

The Free Shipping Tax

Examining the Unsustainable Pricing Model of the USPS



- **If Post Office Ends Don't Meet, Taxpayers Will Pay for Free Shipping** – Recently the USPS has begun to raise parcel rates, and coupled with rising volume the organization has begun to eke out small profits. But this modest level of profitability ignores several billions of benefit payments the USPS is mandated to make. In this note, we examine the true profitability of the Post Office and show that by charging below market rates on parcel volume (mainly eCommerce) the Post Office has essentially turned free shipping into a future tax payers' burden.
- **USPS Parcel Rates Appear Below True Economic Cost** – Based on our primary analysis, which loads incremental benefits costs onto the USPS's parcel business, it appears that average parcel rates would need to increase ~50% initially to break even. The biggest unknown in our analysis is when this "trigger" for higher rates would be reached and how. Inertia in Washington has allowed for this issue to persist for years, but that may change due to proposed postal reform under a new cost minded administration. In addition, continued declines in First Class mail may erode the financial and operational base of support for parcel delivery, thereby forcing the USPS to act, particularly as capacity issues and capital needs increase.
- **Day of Reckoning May Be a \$15-19b Payday Parcel Carriers Are Planning For** – Much has been made of FedEx's and UPS's aggressive capacity investments recently and we believe the expectation of a better pricing environment in the future is a driver of this spending. Assuming the USPS needs to raise rates meaningfully to capture its true costs, we see a large \$15-19b revenue opportunity for FedEx and UPS. We assume that as the floor on pricing rises, both carriers will be able to take incremental Ground pricing. The magnitude is difficult to determine, but we believe it could result in as much as 14-57% earnings accretion over a multi-year period, providing ample return on investment. This supports upside for both stocks, but we would prefer to leverage this through Buy rated FedEx given its nimbleness on pricing.
- **Can Customer Behavior Change or Will Other Participants Bear the Cost?** – The true friction on this analysis is anticipating how customers and shippers will react to the potential for meaningful rate increases. Through efforts by large eCommerce shippers, many consumers have been conditioned to expect shipping solutions which are not supported by economic reality. This likely will be difficult to change in the short run, which could lead to increased pressure on shippers and potentially a lag in the ability for parcel carriers to immediately push through higher rates. It could also push the largest eCommerce shippers to increase already sizeable investments in in-house delivery. We believe a mandated pricing scheme change (i.e. a legislated solution) could provide a shock – depending on implementation speed – and may eventually lead to customer behavior changes related to eCommerce delivery.

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The USPS's Unsustainable Pricing Model

The USPS Ekes Out a Profit by Defaulting on its Benefits Payments

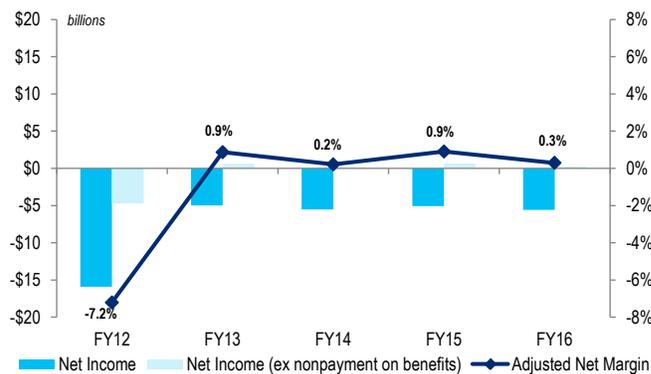
As we detailed [in our previous examination of the USPS' role in the eCommerce/parcel ecosystem](#), the boom in parcel volume over the past several years has coincided with a steady deterioration in the USPS' financial health. On a GAAP basis, the USPS hasn't turned a profit since the FY03-FY06 period, when it averaged a 3.3% net margin. By legislative mandate starting in FY07, the USPS was required to prefund the Postal Service Retiree Health Benefits Fund ("PSRHBF") each year, and recognize the cost as an operating expense on its income statement. This cost is over \$5B per year, and against net income that had dwindled to \$0.9B in FY06, the USPS quickly posted a string of annual net losses starting in FY07, despite 2%+ average revenue growth. To stem the bleeding, since FY12 the USPS has been allowed to default on these annual prefunding payments, and the accrued amount now stands at \$33.9B through FY16. Adjusting out this non-cash accrual, the USPS has turned a slight (20-90 bps) net margin since FY13.

Figure 1. The USPS Owes \$33.9B in Defaulted Benefits Pre-Funding



Source: Company Reports and Citi Research Estimates

Figure 2. These Defaults Have Allowed for Nominal Profitability



Source: Company Reports and Citi Research Estimates

Irrational Pricing Keeps the USPS Unprofitable

We contend that the USPS does not act as a rational price-setter in the parcel market. Remedying this could be the key to the organization regaining operating solvency. Since FY12, revenues on the primary basket of parcel competitive product offerings at the USPS have grown at a 15% CAGR to become over 20% of total revenues (up from 12.5% just 5 years ago). By comparison, market-dominant products ex-services (i.e. regular 1st Class Mail, etc.) have declined at a 0.7% CAGR, going from over 77% of the USPS' revenues to less than 69% in FY16. Given its challenged profitability, one would expect that the USPS grew yields on its competitive products to offset these market-dominant volume losses and the increased operating expenses. Yet while nominal pricing grew between 2% and almost 8% across competitive products on an annualized basis since FY13, mix effects from faster growth in lower-yielding Parcel Select and First-Class Package Service offerings rendered overall yields slightly down (~30 bps on an annualized basis), and to this day, price still does not cover all-in costs. Despite this irrationally priced competition, FedEx and UPS were able to grow ground yields by a weighted average 3.2% annually, with FedEx yields growing faster than UPS's.

Our contention is that this era of unprofitability should come to an end over the next several years

The Era of an Unprofitable USPS May Be Coming to an End

Our contention is that this era of unprofitability may be coming to an end in the intermediate term, as several factors (Washington reform, capex needs, operational failure) may be aligning to force a change to the USPS's unsustainable model. If and when this occurs, the parcel market should see an uplift in pricing, which would be a tailwind to established parcel carriers FedEx and UPS and may cause customer behavior changes or further cost pressure at large eCommerce players.

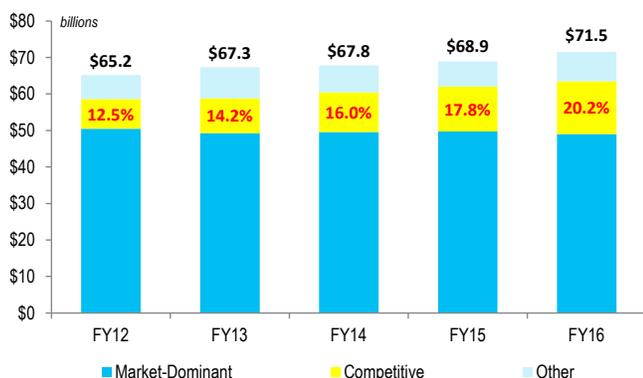
Current House Bills Could Be a 1st Step in Correcting the Issues

There is currently a pair of bills in Congress which seek to remedy USPS' solvency issues: the Postal Service Reform Act of 2017 ("PSRA 2017") and the Postal Service Financial Improvement Act of 2017 ("PSFIA 2017"). These may be key triggers to real industry change. There are 5 provisions in the legislation which are relevant to our current analysis, and we think demonstrate that Congress may be getting more serious about rectifying the USPS' problems. These provisions are:

- 1) A 2.15% rate increase on market-dominant products, which equates to a ~1c increase, and would generate an incremental ~\$1B in annualized revenues and offset 11-12% of the P&L shortfall through 2018;
- 2) A full review of the market-dominant rate system by January 1st, 2018;
- 3) A review of the cost allocation factors for competitive versus market-dominant products by April 1st, 2018 (i.e. Scenario #2 in our current analysis, below);
- 4) The reinstatement of 50% of the exigent surcharges that expired in 2016, and the re-basing of rates to these new levels when determining future rate increases; and,
- 5) The phasing out of the USPS' obligation to pay Medicare premiums for current retirees – while this is a non-cash operating expense on the USPS' P&L (payments are made from a pre-funded asset pool), this removes the future risk of funding obligations to the USPS.

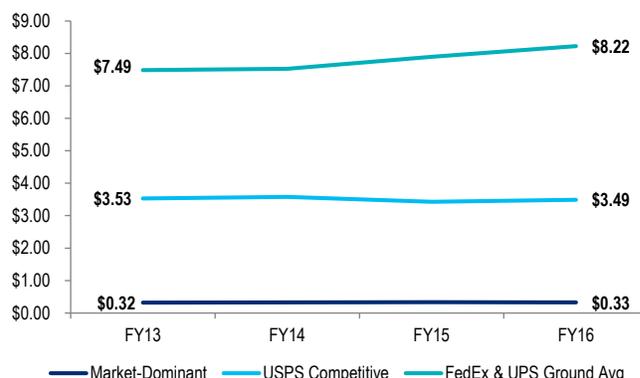
In our view, 1 is possible, but somewhat politically unpalatable. It also ignores the long-term issue of declining mail volume. A combination of 2, 3 and 4 seem most likely to find support and if executed well could provide a long-term solution.

Figure 3. Competitive Products Have Driven the USPS' Top-Line Growth



Source: Company Reports and Citi Research Estimates

Figure 4. But Rates Have Moved Down, Against the Broader Market



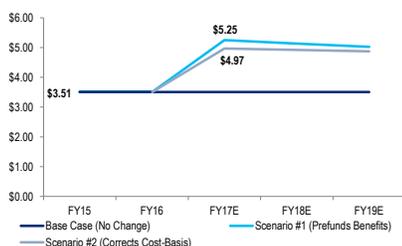
Source: Company Reports and Citi Research Estimates

The USPS has maintained artificially low rates on its competitive products by effectively shifting a significant part of its expenses to the U.S. taxpayer.

USPS Pricing Correction Is a \$15-19B Rev Oppty for FedEx & UPS

The USPS has long functioned as a pricing “floor” for the parcel market. We contend that this floor for competitive (parcel) products has been maintained at artificially low levels, creating large-scale systemic economic inefficiencies engendered by what is effectively a government-enforced taxpayer subsidization of the USPS’ irrational pricing. This has put provided a competitive headwind to FedEx and UPS during a period of historic parcel market growth, pressuring each company’s ability to fully realize adequate pricing power to offset the incremental costs associated with increased eCommerce growth (essentially lower delivery density). This headwind to pricing has been a contributing factor to pressured margins at both FedEx and UPS over the past 5 years.

Figure 5. USPS Yields in Our Analyses



Source: Company Reports and Citi Research Estimates

We believe a day of reckoning is approaching where the USPS will need to raise the overall yields on its suite of competitive parcel products in order to maintain its own solvency and continued participation in this growing market. To gauge the opportunity for the private parcel carriers, we examine two possible scenarios by which this could occur. In the first, the USPS must maintain breakeven profitability on a GAAP basis (i.e. makes all of its benefits prefunding payments) by increasing yields on competitive products. In the second, the USPS must raise yields on its competitive products to better align with the actual costs of providing these service offerings. Between the two scenarios, **we find that the total revenue opportunity at Ground over the next 3 years is between \$15B and \$19B for FedEx and UPS combined, or \$14B to \$17B on a net incremental EBIT basis.**

Scenario 1: The USPS Make its Benefit Payments and Breaks Even

In our first scenario, we examine what levels of incremental yield the USPS would need from its competitive products in order to achieve breakeven GAAP profitability in the next 3 years, similar to its adjusted net income levels over the past 4 years. This means that the USPS must resume making annual prefunding payments to the PSRHBFB as well as meeting the amortization schedule on the accumulated \$33.9B it owes, as laid out in its FY16 annual report to Congress. We also assume a continuation of the secular trend in YoY revenue contraction from market-dominant products, as well as a ~3.5% level of annual opex growth (excluding retiree benefits payments).

Given 15% annualized volume growth in competitive products over the forecast period, the required incremental yield over our \$3.51/package level baseline decreases slightly over time. In other words, our assumption that the USPS remains only breakeven on a GAAP basis is the dominant constraint in our analysis. Should the USPS decide to actually drive a modest profit going forward, our forecast yields likely would not moderate through the forecast period.

Figure 6. Required Rate Increases on Competitive Products to Become GAAP Breakeven

USPS FISCAL YEARS	2013A	2014A	2015A	2016A	2017E	2018E	2019E
PSRHBFB:							
Normal Costs (\$B)					2.9	3.1	3.3
Amortization on unfunded portion (\$B)					2.9	2.9	2.9
Total (\$B)				5.6	5.8	6.0	6.2
Market Dominant Volume (millions)	154,592	151,651	149,949	149,357	147,864	146,385	144,921
%YoY Growth		-1.9%	-1.1%	-0.4%	-1.0%	-1.0%	-1.0%
Market Dominant Yield	\$0.32	\$0.33	\$0.33	\$0.33	\$0.33	\$0.33	\$0.33
%YoY Growth		2.6%	1.5%	-1.1%	0.0%	0.0%	0.0%
Market Dominant Revenues (\$B)	49.2	49.6	49.8	49.0	48.5	48.1	47.6
Revenue loss from MD (\$B)					-0.5	-0.5	-0.5
Non Retiree Related Opex (\$B)	63.7	64.5	65.0	67.8	69.8	72.3	75.2
% Growth		1.3%	0.8%	4.3%	3.0%	3.5%	4.0%
\$ Increase		0.8	0.5	2.8	2.0	2.4	2.9
Total Shortfall to Bridge (\$B)					8.3	8.9	9.6
Competitive Mail Volume (millions)	2,712	3,039	3,577	4,150	4,772	5,488	6,311
%YoY Growth		12.0%	17.7%	16.0%	15.0%	15.0%	15.0%
Competitive Products' Yield (Baseline)	\$3.53	\$3.58	\$3.43	\$3.49	\$3.51	\$3.51	\$3.51
Required Incremental Yield on Competitive Products					\$1.74	\$1.63	\$1.52
Implied Total Required Yield					\$5.25	\$5.13	\$5.02

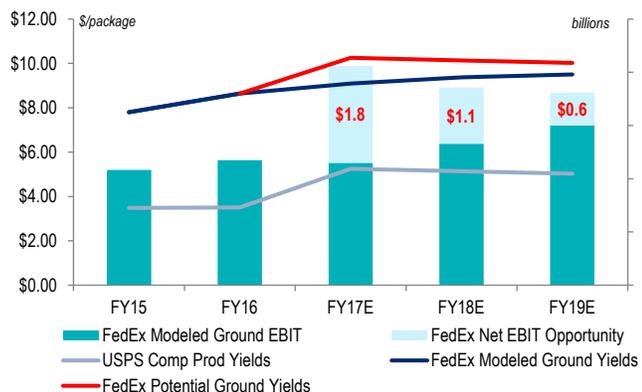
Source: Company Reports and Citi Research Estimates

Our assumptions imply an \$8.3B shortfall in FY17 that grows to \$9.6B in FY19. Competitive products volume has grown at a ~15% CAGR over the past 3 years, and we assume that this continues for the next several years. On these volume growth assumptions, the incremental yield that the USPS would need to derive from its competitive products is almost \$1.75 per package in FY17 for an implied \$5.25/parcel – a 50% increase over current yields. To counter mix effects, the percentage increases on First Class Package and Parcel Select will need to be much larger than 50%, while Priority Mail could be under the 50% mark.

We assume that both FedEx and UPS are able to maintain their absolute dollar/package spread over the USPS' yields in the new pricing environment. We apply a \$5/package premium for FedEx Ground and a \$4.42/package premium for UPS Ground over the USPS yields to arrive at new potential yields for either carrier. Netting these new yields against our modeled yields for either carrier and multiplying through by our modeled volume estimates, we arrive at a \$5.0B revenue opportunity at FedEx and a nearly \$14.3B revenue opportunity at UPS.

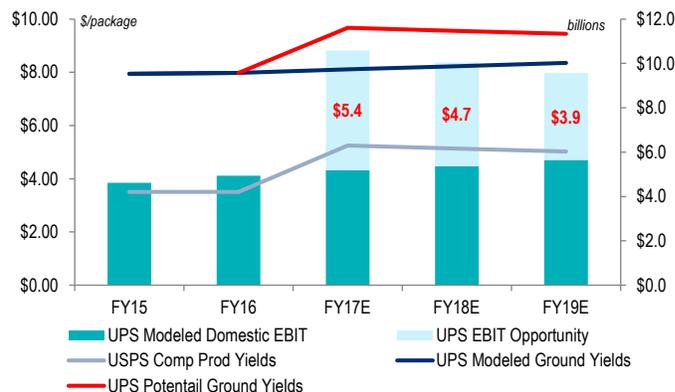
To be consistent with our assumption of raised USPS rates, we also assume incremental costs for FedEx's SmartPost and UPS' SurePost products, both of which utilize the USPS for last mile delivery. These costs assume cost increases per package equal to 50% of the USPS total rate hike on competitive products. Netting these costs against the revenue opportunity results in an incremental EBIT opportunity of roughly \$3.5B at FedEx and \$14.0B at UPS versus our modeled estimates.

Figure 7. Scenario #1: FedEx EBIT Opportunity Is ~\$3.5B



Source: Company Reports and Citi Research Estimates

Figure 8. Scenario #1: UPS EBIT Opportunity Is Almost ~\$14B



Source: Company Reports and Citi Research Estimates

Putting these incremental EBIT estimates through our modeled tax rates and share counts for the two carriers results in a cumulative ~20% EPS accretion to FedEx and ~57% to UPS over the next three years. Using a ~16x multiple for FedEx and a ~18.5x multiple for UPS (in line with our current valuation) and annualizing the accretion opportunity, this implies ~\$45/share of upside to FedEx and ~\$65/share of upside to UPS.

Figure 9. Scenario #1: Accretion Is 20% to FedEx, 57% to UPS Versus Citi's Modeled Estimates

USPS FISCAL YEARS	2012A	2013A	2014A	2015A	2016A	2017E	2018E	2019E	2017-2019
USPS									
Competitive Mail Yield	\$3.75	\$3.53	\$3.58	\$3.43	\$3.49				
Justified Yield						\$5.25	\$5.13	\$5.02	
FedEx Ground									
Modeled Yield	\$8.71	\$6.58	\$6.89	\$7.81	\$8.65	\$9.09	\$9.38	\$9.50	
Spread to USPS	\$4.96	\$3.05	\$3.31	\$4.38	\$5.16	\$5.00	\$5.00	\$5.00	
Target Yield						\$10.25	\$10.13	\$10.02	
Incremental Yield Opp						\$1.16	\$0.76	\$0.52	
Modeled Volume	1,120	1,648	1,719	1,775	1,970	2,024	2,075	2,106	6,205
Incremental Rev						\$2,353	\$1,569	\$1,102	\$5,024
Incremental SmartPost Cost						\$536	\$513	\$485	
Net Incremental EBIT						\$1,817	\$1,057	\$616	\$3,490
Tax Rate						34.2%	34.0%	34.0%	
Shares						270.4	269.4	270.1	
Incremental EPS						\$4.42	\$2.59	\$1.51	\$8.52
Modeled EPS						\$12.16	\$14.03	\$15.67	\$41.86
EPS Accretion						36.4%	18.5%	9.6%	20.3%
UPS Ground									
Modeled Yield	\$7.85	\$7.98	\$7.87	\$7.94	\$7.97	\$8.11	\$8.23	\$8.36	
Spread to USPS	\$4.10	\$4.46	\$4.29	\$4.52	\$4.49	\$4.42	\$4.42	\$4.42	
Target Yield						\$9.67	\$9.55	\$9.44	
Incremental Yield Opp						\$1.56	\$1.32	\$1.09	
Modeled Volume	2,909	2,991	3,185	3,290	3,379	3,537	3,630	3,703	10,871
Incremental Rev						\$5,519	\$4,798	\$4,027	\$14,344
Incremental SurePost Cost						\$130	\$125	\$120	
Net Incremental EBIT						\$5,389	\$4,673	\$3,908	\$13,969
Tax Rate						34.5%	35.0%	35.0%	
Shares						877.3	866.1	854.3	
Incremental EPS						\$4.03	\$3.51	\$2.97	\$10.51
Modeled EPS						\$5.88	\$6.15	\$6.55	\$18.59
EPS Accretion						68.4%	57.0%	45.4%	56.5%

Source: Company Reports and Citi Research Estimates

Scenario 2: The USPS Corrects Pricing to Reflect Associated Costs

In our second scenario, we approach the USPS' suboptimal pricing problem from the perspective of institutional cost allocation. Under the Postal Accountability and Enhancement Act ("PAEA", 2006), the USPS' product offerings are to be priced such that they recoup both volume variable costs as well as their "appropriate share" of the organization's institutional costs. Broadly speaking, these costs are the fixed costs of operations that can be attributed to each product offering. These costs were slightly above 35% of non-retiree related opex in 2000, but have climbed steadily over the years and are likely ~50% as of FY16.¹

When the PAEA was passed, competitive products were assigned a 5.5% share of the USPS' institutional costs and this percentage has remained unchanged despite the 15% CAGR volume growth and 850 bp revenue share growth posted by competitive products over the past several years. In 2015, UPS filed several in-depth papers with the Postal Regulatory Commission which examined several areas of putatively flawed economic logic in the USPS' determination of "appropriate share" for its various products. In its findings, UPS argued that competitive products share of institutional costs today are 24.6% versus the 5.5% determined over a decade ago. For our Scenario #2 analysis, we work through the impact if the UPS's suggested 24.6% estimate is instituted.²

As in Scenario #1, we assumed that non-retiree opex grows at a ~3.5% rate through our forecast period. The institutional share of total non-retiree opex has grown at roughly 70 bps per year over the past 15 years, and we assume that this continues over the next several years as well. Using these parameters, we then calculate competitive products' share at both the current understated 5.5% rate and the updated 24.6% rate proposed by UPS. The difference between the two rates represents the incremental institutional costs that need to be allocated to competitive products. Using our 15% annualized volume growth assumption (as in Scenario #1) we then calculate the incremental yields needed to offset these incremental costs. Adding these incremental yields to our flat / no-change base case of \$3.51/package yield for the USPS' competitive products give us the implied total required yields for competitive products over the next several years.

Figure 10. Competitive Product Rates with Corrected "Appropriate" Share of Cost Methodology

USPS FISCAL YEARS	2013A	2014A	2015A	2016A	2017E	2018E	2019E
Non Retiree Related Opex (\$B)	63.7	64.5	65.0	67.8	69.8	72.3	75.2
Institutional Share	44.6%	46.5%	48.4%	50.3%	52.3%	56.1%	60.0%
Competitive Products Portion @ 5.5%					2.0	2.2	2.5
Competitive Products Portion @ 24.6%					9.0	10.0	11.1
Incremental Allocated Institutional Costs					7.0	7.7	8.6
Competitive Products' Yield (Baseline)	\$3.53	\$3.58	\$3.43	\$3.49	\$3.51	\$3.51	\$3.51
Required Incremental Yield on Competitive Products					\$1.46	\$1.41	\$1.36
Implied Total Required Yield					\$4.97	\$4.92	\$4.87

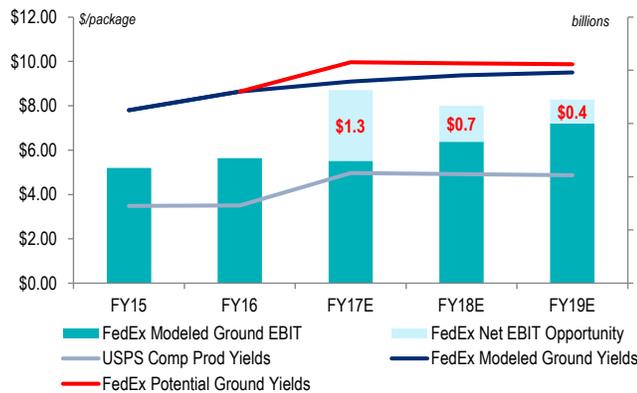
Source: Company Reports and Citi Research Estimates

¹ We note that there is some variance both in the methodology and estimates of what costs should be included in appropriate/attribution share analysis for competitive products. For example, in [UPS' initial comments to the PRC](#) regarding the Notice of Proposed Rulemaking to evaluate competitive products' cost contribution, total institutional costs are on average 5.2% higher in F2008-F2016 than our estimates. This would result in a 5c (~3.5%) increase to our required incremental yield calculations in Figure 10, which we would consider to be negligible for the purposes of the current analysis.

² UPS' latest estimate (January 2017) argues for competitive products' appropriate share at 29%, but for the purposes of the current analysis, we utilize the longer-established 24.6% figure to illustrate the same point.

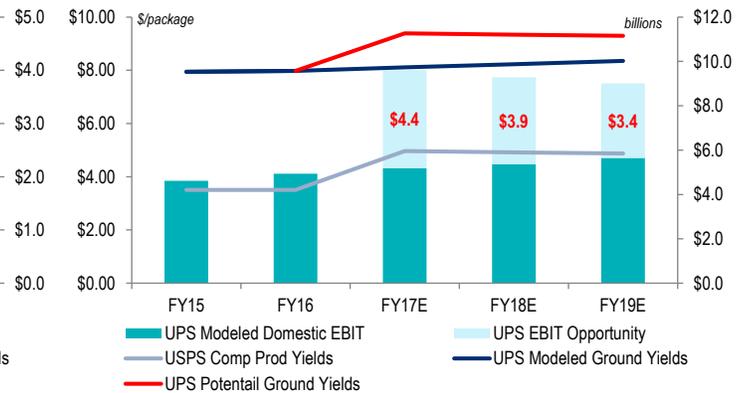
As in Scenario #1, we assume that FedEx and UPS maintain the spread above the USPS for their ground product yields (\$5.00/package for FedEx, \$4.42/package for UPS). This results in potential yields for either carrier, which we then net against our modeled yields to calculate the incremental potential yield for either carrier. Using our modeled volume forecasts, we apply these incremental yields to arrive at a \$3.7B incremental revenue opportunity for FedEx and a \$12.0B opportunity for UPS. Also in line with our calculations in the first scenario, we back out incremental SmartPost and SurePost costs to FedEx and UPS, respectively, to arrive at a net incremental EBIT opportunity of \$2.5B for FedEx and \$11.7B for UPS.

Figure 11. Scenario #2: FedEx EBIT Opportunity Is ~\$2.5B



Source: Company Reports and Citi Research Estimates

Figure 12. Scenario #2: UPS EBIT Opportunity Is ~\$11.7B



Source: Company Reports and Citi Research Estimates

Putting these incremental EBIT estimates through our modeled tax rates and share counts for the two carriers results in a cumulative ~14% EPS accretion to FedEx and ~47% to UPS over the next three years.

Figure 13. Scenario #2: Accretion Is 13% to FedEx, 47% to UPS Versus Citi's Modeled Estimates

USPS FISCAL YEARS	2012A	2013A	2014A	2015A	2016A	2017E	2018E	2019E	2017-2019
USPS									
Competitive Mail Yield	\$3.75	\$3.53	\$3.58	\$3.43	\$3.49				
Justified Yield						\$4.97	\$4.92	\$4.87	
FedEx Ground									
Modeled Yield	\$8.71	\$6.58	\$6.89	\$7.81	\$8.65	\$9.09	\$9.38	\$9.50	
Spread to USPS	\$4.96	\$3.05	\$3.31	\$4.38	\$5.16	\$5.00	\$5.00	\$5.00	
Target Yield						\$9.97	\$9.92	\$9.87	
Incremental Yield Opp						\$0.88	\$0.54	\$0.37	
Modeled Volume						2,024	2,075	2,106	6,205
Incremental Rev						\$1,779	\$1,122	\$780	\$3,681
Incremental SmartPost Cost						\$450	\$445	\$332	
Net Incremental EBIT						\$1,330	\$677	\$448	\$2,454
Tax Rate						34.2%	34.0%	34.0%	
Shares						270.4	269.4	270.1	
Incremental EPS						\$3.24	\$1.66	\$1.10	\$5.99
Modeled EPS						\$12.16	\$14.03	\$15.67	\$41.86
EPS Accretion						26.6%	11.8%	7.0%	14.3%
UPS Ground									
Modeled Yield	\$7.85	\$7.98	\$7.87	\$7.94	\$7.97	\$8.11	\$8.23	\$8.36	
Spread to USPS	\$4.10	\$4.46	\$4.29	\$4.52	\$4.49	\$4.42	\$4.42	\$4.42	
Target Yield						\$9.39	\$9.34	\$9.29	
Incremental Yield Opp						\$1.28	\$1.11	\$0.93	
Modeled Volume						3,537	3,630	3,703	10,871
Incremental Rev						\$4,516	\$4,015	\$3,462	\$11,993
Incremental SurePost Cost						\$109	\$109	\$108	
Net Incremental EBIT						\$4,407	\$3,906	\$3,354	\$11,667
Tax Rate						34.5%	35.0%	35.0%	
Shares						877.3	866.1	854.3	
Incremental EPS						\$3.29	\$2.93	\$2.55	\$8.78
Modeled EPS						\$5.88	\$6.15	\$6.55	\$18.59
EPS Accretion						56.0%	47.6%	39.0%	47.2%

Source: Company Reports and Citi Research Estimates

The Impact on Amazon

The next step of our analysis is to examine the impact of potential USPS changes on the companies that rely on them the most, including Amazon and large brick and mortar retailers. Inherent in this discussion is how customer behavior may need to change by accepting slower speeds on low value/free shipping items, or changing delivery locations to allow for greater density (i.e. delivery to stores, lockers or retail consolidation centers like FedEx's recent agreement with Walgreens or UPS's Access Point initiative).

For the purposes of this report, we are assuming that customer and retail/etail behavior remains similar to current traits.

Amazon's Delivery Diversification

We've detailed Amazon's efforts to diversify its last mile delivery methods in our previous [note](#), which was part of a larger report titled [The USPS: E-Commerce's Big Risk](#). In the report, we wrote about how Amazon's investment in delivery stations and expanded use of regional delivery partners and Amazon Flex (a crowdsourced/sharing economy solution for parcel delivery) was providing even greater capacity, diversification and flexibility within its logistics network.

Amazon's efforts to diversify its delivery in recent years are likely due to a number of reasons. From a pure capacity perspective, Amazon's expanded footprint provides it options today that weren't feasible in the past. We estimate the retailer added roughly double the amount of square footage in 2016 than its next highest year (2014), and expanded its US fulfillment capacity by nearly one-third from the end of 2015. The larger footprint brings it closer to the customer and reduces the

amount of distance a package needs to travel to the customer. This opens up options for delivery that would not be available if the package needed to be transported over a long distance.

The company has also introduced sortation and delivery centers in recent years to capture greater control of the entire delivery process. We see financial incentives behind this move, estimating that Amazon could save [nearly 40%](#) by running packages through its sortation centers and handing it off to delivery partners (namely the USPS, regional carriers or Amazon Flex contractors) rather than paying traditional carriers to sort and deliver the package. But, we also see strategic motives behind Amazon's logistics investments.

Amazon has sustained unit volume growth above 20% every quarter we have on record (starting in 2005). This is an enormous amount of annual growth for the parcel industry to digest, particularly when one considers that ex-Amazon parcel volume growth has averaged a 6% CAGR over the past ~5 years. This dynamic, coupled with the importance of not being too reliant on one carrier, are likely just as large of contributors to Amazon's adopted strategy in fulfillment as the potential cost savings are.

The Effect from a Potential Price Hike

The downside of high volume growth is that it seems unlikely Amazon would be able to turn off a delivery provider of scale if there is a sudden and drastic increase in rates, at least in the near-term. This could make Amazon susceptible to significant USPS price increases (and subsequent carrier increases).

Starting in Figure 14, we outline the "worst case scenario"-- Amazon incurring the significantly increased shipping costs across the board without any offset.

To illustrate the magnitude of impact from a USPS rate increase, our analysis models a theoretical instant USPS rate hike – a "worst case" scenario. In practice, we would expect a more gradual ramp-up that is less disruptive to Amazon's operations.

We note a number of caveats in the following section explaining why we believe such a scenario is unlikely (to the degree suggested below), but we present the most extreme scenario (50% y/y USPS rate increases, 20% UPS/FedEx price jumps) as it is our operating thesis in this piece.

We start by carving out U.S. Shipping costs from worldwide shipping costs. To do this, we prorate our CY17 WW shipping cost estimate by the percentage of retail sales from North America, and then the percentage of North America sales in the U.S (this assumes the shipping costs are allocated proportionately to retail sales). We arrive at an estimate of \$12.6bn for 2017 U.S. shipping costs. From there, we leverage our framework in the *New Package Paradigm* note which isolates shipping costs by provider. While our shipping cost forecasts have changed since its publication, we believe the percentage distribution of shipping costs among internal and external providers (and the breakdown b/w outbound service providers) remains fair. Our estimates suggest that ~49% of shipping costs are tied to the USPS/Other regional carriers, 15% is to UPS and 11% is to FedEx. These are the "affected costs" in this analysis.

Figure 14. We estimate 75% of Amazon's U.S. Shipping costs would be impacted by the price increases

	Inbound	Sort/Del. Ctr.	Outbound			Total
	Misc	Internal	FedEx	UPS	USPS/Other	
CY 17 Worldwide Shipping Costs	\$19,722	\$19,722	\$19,722	\$19,722	\$19,722	\$19,722
* NA % of Retail Sales	65%	65%	65%	65%	65%	65%
* US % of NA Sales	98%	98%	98%	98%	98%	98%
= US Shipping Costs	\$12,601	\$12,601	\$12,601	\$12,601	\$12,601	\$12,601
* % of Total U.S. Shipping Costs ¹	7%	18%	11%	15%	49%	75%
= 2017 U.S. Shipping Costs	\$849	\$2,279	\$1,394	\$1,952	\$6,127	\$9,473

Source: Citi Research and Company Reports; ¹Calculated from framework in *New Package Paradigm* Note

We then adjust these costs by the estimated price increases found earlier in this note under both Scenario #1 and Scenario #2. We further segment the USPS/Other portion of costs by estimating that 50% of costs are from the USPS and 50% are from regional carriers. The USPS portion is adjusted by the estimated increase in USPS costs and the "Regional" cost bucket is grown by the average increase in UPS and FedEx ground rates. It is also possible that the "Regional" bucket will have even lower price elasticity since Amazon has direct services like Amazon Flex that should be less impacted by these pricing trends (since the higher prices won't necessarily result in higher wages). Under these assumptions, we find that the annual impact would be \$2.6bn in incremental costs on average.

Figure 15. We estimate the annual impact from such price increases would be \$2.6bn.

	Inbound	Sort/Del. Ctr.	Outbound				Total
	Misc	Internal	FedEx	UPS	USPS	Regional	
Scenario #1							
CY 17 Shipping Costs Before Change	\$849	\$2,279	\$1,394	\$1,952	\$3,064	\$3,064	\$9,473
* Increase in Scenario #1	0%	0%	20%	22%	50%	21%	30%
= \$ Increase in Scenario #1	\$0	\$0	\$285	\$428	\$1,519	\$649	\$2,881
Scenario #2							
CY 17 Shipping Costs Before Change	\$849	\$2,279	\$1,394	\$1,952	\$3,064	\$3,064	\$9,473
* Increase in Scenario #2	0%	0%	17%	18%	42%	18%	26%
= \$ Increase in Scenario #2	\$0	\$0	\$239	\$359	\$1,274	\$545	\$2,418
Average Increase	\$0	\$0	\$262	\$394	\$1,397	\$597	\$2,649

Source: Citi Research and Company Reports

We repeat this exercise for CY18 and CY19 assuming the distribution of shipping costs remains constant. Under such a scenario, North America CSOI would be cut by 44-49% and overall CSOI would fall by 19-23%.

Figure 16. The proposed shipping cost increases would significantly impact CSOI

	CY17	CY18	CY19
Current Shipping Cost Estimate	19,722	23,915	27,969
* NA % of Retail Sales	65%	65%	65%
* US % of NA Sales	98%	98%	98%
= Estimated U.S. Shipping Costs	12,601	15,266	17,786
- U.S. Shipping Costs post Price Increase	15,250	18,305	21,140
= Incremental Shipping Costs	(2,649)	(3,039)	(3,354)
+Current CSOI Estimate	9,468	13,506	17,933
= Potential Total	6,818	10,467	14,579
CSOI % Change	-28%	-23%	-19%
Incremental Shipping Costs	(2,649)	(3,039)	(3,354)
+ NA CSOI Estimate	4,997	6,262	7,542
= Potential NA CSOI	2,348	3,222	4,188
NA CSOI % Change	-53%	-49%	-44%

Source: Citi Research Estimates

Why This Impact Is Likely Overstated

As evidenced, such a scenario would significantly impact near-term profitability. However, there are a few caveats: 1) The USPS has other means for closing its funding gap, such as standard mail postage increases, the partial reinstatement of exigent surcharges, and legislative relief from statutory obligations to prefund certain benefits obligations (all currently under Congressional review); 2) a good portion of Amazon's UPS/FedEx spend is likely on air services, which is more independent of USPS ground rates and may not see the same upward price pressure as last mile delivery in this scenario; and, 3) if the USPS were to increase parcel pricing significantly, this likely would be done over time rather than all in one year. This would reduce the impact on Amazon in the near-term and give Amazon further runway to diversify its last-mile to better insulate itself. We believe there are other key counterbalances on the retailer side that could mitigate the negative impacts and potentially make such a scenario a net benefit for Amazon over the long-term.

Amazon's size and best-in-class logistics position it to digest higher shipping costs better than other retailers. The density of Amazon's network gives it more options for last-mile fulfillment than its competitors, granting it increased bargaining power. Amazon's volume alone allots it a sizeable discount to carriers' market rates, which we peg around 20% for UPS and FedEx. Considering the significant costs that omnichannel providers are already incurring with "free" expedited shipping, it seems more likely retailers would pass along higher delivery costs to consumers rather than eat into their margins. We believe this would add friction to the purchase process. Since we expect Prime would sustain its "free shipping" offering, such a scenario should further increase Amazon's cost advantage to consumers. While the higher shipping costs would likely hurt Amazon's margin in the short-term, increased purchase frequency and customer density should benefit margins over-time.

We also believe it is possible that increased shipping costs could drive brands and retailers to outsource their fulfillment to Amazon. Since Amazon is benefitting from discounted rates and has greater flexibility in its system, routing deliveries through them could become an attractive option for other retailers and brands (especially since they would also benefit from Amazon's significantly higher conversion rates and enormous customer base). Amazon could collect its profit on the sales commission and essentially offer fulfillment services at breakeven (recall it incurs

shipping costs at a discount to market rates). In short, higher shipping costs could stimulate greater use of Amazon's FBA service by brands and retailers, increasing selection on Amazon across categories and brands which should help consolidate greater market share.

Even if this does not end up being the case, we believe Amazon is best positioned to navigate a higher shipping cost environment on a relative basis. This is due to the company's significant bargaining power, best-in-class fulfillment network and ability to better offset higher shipping costs than other retailers through charging higher FBA and Prime membership fees.

Potential Impact to Other Retailers Is Mixed

Within **Broadlines/Hardlines**, many retailers currently have a fairly minimal impact related to increasing shipping costs for e-commerce orders but we acknowledge that this will likely be a growing issue over time as most are seeing double-digit sales growth through the online channel each year.

Auto Parts – Within sub-industries of Broadlines/Hardlines, the auto parts retailers are likely the least impacted as we estimate that typically less than 5% of overall sales are conducted through the online channel and that, due to the nature of DIY, many of the items are picked up in-store. Many DIY'ers start their research online but head into the store to speak with experienced store associates on what specific part is needed and may also seek assistance from the associates in installation. On the DIFM front, deliveries to commercial customers are conducted by store associates daily.

Consumer Electronics – Relative to its peers, BBY has a higher profitability risk from increased shipping rates as we estimate that ~9% of its sales are shipped to the customer from either a DC or a store. Historically, BBY had primarily used UPS for deliveries but have added FedEx and USPS into the mix in the past year. BBY negotiates multi-year agreements with each carrier. In addition, BBY is testing using Deliv in certain markets to gauge the demand that customers have for same-day and weekend delivery. Although BBY has capabilities to ship from store in all of their U.S. stores, most packages are still shipped from DCs but BBY will look at shipping from stores if there is a time constraint.

Home Furnishings – Within the North American home furnishings industry, exposure to e-commerce varies substantially with HomeGoods (a subsidiary of TJX, covered by Paul Lejuez) and At Home (HOME, not covered) eschewing online sales entirely while competitors like WSM (covered by Kate McShane) and RH (not covered) generate approximately half of sales through e-commerce. Notably, the profitability of home furnishings e-commerce also fluctuates by company, as WSM generates 20%+ operating margins from its e-comm operations while BBBY (covered by Kate McShane) runs its digital business at a loss. Given this backdrop and also taking into account the industry-wide proliferation of free-shipping offers and free-shipping threshold reductions, the impact from higher shipping rates would likely be substantial.

Home Improvement – The home improvement retailing industry has relatively low exposure to e-commerce as only 5.9% of HD's sales are conducted online and 3.5% for LOW. Of those sales, 45% are picked up in store for HD and 60% for LOW. For HD, all online orders shipped to a customer's home/job location is delivered from one of three of HD's direct fulfillment centers and typically arrives within a few days. If the customer needs an item within a day, the customer may choose to pick up the item at a local HD or pay a \$79 fee for next-day delivery (with increasing fee rates for shorter delivery windows of 2 or 4 hours) conducted by HD

or a third-party contractor. For LOW, if the customer chooses to have an order shipped to their home, LOW has the ability to ship from 75 locations and reach 90% of U.S. markets within 24 hours at standard shipping rates for in-stock product. LOW fulfills online orders through the most convenient and cost-effective means available (store, DC or directly from supplier).

Office Supplies – By far, the office supplies companies have the most exposure as the majority of North American sales (61% for SPLS and 49% for ODP) are ordered online and delivered to customers through third-party contracted fleets, the national carriers, and couriers. Staples.com typically ships through UPS (BOSFS is UPS) but FedEx and USPS are more recent additions to the delivery mix. On the commercial side, SPLS typically ships half through parcel deliverers, about 30% through couriers and the remainder through SPLS' fleet. SPLS has a variety of options at their disposal for shipments and can easily shift deliveries through the different providers. SPLS is looking at insourcing market by market and have the ability to increase or decrease their fleet as appropriate. SPLS is also piloting Staples Rush in four markets (Dallas, Boston, Chicago and Manhattan) for same-day delivery for \$9.99 and testing partnerships with Uber and bike messengers.

Figure 17. %age of Sales Exposed to Higher Delivery Costs by Hardlines/Broadlines Retailer

	2016 Online Sales Growth	% of 2016 Sales Online	% of 2016 Online that's Click and Collect	Sales Exposed to Higher Shipping Costs based on '16
HD	19.3%	5.9%	45.0%	3.2%
LOW	20.0%	3.5%	60.0%	1.4%
ODP (BSD & .com)	-5.4%	50.1%	2.1%	49.1%
SPLS (Delivery & .com)	-0.9%	61.5%	1.9%	60.3%
BBY U.S.	20.8%	13.4%	32.5%	9.0%
TGT	27.0%	4.4%	15.0%	3.7%
COST	15.0%	4.0%	0.0%	4.0%
BBBY	27.6%	11.6%	NA	NA
WSM	4.4%	51.8%	0.0%	51.8%
TTS	65.0%	3.0%	NA	NA

Source: Company Reports and Citi Research Estimates

Within the **Specialty Retail and Department Store** group, as online sales penetration increases, EBIT margins have come under intense pressure, largely the result of shipping costs and higher return rates online. Given the intense promotional environment within apparel, we believe it would be a challenge for most companies to pass through higher shipping costs to customers, and thus could further pressure margins for many.

Off-price and Department Stores – TJX, ROST and BURL are best positioned given extremely low levels of online sales (0% online at ROST) while we believe department stores would be most pressured. Department stores already face the pressure of selling "other people's stuff", which makes pricing more of a factor in the customer purchase decision. JWN already offers free shipping and returns on all orders (which we don't see them changing), so would be most directly and immediately impacted by a change in shipping rates.

Specialty Retail – Those selling at higher price points (TIF, COH, KORS, LULU) would be less impacted by a change in rates. And to the extent retailers try to pass through higher rates to customers, those with the stronger brands (which can change over time) are more likely to have customers accept the change.

Amazon.com, Inc.

(AMZN.O; US\$901.99; 1; 17 Apr 17; 16:00)

Valuation

We arrive at a 12-month price target of \$960 for Amazon by using a 10-year DCF analysis, assuming a 9% discount rate and an 8x EBITDA multiple. Our DCF model accounts for dilution associated with equity compensation by discounting annual cash flows on a per share basis.

Our \$960 price target implies 0.8x, 0.7x, and 0.2x EV/CY18E GMV multiples for the North America, Big 3 International (Germany, Japan, UK) and Rest-of-World segments, and a 15x EV/CY18E EBITDA multiple for AWS. The multiples for the North America and Big 3 retail businesses are above the comp group averages for traditional retailers, which we believe is reasonable given Amazon's significantly faster growth in each business and improving margin profile. We believe AWS's 15x EV/EBITDA multiple is appropriate given its significant growth, continued market expansion and market leading position in a secular growth industry.

Risks

Risks to achievement of our price target are as follows. 1) Macro – As an enabler of online retail and with a business model that is based on fees derived from online retail transactions, Amazon's business is susceptible to changes in consumer spending. 2) Margin Expansion – Over the long term, we believe margins can rise appreciably from current levels. This is partially due to the assumption that Amazon will one day achieve density in its fulfillment center network as well as a mix shift to the higher-margin cloud business over time. If AWS loses market share or spending levels do not subside over time, Amazon's long-term margins may disappoint. 3) Near-term investments - Amazon is investing in its U.S. fulfillment network, Instant video content, and the India e-Commerce market. These investments may weigh on near-term margins.

FedEx Corp.

(FDX.N; US\$185.54; 1; 17 Apr 17; 16:00)

Valuation

Our \$235 price target is based on a ~14x multiple of our House Ways & Means tax reform adjusted C2018 EPS estimate. We are capturing the upside from tax reform though a ~16x multiple on our current (unadjusted) C2018 EPS estimate, essentially in line with its historical ~15.5x average and several turns above current market valuation, and gives credit for the acquisition of TNT Express. Potential EPS upside remains from secular eCommerce growth, improving pricing, successful focus on self-help, and growing FCF generation, as we believe that there is more than enough volume growth to be spread around, even as Amazon fulfills more of its own volume.

Risks

For FedEx, we highlight the following risks to achieving our price target and earnings forecasts:

Economic cyclicality. The transportation industry is subject to cyclical factors, including economic conditions, customers' business conditions, credit markets, and seasonal patterns, which may adversely affect customer shipping volumes and industry freight demand.

Competitive market. Freight rates are subject to competitive pricing pressures from other transportation providers that may limit growth opportunity and adversely affect operating results. In addition, package carriers compete globally with government owned/sponsored entities which may make uneconomic business decisions which can undermine the competitive nature of markets.

Highly regulated industry. The airfreight/package industry is subject to various laws and regulations that govern industry-related and environmental activities. Changes or violations of these laws and regulations could adversely affect operations.

Fluctuating fuel prices. Fuel price changes may adversely affect operating results because increases in fuel-surcharge revenue may not offset increases in fuel costs, and increases in freight revenue may not offset the resulting reduction in fuel-surcharge revenue from lower fuel costs. In addition, sudden spikes in fuel costs are difficult to match to surcharges, potentially lowering effective coverage levels.

Emerging markets are volatile. A significant portion of expected future growth is likely to be driven by volume growth in emerging market, which given their relative size and potential for geopolitical disruptions are likely to be volatile.

Legal proceedings. FedEx is involved in a number of legal proceedings with a majority of the legacy disputes challenging FedEx Ground's classification of owner operators as independent contractors. An unfavorable ruling could result in a change in employment status of its independent contractors and result in some cost headwinds in addition to other potential liabilities.

United Parcel Service Inc.

(UPS.N; US\$104.87; 2; 17 Apr 17; 16:00)

Valuation

Our target price of \$115 is based on ~18.5x our 2018 EPS estimate. Our target multiple is a modest premium to the company's long term average in order to capture potential benefit from tax reform, which would be accretive to our 2018 estimate. UPS's network could be well-positioned to capture growth in eCommerce, but we would look for a clearer line of sight toward pricing execution or cheaper valuation to become more constructive

Risks

We highlight the following risks to achieving our price target and earnings forecasts:

Economic cyclicality. The transportation industry is subject to cyclical factors, including economic conditions, customers' business conditions, credit markets, and seasonal patterns, which may adversely affect customer shipping volumes and industry freight demand.

Competitive market. Freight rates are subject to competitive pricing pressures from other transportation providers that may limit growth opportunity and adversely affect operating results. In addition, package carriers compete globally with

government owned/sponsored entities which may make uneconomic business decisions which can undermine the competitive nature of markets.

Highly regulated industry. The airfreight/package industry is subject to various laws and regulations that govern industry-related and environmental activities. Changes or violations of these laws and regulations could adversely affect operations.

Fluctuating fuel prices. Fuel price changes may adversely affect operating results because increases in fuel-surcharge revenue may not offset increases in fuel costs, and increases in freight revenue may not offset the resulting reduction in fuel-surcharge revenue from lower fuel costs. In addition, sudden spikes in fuel costs are difficult to match to surcharges, potentially lowering effective coverage levels.

Emerging markets are volatile. A significant portion of expected future growth is likely to be driven by volume growth in emerging market, which given their relative size and potential for geopolitical disruptions are likely to be volatile.

If the impact on the company from any of these factors proves to be greater than we anticipate, the stock will likely have difficulty achieving our target price. Likewise, if any of these factors proves to have less of an effect than we anticipate, the stock could outperform our target.

Appendix A-1

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The research analysts primarily responsible for the preparation and content of this research report are either (i) designated by “AC” in the author block or (ii) listed in bold alongside content which is attributable to that analyst. If multiple AC analysts are designated in the author block, each analyst is certifying with respect to the entire research report other than (a) content attributable to another AC certifying analyst listed in bold alongside the content and (b) views expressed solely with respect to a specific issuer which are attributable to another AC certifying analyst identified in the price charts or rating history tables for that issuer shown below. Each of these analysts certify, with respect to the sections of the report for which they are responsible: (1) that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc. and its affiliates; and (2) no part of the research analyst’s compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in this report.

IMPORTANT DISCLOSURES

United Parcel Service Inc. (UPS)

Ratings and Target Price History Fundamental Research

Analyst: Christian Wetherbee



	Date	Rating	Target Price	Closing Price
1	29-Jul-14 17:58:42	2	*104.00	98.86
2	03-Feb-15 18:02:51	2	*102.00	100.57

	Date	Rating	Target Price	Closing Price
3	28-Apr-16 14:58:27	2	*109.00	104.91
4	12-Dec-16 05:12:41	2	*129.00	120.13

	Date	Rating	Target Price	Closing Price
5	31-Jan-17 14:23:03	2	*115.00	109.13

*Indicates Change

Rating/target price changes above reflect Eastern Time

United Parcel Service Inc. (UPS)

Ratings and Target Price History Best Ideas Research Relative Call (3 Month)

Analyst: Christian Wetherbee



*Indicates Change

Rating/target price changes above reflect Eastern Time

Amazon.com, Inc. (AMZN)
Ratings and Target Price History
Fundamental Research

Analyst: Mark May



	Date	Rating	Target Price	Closing Price
1	24-Apr-14 21:25:13	1	*414.00	337.15
2	22-Jul-14 00:30:00	*2	*395.00	360.84
3	24-Jul-14 19:46:07	2	*358.00	358.61
4	23-Oct-14 21:24:06	2	*325.00	313.18
5	13-Jan-15 01:00:00	*1	*354.00	294.74
6	29-Jan-15 23:21:31	1	*405.00	311.78

	Date	Rating	Target Price	Closing Price
7	27-Mar-15 01:00:00	1	*430.00	370.56
8	23-Apr-15 23:47:57	1	*460.00	389.99
9	23-Jul-15 21:57:51	1	*650.00	482.18
10	22-Oct-15 23:24:09	1	*700.00	563.91
11	13-Nov-15 02:48:18	1	*785.00	642.35
12	28-Jan-16 21:36:30	1	*780.00	635.35

	Date	Rating	Target Price	Closing Price
13	01-Apr-16 02:01:06	1	*760.00	598.50
14	28-Apr-16 21:57:56	1	*780.00	602.00
15	29-Jul-16 00:49:37	1	*870.00	758.81
16	26-Oct-16 03:00:00	1	*975.00	822.59
17	28-Oct-16 00:57:23	1	*965.00	776.32
18	27-Nov-16 19:00:00	1	*960.00	780.37

*Indicates Change

Rating/target price changes above reflect Eastern Time

Amazon.com, Inc. (AMZN)
Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)

Analyst: Mark May



*Indicates Change

Rating/target price changes above reflect Eastern Time

FedEx Corp. (FDX)
Ratings and Target Price History
Fundamental Research

Analyst: Christian Wetherbee



	Date	Rating	Target Price	Closing Price
1	17-Sep-14 20:32:19	1	*180.00	159.71
2	30-Sep-14 04:00:00	1	*190.00	161.45
3	02-Dec-14 04:00:00	1	*210.00	180.39

	Date	Rating	Target Price	Closing Price
4	18-Mar-15 16:53:01	1	*200.00	173.30
5	09-Apr-15 04:00:00	1	*205.00	172.92
6	09-Mar-16 04:10:23	1	*175.00	141.98

	Date	Rating	Target Price	Closing Price
7	16-Mar-16 21:50:45	1	*180.00	144.27
8	19-May-16 04:00:00	1	*200.00	159.11
9	12-Dec-16 05:12:41	1	*235.00	197.64

*Indicates Change

Rating/target price changes above reflect Eastern Time

FedEx Corp. (FDX)
Ratings and Target Price History
Best Ideas Research
Relative Call (3 Month)
Analyst: Christian Wetherbee



*Indicates Change

Rating/target price changes above reflect Eastern Time

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