

Amazon.com (AMZN)

Yet Another Massive Market on the Horizon; Reiterate Outperform Rating

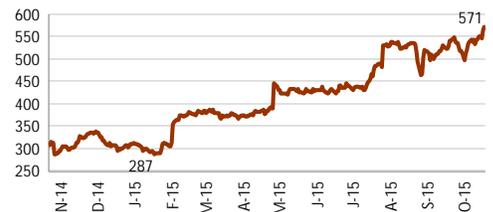
Amazon is not finished disrupting industries. Among other opportunities, Amazon has “powerhouse potential” in the large transportation and logistics market, dominated by global enterprises such as DHL and UPS. Just as Amazon leverages infrastructure behind the core retail business to grow AWS and Marketplace, there is evidence the company may extend its increasingly complex and technology-centric logistics and delivery platform as a third-party offering. In this “deep dive”, we highlight Amazon’s unique advantages in a \$400-450Bn incremental market opportunity.

- **Global logistics is a highly competitive market that we believe has yet to fully capitalize on the emergence of web-based technologies** such as cloud computing, data-centric analytics and optimization that can reduce inefficiencies throughout the supply chain. Amazon’s cloud technology expertise and increasingly complex fulfillment, logistics and delivery network seem to be obvious foundation to offer third-party services, with an incremental \$400-450 billion market opportunity.
- **Significant addressable market size and market cap open for disruption.** We believe Amazon may be the only company with the fulfillment/distribution density and scale to compete effectively with global providers, and with an investor base that is historically tolerant of large-scale investment and low margin revenues. We note there is currently ~\$170 billion in market capitalization in legacy companies that may be ripe for disruption. Just as AWS contributes an incremental \$50Bn+ in Amazon value, we believe Logistics could ultimately add billions more.
- **Our assessment of Amazon’s broadening fulfillment ecosystem, internal domain expertise,** and early initiatives with Prime Now to offer third-party delivery suggests there is evidence Amazon may ultimately pursue more comprehensive third-party services. Similar to the gradual rollout of AWS, we would expect Amazon to introduce competitive transportation and logistics services on an incremental basis, with a long-term focus.
- **Ideal customers for ATL (Amazon Transportation & Logistics) would range from SMBs to enterprise businesses** that lack financial resources, expertise, or technology horsepower to manage fulfillment/logistics internally, and with an offering that raises the competitive bar vs. incumbent service providers. Amazon currently operates >165 fulfillment centers worldwide, and is already testing “last mile” delivery of products not sold via Amazon’s websites.
- **Reiterate Outperform** rating with a strong positive long-term bias based on multiple large market opportunities. We would use any earnings-related pullback as a buying opportunity.

Amazon.com is the largest global online retailer and a leading provider of cloud computing services in the *Infrastructure-as-a-Service* segment.

RESEARCH UPDATE

1-Year Price Chart



Stock Data

Rating:	Outperform
Suitability:	Average Risk
Price Target:	\$630
Price (10/16/15):	\$570.76
Market Cap (mil):	\$271,682
Shares Out (mil):	476.0
Average Daily Vol (mil):	4.26
Dividend Yield:	0.0%

Estimates

FY Dec	2014A	2015E	2016E
Q1	0.23 A	(0.12) A	
Q2	(0.27) A	0.19 A	
Q3	(0.94) A	(0.45) E	
Q4	0.45 A	1.29 E	
Fiscal EPS	(0.52) A	0.92 E	2.43 E
Fiscal P/E	NM	NM	NM

Chart/Table Sources: Factset and Baird Data

**Please refer to Appendix
- Important Disclosures
and Analyst Certification**

Details

Some of Amazon’s fastest growing and most profitable businesses grew out of support for core retail platform. Building on the foundation of the core retail website, Amazon has created ancillary services that help the company to subsidize investments that were originally aimed at growing the core e-commerce business. In some cases, these businesses have flourished and are legitimate large scale enterprises in their own right. For example, Amazon’s third-party Marketplace (including Fulfillment By Amazon) leverages the scale of Amazon’s e-commerce traffic and supporting fulfillment infrastructure. Similarly, Amazon Web Services (AWS) leverages the cloud computing platform developed for the company’s core retail website to offer companies infrastructure-as-a-service at a highly efficient scale. Following in the footsteps of Marketplace and AWS, Amazon’s Advertising business also emerged as another by-product of the inherent leverage and scale of the company’s business model. In the case of advertising services, Amazon was able to leverage not only its position as the leading destination for e-commerce with ~280 million active customers, but also as a top-ten web property overall, generating more than 175 million unique visitors monthly.

More broadly, Amazon already has working relationships with over three million businesses (including third party sellers), cloud computing customers and advertisers, and as such, we believe the company’s track record and breadth of capabilities demonstrated by the third-party fulfillment business (FBA) and best-in-class technology platform (AWS) position Amazon well to offer a scalable, on-demand service geared towards shipping/logistics verticals. In short, leveraging the infrastructure that is driving growth for Amazon’s core revenue-generating business gave rise to Marketplace, AWS, FBA and Advertising, and similarly, would provide a significant competitive advantage in building a more comprehensive third party logistics platform. Below we include a snapshot of Amazon’s third-party services to help illustrate how these initially complementary/tangential businesses have grown to become significant contributors to Amazon’s growth and profitability.

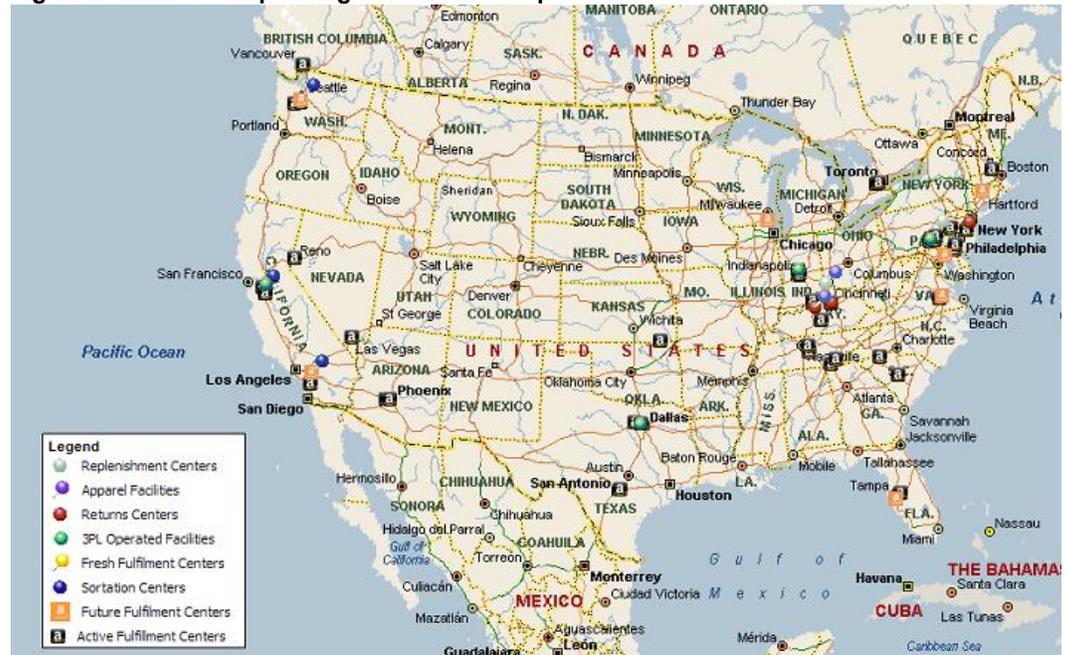
Figure 1: Amazon Third-Party Services & Addressable Markets

Amazon Segment	Baird 2015E Revenue Estimate	Baird Estimated Segment CSOI Margin (%)	Addressable Market(s)	Large Competitors
3P Marketplace	\$12.1B (+36.7% Y/Y)	\$1.2B (10%)	US Retail (\$3.5T; \$2.4T ex-auto & food services in 2015) US E-Commerce (\$450-\$500B in 2018E) Global Retail (\$22T) Global E-Commerce (\$3.55T in 2018E)	Online Marketplaces: eBay, Alibaba Multi-Channel Retailers: Wal-Mart, Target, Costco
Amazon Web Services (AWS)	\$7.7B (+66% Y/Y)	\$1.6B (20.7%)	Global Enterprise IT Market (\$500B shrinking to \$300B due to Cloud efficiencies)	Microsoft, Google, some legacy IT vendors
Fulfillment by Amazon (FBA)	\$5.4B (+21.7% Y/Y)	\$250-\$500M (5-10%)	US LTL/Parcel/ Courier Market (\$80B) Global Contract Logistics Market (\$250B) Global Freight Forwarding Market (\$170B; \$55B Air, \$115B Containerized Ocean Freight)	LTL/Parcel: UPS, FedEx, USPS, Alibaba Logistics Freight Forwarding/Contract Logistics: DHL, UPS, Expeditors, GENCO, Kuene + Nagel, DB Schenker Logistics
Mobile Devices (Kindle, Fire Tablet, Fire TV)	\$500M - \$1B (~5M devices)	Breakeven	Global Tablet Market: \$35B	Apple, Samsung, Lenovo, Huawei
Amazon "Services" Total	\$26 - \$27B	\$3 - \$3.5B (10-13%)	\$2 - \$20T	

Source: Robert W. Baird estimates, Internet Retailer, eMarketer, Company reports, Armstrong & Associates

Third-party shipping & logistics seems like a logical extension of Amazon services. AWS was borne out of Amazon’s proficiency in managing highly volatile computing workloads for its retail business; FBA was created to help drive more reliable fulfillment and customer service for physical products sold on (and off) Amazon; and in a similar vein, we believe Amazon can leverage the vast and expanding technology and fulfillment infrastructure supporting their own network of distribution, local sortation and data centers to offer logistical and delivery services to third parties. According to industry sources, Amazon currently operates 167 distribution facilities around the world, totaling more than 100 million sq. ft., and continues to grow. In North America, Amazon operates 92 facilities (including local sortation centers). Additionally, when looking at the descriptions for some of Amazon’s Transportation and Supply chain job openings, it’s apparent that logistics is becoming a more integral part of Amazon’s retail business (see listing for “Senior Program Manager – Last Mile Transportation SME), and as such, we believe they could look to externalize some of the logistics-centric technology as third-party services. While most of these openings are focused on serving Amazon’s internal logistics demand, it highlights the broader focus on transportation/logistics within Amazon. Other notable positions include: *Prime Now Operations Manager, Senior Program Manager – Supply Chain Analytics, Senior Supply Chain Optimization Engineer, Driver Experience Manager, Network Manager – Amazon Logistics Freight, External Fulfillment Analyst.*

Figure 2 Amazon's Expanding Fulfillment Footprint



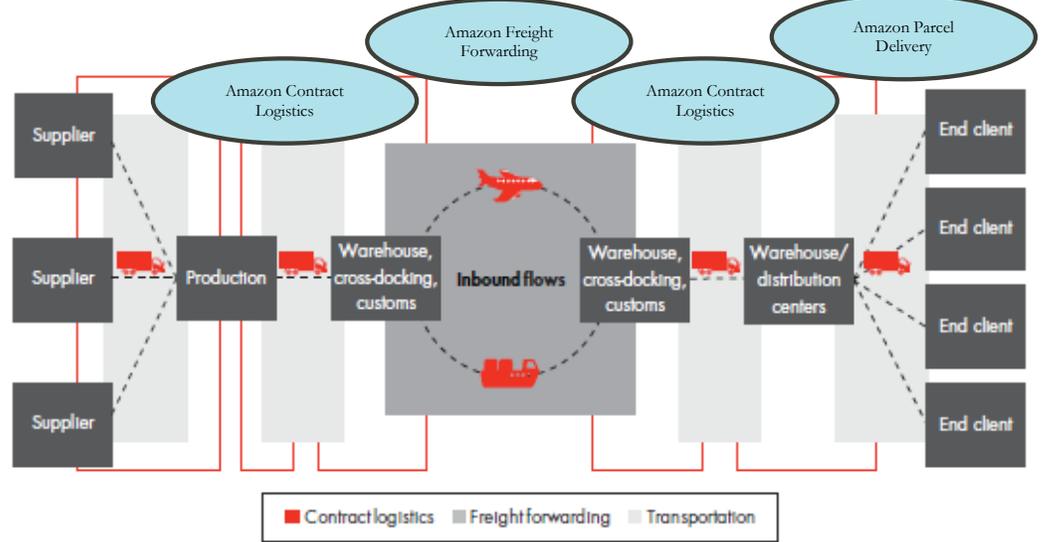
Source: mwpvl.com

We believe that global logistics is a highly competitive and fragmented market that has yet to capitalize fully on the emergence of web-based technologies such as cloud computing and data-centric analytics and optimizations that can reduce inefficiencies within the supply chain. As such, we believe certain segments of the logistics market, namely last-mile parcel delivery as well as the much larger contract logistics space, are areas in which Amazon could provide a compelling alternative to traditional shipping/logistics providers. Ideal customers for an ATL (Amazon Transportation & Logistics) would range from SMBs to enterprise businesses that lack the financial resources, expertise, or technological horsepower to manage fulfillment/logistics internally, with an offering that could compete with incumbent service providers (e.g., UPS, FedEx). Below we break out the sub-sectors of the global logistics market in which we believe Amazon could compete most effectively, and then we provide an overview of the market dynamics and major competitors, acknowledging that lines between some of these sub-sectors are blurry and that the same company can operate multiple businesses across different sectors under the “Global Logistics” umbrella (i.e., UPS and DHL have a significant presence in both parcel delivery and contracted logistics).

- Domestic Parcel Delivery (\$80 billion US market):** An oligopoly both US and internationally, dominated largely by three companies (UPS, FedEx, DHL) following the recent acquisition of TNT by FedEx; requires significant investment in fixed assets (i.e. distribution/fulfillment centers, physical delivery vehicles, flexible IT infrastructure) and typically yields lower returns on capital than asset-light models. Amazon currently partners with a number of these integrators as last-mile delivery partners, but more recently, has been investing in their own delivery assets in some markets (i.e., Prime Fresh same-day grocery delivery, Prime Now hourly delivery from both third-party merchant physical locations in addition to Amazon’s own sortation centers) as well as newer on-demand initiative [Amazon Flex](#), which utilizes contracted civilian vehicles/couriers (similar to Uber’s model) to complete time-sensitive deliveries. We believe Amazon may be the only company with the fulfillment/distribution density and scale to compete effectively with global UPS/FedEx/DHL, and with an investor base that historically is tolerant of margin volatility relative to the “profit mandates” of traditional Transportation & Logistic shareholders, a significant competitive advantage in our view. While still in very experimental stages, Amazon’s drone program could eventually provide a first-mover advantage in the parcel delivery space, and assuming regulatory/safety issues do not choke innovation, then drone technology could provide a significant competitive advantage relative to other integrators, and significantly reduce “last-mile” delivery costs. Below is a list of markets in which Amazon’s Prime Fresh, Prime Now, and Flex services are currently offered.

- **Amazon Prime Now (1-2 hour delivery):** New York, Philadelphia, San Francisco/Oakland, Seattle, Atlanta, Boston, Baltimore, Dallas-Fort Worth, Houston, Indianapolis, Los Angeles-Orange County, Minneapolis-St. Paul, Phoenix, San Diego, Tampa Bay, Washington DC
- **Amazon Prime Fresh (same-day grocery delivery):** Select zip codes in New York/Northern New Jersey, Seattle, San Francisco/Oakland, Philadelphia, Los Angeles/Orange County
- **Amazon Flex (package delivery via on-demand contractors):** Available in Seattle; coming soon to Manhattan, Baltimore, Miami, Dallas, Austin, Chicago, Indianapolis, Atlanta, Portland
- **Competitive Landscape: Domestic Parcel Delivery**
 - UPS: \$93 billion market capitalization; ~\$36 billion 2014 domestic parcel revenue
 - FedEx: \$43 billion market capitalization; ~\$34 billion 2014 total domestic revenue
 - DHL (Deutsche Post): \$33 billion market capitalization; ~\$5 billion in 2014 domestic parcel revenue
 - United States Postal Service: estimated ~\$6 billion in parcel revenue in 2014 based on 900 million package volume @ ~\$7/package.
- **Third-Party Logistics - Freight Forwarding (\$170 billion global market):** In general, third-party logistics providers can leverage relationships they have with asset-heavy transportation companies to manage customer freight transportation, customs brokerage, and insurance/tracking. International freight forwarding offerings consist primarily of air cargo, ocean containers, and customs brokerage/clearance, while the smaller domestic forwarding industry utilizes third-party air and truck capacity to meet demands of domestic customers. Internationally, the top 10-15 freight forwarders account for ~50% of the total market and includes companies such as DHL, Kuehne + Nagel, Deutsche Bahn (Shenker/BAX), UPS (UPS Supply Chain Solutions), Expeditors International, and UTi Worldwide. From a value proposition perspective, international freight forwarders provide asset-based transportation companies (i.e. ocean liners, airfreight carriers, passenger airlines with underbelly cargo space) with access to exporters of all sizes by functioning as an aggregator of supply, and can reduce the logistical complexities for shippers/manufacturers (i.e. Adidas, Volkswagen, Target). While we acknowledge Amazon currently lacks the legitimacy and scale of a global third-party forwarder (after all, the entrance into these markets is still hypothetical), information technology is an increasingly important differentiating factor in the freight forwarding market, and as such, we believe Amazon could become a meaningful player should they decide to leverage their cloud computing resources/data analytics and repurpose those tools for external supply chain management. Additionally, Amazon could look to develop their own complimentary cargo fleet (similar to UPS and DHL) to support freight forwarding initiatives, although perhaps more likely Amazon could utilize technology to function in more of a brokerage role. We note that much like Amazon's "channel conflict" with 3P Marketplace "partners", there could be shipper (primarily retailers such as Wal-Mart/Target) apprehension around using the services of a competitor.
 - **Competitive Landscape: Freight Forwarding**
 - DHL (Deutsche Post): \$33 billion market capitalization; ~\$18 billion in Global Freight Forwarding gross revenue in 2014
 - Kuehne + Nagel: \$16 billion market capitalization; ~\$18 billion in Global Freight Forwarding gross revenue in 2014
 - DB Schenker Logistics: ~\$25 billion in total logistics and transportation revenue in 2014 (including German railway revenue)
 - UPS Supply Chain Solutions: ~\$9 billion in Supply Chain & Freight gross revenue in 2014
 - Expeditors International of Washington: \$9.5 billion market capitalization; \$6.5 billion of gross Airfreight, Ocean freight, and Customs Brokerage revenue in 2014

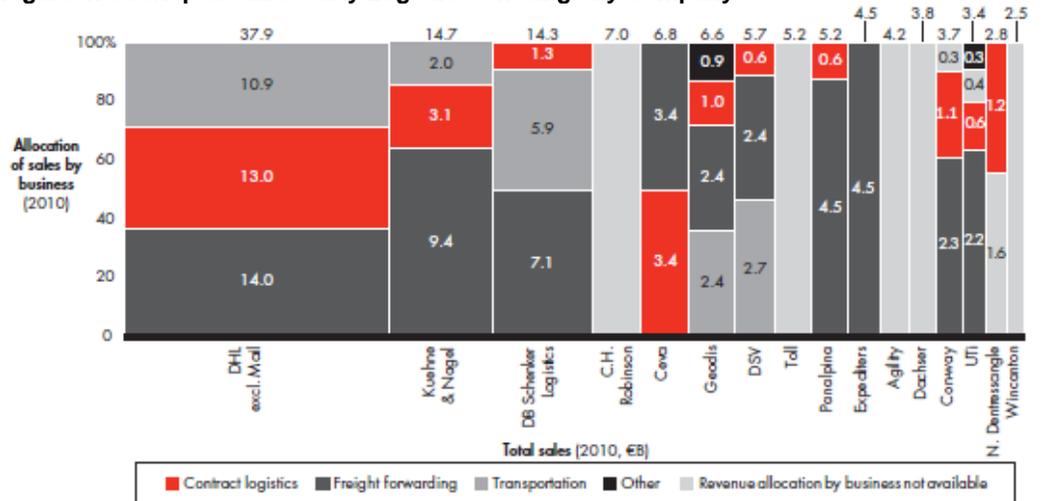
Figure 3: Potential Areas For “Amazon Transportation and Logistics” Disruption



Source: Bain & Company, Robert W. Baird

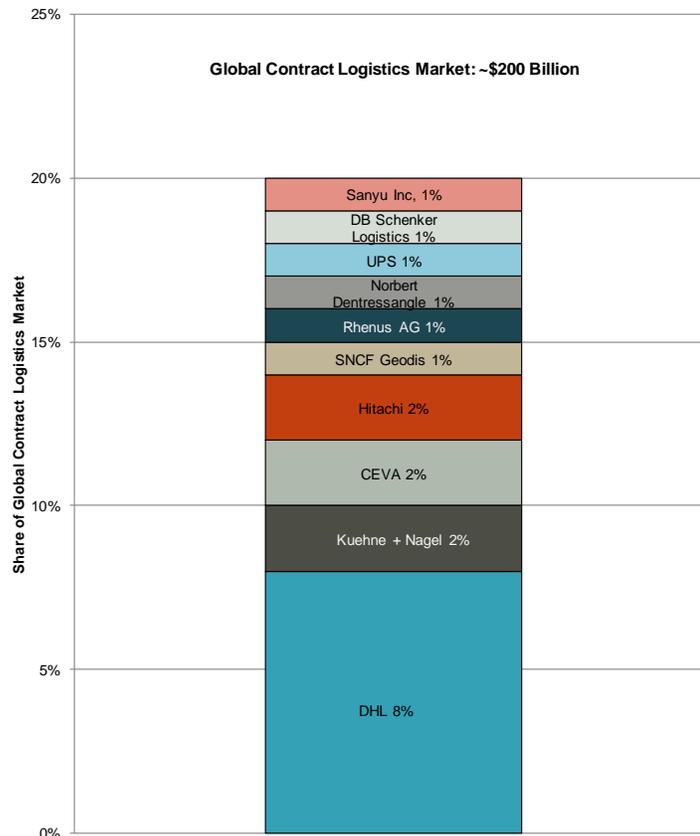
Third-Party Logistics – Contract Logistics (\$250 billion global market): As shown in Figure 4 below, most of the large freight forward companies also have a sizeable contract logistics business, as the physical storage of product (i.e., warehousing) and more specialized services including light assembly, packaging, and pre configuration are natural complements to the freight forwarding services that they offer manufacturers/exporters. The global contracted logistics market is very fragmented, with the top 10 companies comprising only 20% of total revenue, with DHL accounting for a disproportionate share of that amount (8% in 2013). According to Baird Transportation Analyst Ben Hartford, the U.S. warehousing market size is roughly \$100 billion per year, with only ~35% of that capacity outsourced to third parties. However, the effective utilization of warehouse capacity is inhibited by the seasonality of many businesses (i.e., toy manufacture needs room for holiday inventory that goes unused in July), and given the early success of on-demand warehouse space “marketplaces” like [Flexe](#), we believe Amazon could accelerate adoption of technology-oriented contracted logistics solutions. In fact, the current contract logistics market is not unlike that of the enterprise IT market prior to the explosion of cloud computing technology only a decade ago. Today, even with value-add services such as light-assembly/packaging, contract logistics is viewed by manufacturers largely as an undifferentiated, “commoditized” service selected based upon the lowest price, because at the end of the day, inventory needs to be housed somewhere. And just as AWS was able to save companies from the capital and operating costs of owning on-premise IT infrastructure that was often underutilized and technologically constrained, Amazon could provide similar on-demand solutions for manufacturers/retailers in need of warehouse space.

Figure 4: Overlap of Third-Party Logistics Offerings by Company



Source: Bain & Company

Figure 5: Contract Logistics Competitive Environment Remains Fragmented



Source: Transportation Intelligence

ATL platform could provide material financial upside over the long-term. When officially launched as a stand-alone platform in 2006, it was unclear if Amazon Web Services would contribute in a meaningful way to Amazon’s long-term financial results. Built on the same architecture as Amazon’s core retail business and then standardized for third-party use, the flexibility and affordability that AWS provided developers in contrast with legacy server, storage and networking infrastructure become clear, and within five years, grew into a \$1 billion revenue contributor, and by the end of this year could approach a \$10 billion annualized revenue-run rate. Despite this explosive growth, AWS’ \$9-10 billion share would only account for ~5% of the ~\$150

billion global data center IT pie and less than 1% of the \$1.2-\$1.4 trillion enterprise/IT services spend (we currently estimate TAM for AWS in the \$300 billion range). While not a perfect comparison, should Amazon pursue the combined \$400-\$450 billion domestic parcel/freight forwarding/contracted logistics market over the next 5-10 years, the incremental revenues could easily match AWS contributions (see Figure 5 below). We acknowledge that the scalability of AWS does not necessarily translate as well to the expansion of warehouses and last-mile delivery infrastructure, but we believe that Amazon’s technology orientation, a still expanding critical mass of fulfillment/distribution facilities, and long-term focus are a unique combination that make them potential innovators in the transportation and logistics market; something that sub-scale, technologically challenged, short-term oriented competitors might find challenging to combat. As such, despite the relatively fragmented market-share for incumbents in spaces like contract logistics, we note that even a very modest market share for “ATL” would result in meaningful revenue contributions, and could even exceed penetration levels of current players give Amazon’s aforementioned core competencies.

Figure 6: “Amazon Transportation and Logistics” Financial Upside

Addressable Logistics Market	Amazon Revenue @ 1% Share	Amazon Revenue @ 5% Share
Domestic Parcel Delivery: \$80 Billion	\$800 Million	\$4 Billion
Third Party Logistics - Freight Forwarding \$170 Billion	\$1.7 Billion	\$8.5 Billion
Third Party Logistics - Contracted Logistics \$250 Billion	\$2.5 Billion	\$12 Billion
Amazon Logistics Services Total	~\$5 Billion	~\$25 Billion

Source: Robert W. Baird estimates

Investment Thesis

We have an Outperform rating and \$630 price target for Amazon. Amazon remains, in our view, uniquely positioned to achieve significant ongoing market share expansion amid strong ~20% annual growth in revenues and leveraging a large and growing base of more than 285 million active customers. We view the company's focus on the customer experience through broad product selection and low prices as creating a meaningful competitive moat, which in turn should ultimately drive operating leverage and continued healthy free cash flow returns. With a trillion-dollar market opportunity and accelerating e-commerce tailwinds, we believe shares will continue to trade at a premium to other large-cap Internet companies (e.g., GOOG, EBAY, YHOO).

We derive our \$630 price target based upon a combination of DCF, EV/EBITDA multiples, and sum-of-the parts analysis. We apply a 1.8x multiple to our 2016 retail segment revenue expectations of \$112 billion, 8x 2016E AWS revenue of \$11.2 billion, and 4x 2016E Advertising/Other revenues of \$1.2 billion and ~\$6B of net cash. Our multiples reflect increased conviction in AWS revenue targets and opportunities in emerging businesses (Advertising), but we also consider relative sector multiples and historical valuation ranges, among other factors. In addition, we apply 25x 2016E EV/EBITDA, above mean comparable of 18x due to Amazon's higher growth profile.

Risks & Caveats

- **Retail risks.** Amazon faces competitive risks from traditional retailers (such as Wal-Mart, Target, Barnes & Noble, Costco and others), from other online e-commerce and advertising companies (eBay and Google in particular) as well as from technology product OEMs such as Apple. The threat from traditional retailers is predominantly in the form of a combined click and mortar strategy, whereby such retailers can leverage their offline retail presence to provide experiences and conveniences that cannot be emulated online.
- **E-Commerce and online advertising related risks.** In terms of online competition, eBay's Marketplace is a direct competitor to Amazon's third-party marketplace. In many instances, third-party sellers utilize both Amazon's and eBay's Marketplace. On the online advertising front, Google is the leading facilitator of paid search advertising, which is the primary sales channel for many of Amazon's competitors. While Amazon is also one of Google's largest customers, Google also enables its competitors. More recently Google has also created advertising products that help physical retailers to leverage their proximity to customers and the availability of their products.
- **Electronic and digital content sales risks.** With the introduction of the Kindle, Amazon has entered into direct competition with Apple, Barnes and Noble and other sellers of electronic products. With the move to digital products, e-books and music in particular, the role of e-readers has increased significantly. Amazon does not have a long track record in making devices and selling digital content, despite its significant success in both e-readers and e-books. Amazon's digital music initiatives have been moderately successful. Amazon's Kindle product also uses an open sources version of Android, of which Google ultimately has more control.
- **Sales tax risks.** Amazon currently collects tax on more than 50% of its revenue base, and is increasingly entering into state agreements, to pay sales taxes (including California, Texas, New York and others). We believe this is a diminishing risk, as Amazon increasing pays taxes in almost regions in which it operates. Furthermore, once having agreed to pay state taxes, Amazon is now able to set up increased local Fulfillment Centers, which they previously could not do, in order to satisfy the conditions for state tax exemptions.

- **Cloud-based services risks.** AWS is now a sizable and rapidly growing business, which requires significant capital expenditures, for which long-term profitability has yet to be proven. Amazon also faces technology competitors such as Google, Microsoft and Rackspace with Google and Microsoft both having deeper pockets and larger R&D budgets.
- **Macro-related risks.** In the event of another recession, Amazon will likely see its growth reduced again; however, longer term downturns typically increase Amazon's competitiveness as weaker competitors may be forced out of business or have less capital flexibility to make long-term investments.

Company Description

Amazon.com is the largest global online retailer and is focused on sales of physical and digital goods through the online channel. The company's stated objective is to be the world's most customer-centric company, focusing on three core sets of customers: consumers, sellers, and enterprises. Consumers are served through Amazon, while sellers connect to consumers on Amazon's third party marketplace. Amazon Web Services (AWS), a cloud computing *Infrastructure-as-a-Service* offering, is the company's enterprise service. Amazon is currently the leading on-line e-commerce site in virtually all markets in which it operates, including US, UK, Germany, Japan, France, Italy, Spain and other developed markets. Amazon is also investing aggressively in China, but as yet this remains a nascent market.

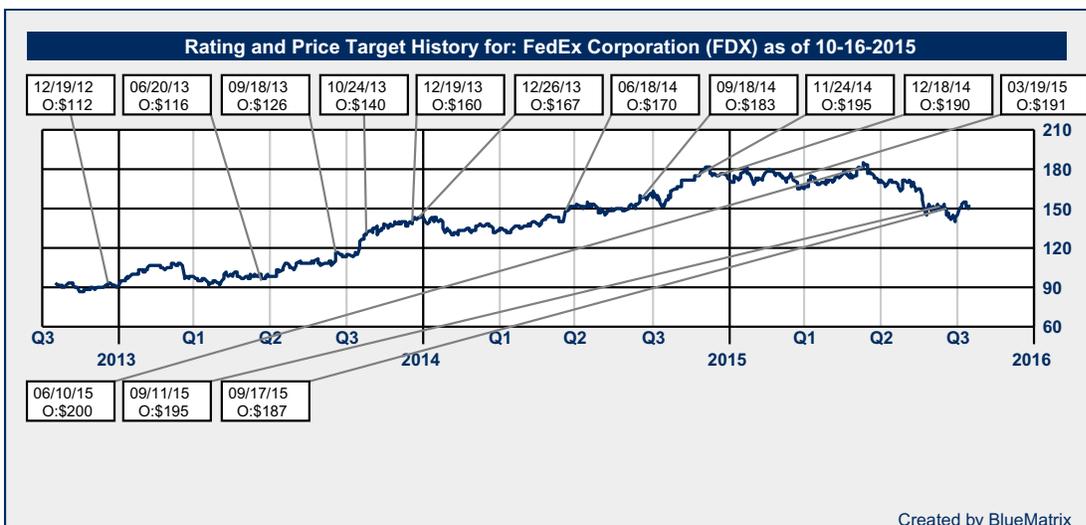
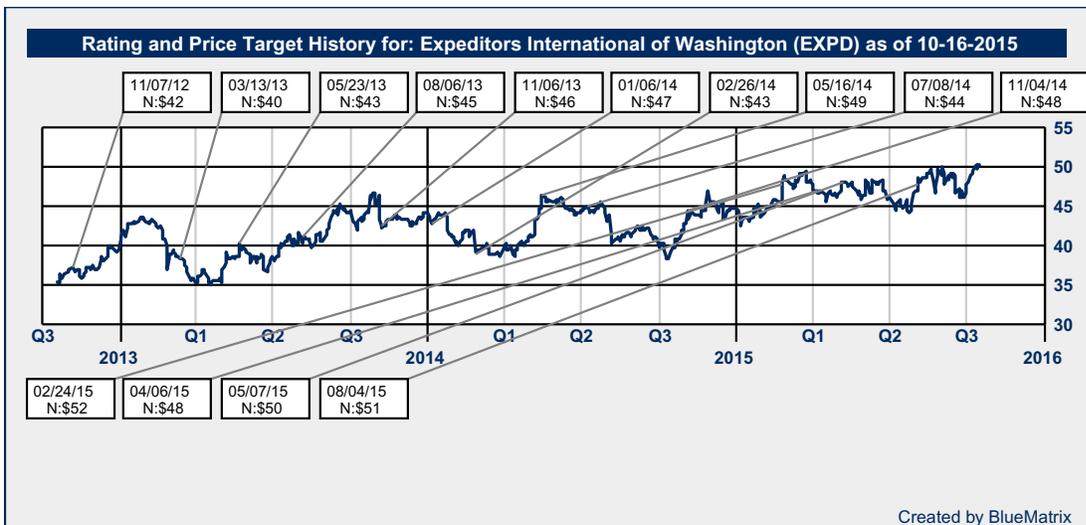
Appendix - Important Disclosures and Analyst Certification

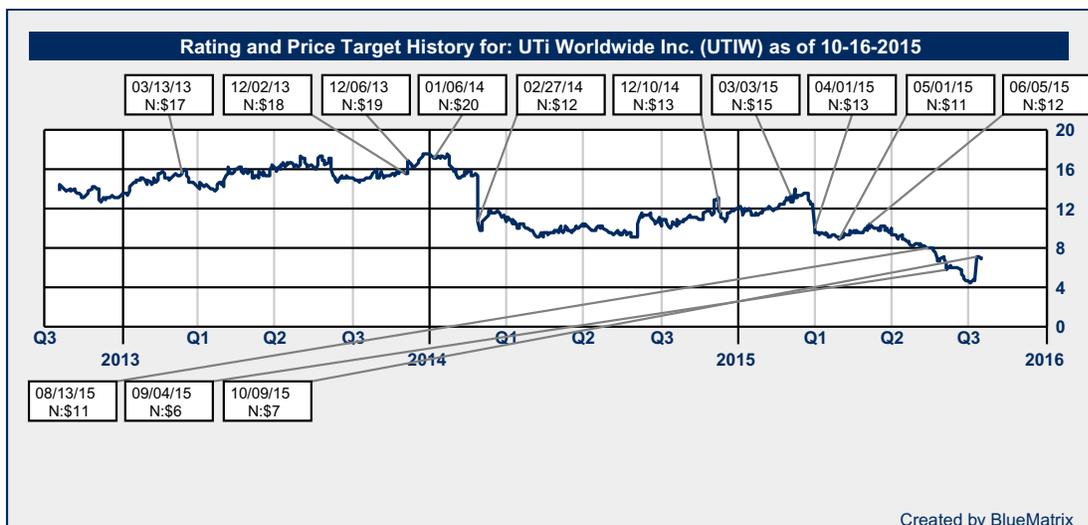
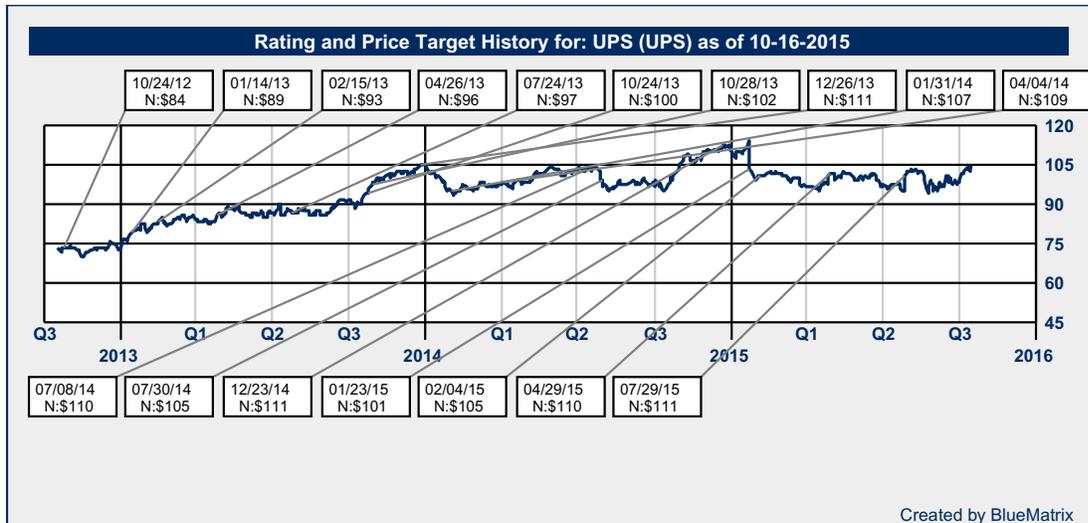
Covered Companies Mentioned

All stock prices below are the October 18, 2015 closing price.

- eBay Inc. (EBAY - \$24.55 - Outperform)
 - Expeditors International of Washington (EXPD - \$49.98 - Neutral)
 - FedEx Corporation (FDX - \$152.48 - Outperform)
 - Google, Inc. (C) (GOOG - \$662.20 - Outperform)
 - UPS (UPS - \$103.95 - Neutral)
 - UTi Worldwide Inc. (UTIW - \$7.01 - Neutral)
- (See recent research reports for more information)







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