: US Census, Refinitiv, Barclays Research

U.S. Trade Data Can Generate a Trading Signal for EXPD

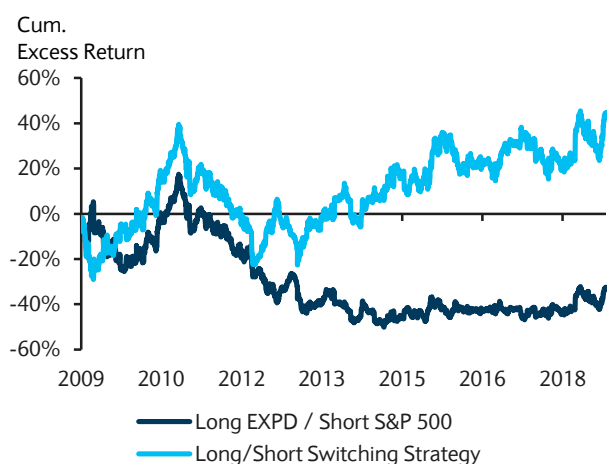
If the trade data is actually useful in predicting the direction of consensus misses, we would also expect it to provide a useful relative-value trading signal. In fact that does appear to be the case.

Here's how we constructed the signal backtest:

- Starting in mid-2009, we parameterize 'point-in-time' regressions for consensus versus actual sales growth for EXPD and the errors in that relationship, as of each data release date. We use only data that was public prior to the release for each step. We then made a point-in-time consensus error prediction using the current early trade datapoint (which was outside the training set).
 - When the model suggests consensus is too low, we buy EXPD and hedge by selling the same notional amount of S&P 500. We keep the notional amounts equal, as EXPD had a beta close to 1, based on weekly stock and index movements from 2000-2008 (per Bloomberg).
 - When our model suggests consensus is too high, we buy S&P 500 and hedge by selling an equal notional amount of EXPD.
 - We open the trade at the close on the day the customs data is released (data releases happen at 8:30am) and close the trade on the close of the next data release date.
 - We don't trade around the third monthly data release within the quarter, as it tends to come within a few days of the final reporting (and consequently contains the least new information relative to consensus).

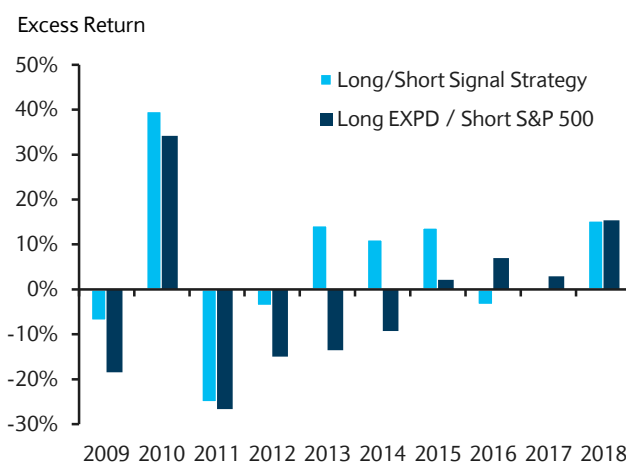
This trading strategy was backtested to have generated ~5.5% excess return per year since 2009 (Figure 5). More importantly, for a single name strategy using the signal to trade a hedged position in EXPD would have generated higher returns than simply owning a hedged position in the stock. This is best illustrated by the performance from the end of 2013 to the end of 2017. During that time, a position in EXPD stock would have returned 55% and a position in S&P 500 would have returned 57%. So a trade that was long EXPD and short the same dollar amount of SPX would have returned -2%. But a portfolio traded based on the trade data signal would have returned about 18% during the same time period.

FIGURE 5
Strategy Based on Trade Data Signal (Light Blue Line) Has Outperformed a Hedged Position in EXPD (Dark Blue Line) by >7.5% Annually Since 2009...



Source: US Census, Refinitiv, Barclays Research

FIGURE 6
...Trade Data Signal Outperformed a Hedged Position in EXPD in 8 out of the Past 10 Years



Source: US Census, Refinitiv, Barclays Research

As with any systematic analysis, this one comes with caveats. We have not accounted for trading costs, price impacts of trading, or the carrying costs of being short the stock or the index. Nevertheless, we think this is a useful tactical framework for both long/short and long-only investors to keep in mind that when they are deciding whether to trade in the name.

Current Trade Direction

Based on the trade data release on December 6, 2018, our model expects EXPD 4Q18 y/y sales growth to beat the current consensus by ~6%. In our model, that would be a signal to be long EXPD and hedge with S&P 500. It is a notably timed buy signal, as it appears investors are turning more negative on transport demand because of concerns about an extended trade war and the prospects for economic growth (see: Brandon Oglenski *North America Transportation: Time to Get Defensive? A Quick Look at Asset Light Margins*; November 19, 2018). Although growth in trade would likely be vulnerable in an economic slowdown, the opposite is showing up in the data. October trade that moved by air grew 12% over the same month in 2017, and it was the fastest growth this year. While there is always a possibility that November and December will show a slowdown, it is worth noting that since at least 2005 EXPD has never seen a quarterly sales decline when the first month of the quarter had trade growth higher than 10%. So while the company might yet be vulnerable if a trade war emerges, the latest numbers suggest that it is not feeling the effects yet.

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Materially Mentioned Stocks (Ticker, Date, Price)

Expeditors Intl. of Washington Inc. (EXPD, 20-Dec-2018, USD 66.44), Overweight/Positive, CE/J

Prices are sourced from Refinitiv as of the last available closing price in the relevant trading market, unless another time and source is indicated.

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Canadian Pacific Railway (CP)	Canadian Pacific Railway (CP.TO)	CSX Corporation (CSX)
Expeditors Intl. of Washington Inc. (EXPD)	FedEx Corp. (FDX)	Fortress Transportation & Infrastructure Investors LLC (FTAI)
Heartland Express, Inc. (HTLD)	Hub Group Inc. (HUBG)	JB Hunt Transport Services Inc. (JBHT)
Kansas City Southern (KSU)	Knight-Swift Transportation Holdings (KNX)	Norfolk Southern Corp. (NSC)
Union Pacific Corp. (UNP)	United Parcel Service Inc. (UPS)	Werner Enterprises Inc. (WERN)
XPO Logistics Inc. (XPO)		

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USD 66.44 (20-Dec-2018)

Stock Rating

OVERWEIGHT

Industry View

POSITIVE

Rating and Price Target Chart - USD (as of 20-Dec-2018)

Currency=USD



Publication Date	Closing Price	Rating	Adjusted Price Target
08-May-2018	69.58		78.00
08-Jan-2018	65.48		70.00
08-Dec-2017	64.46		65.00
02-Oct-2017	60.34		63.00
09-Jan-2017	53.04		58.00
08-Nov-2016	50.29		55.00
14-Apr-2016	48.70	Overweight	58.00

On 20-Dec-2015, prior to any intra-day change that may have been published, the rating for this security was Equal Weight, and the adjusted price target was 51.00.

Source: Refinitiv, Barclays Research

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Source: IDC, Barclays Research

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