

What Makes Amazon Tick in Healthcare & the Potential for M&A

Summary

As we ponder the meaningful destruction in market cap in our drug supply chain coverage universe and await the apparent Thanksgiving (aka "Doomsday") decision by Amazon on whether or not the company will enter the pharmacy space, we have to ask ourselves "do we believe in coincidences?"

Key Points

- **We have been steadfast in our belief that Amazon will NOT enter the pharmacy market, but if it happens M&A is a NECESSITY.** This is based on our research and industry checks. Amazon's current logistics and distribution model would not translate into healthcare. Simply stated healthcare is a different beast. It is complex and complicated on both the B-to-B side (chain of custody of the product matters!) and B-to-C (patient access).
- **We think we know what makes Amazon tick in healthcare and its cross-selling its existing services, especially AWS.** Amazon appears focused on selling AWS and its cloud capability and Amazon Business into health systems. Further, based on our checks we think the potential of Amazon entering medical supply (non-PPI products) distribution is real, but we think M&A is likely needed.
- **But the press reports suggesting Amazon is looking into pharmacy has been a thorn in our side.** Why do we even know Amazon is looking into pharmacy? Is Amazon trying to prepare the market for this new vertical (as some believe) or are the press reports just coincidences? We think the theory Amazon is "preparing" the market is a stretch. Nonetheless, given our view that M&A is a necessity for Amazon to enter this highly complicated and regulated market with massive net working capital requirements, **we present a list of potential targets that Amazon could buy based on what we believe is important to Amazon from our recent checks.**
- **What is Our "Doomsday" Prediction?** We have two actually. First, we do *not* think Amazon is entering the pharmacy business given the lack of leading indicators or evidence, which is in complete contrast to medical supply distribution. Second, if we are wrong we think Amazon will enter the business via a large acquisition (versus current Street expectations of entering organically with the help of small, bolt-on acquisitions). Maybe Amazon has figured this out and is preparing the market for a new vertical. Maybe there is no such thing as a coincidence.

Company	Symbol	Price (11/10)	Rating		PT
			Prior	Curr	
Amerisource Bergen Corp.	ABC	\$75.00	-	Neutral	\$92.00
Cardinal Health, Inc.	CAH	\$58.55	-	Neutral	\$70.00
CVS Health	CVS	\$70.99	-	Buy	\$90.00
Express Scripts Inc.	ESRX	\$60.05	-	Neutral	\$67.00
McKesson Corporation	MCK	\$137.61	-	Neutral	\$168.00
Rite Aid Corporation	RAD	\$1.57	-	Neutral	\$2.25
Walgreens Boots Alliance, Inc.	WBA	\$70.99	-	Buy	\$94.00

Source: Bloomberg and Mizuho Securities USA

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Thoughts Before the Domsday Decision

We have been steadfast in our belief that Amazon will not enter the pharmacy market but, if it happens, we believe *major* M&A is a necessity. This is based on our research and industry checks. Amazon's current logistics and distribution model would not translate into healthcare. Simply stated, healthcare is a different beast. It is complex and complicated on both the B-to-B side (chain of custody of the product matters!) and B-to-C (patient access).

Frankly, the press reports suggesting Amazon is looking into pharmacy have been a thorn in our side. Why do we even know Amazon is looking into pharmacy? In my 20+ year career on Wall Street, I have never experienced anything quite like this - meaningful market cap destruction of high-quality companies like CVS and WBA over market rumors and speculation. Back when Walmart introduced its \$4 generic program the stocks were under significant pressure, but that was based on a real threat as the company announced the introduction of the program. Is Amazon trying to prepare the market for this new vertical (as some believe) or are the press reports just coincidences? We think the theory Amazon is "preparing" the market is a stretch. Nonetheless, given our view that M&A is likely a necessity for Amazon to enter this highly complicated, regulated market with massive net working capital requirements, we present potential companies that Amazon could target. ***Our opinion is that if Amazon enters through M&A, it will be via a large acquisition for the business and patient access. A small acquisition would do nothing for Amazon, in our opinion.***

Exhibit 1: Potential Pharmacy M&A Targets for Amazon

	ESRX	CVS	WBA	RAD	ABC	CAH	MCK
B-to-B (that make pharmacy decisions)	Yes	Yes	No	Yes	No	No	No
B-to-C (access to pharmacy patient)	Yes	Yes	No	Yes	No	No	No
U.S. Retail Footprint	No	Yes	Yes	Yes	No	No	No
Same-Day Delivery (B-to-C)	No	Yes	Yes	Yes	No	No	No
Generic Buyer / Inventory	Yes	Yes	Yes	No	Yes	Yes	Yes
Mail Capability	Yes	Yes	Yes	Yes	No	No	No
U.S Drug Distrution	No	No	No	No	Yes	Yes	Yes
Points	4	6	4	5	2	2	2

Implied Deal Price (For illustrative purposes only)

Current PE FY18E*	12.0x	11.2x	12.8x	NM	12.4x	11.8x	11.3x
Current Market Cap	\$34,511	\$72,126	\$75,214	\$1,676	\$16,601	\$18,619	\$28,898
Current Enterprise	\$33,936.0	\$95,710.8	\$84,847.9	\$4,535.6	\$17,611.4	\$27,440.9	\$34,131.1
10-Year Trading Average	14.7x	14.7x	15.4x	14.7x	14.7x	13.4x	13.9x
Implied Deal Price On 10-year Average*	\$73.35	\$93.35	\$85.32	\$2.25	\$89.23	\$66.46	\$169.44
Implied Upside	+22%	+31%	+20%	+43%	+19%	+14%	+23%
Implied Enterprise Value	\$53,667.9	\$118,423.5	\$100,026.3	\$5,261.3	\$20,761.1	\$29,957.6	\$40,815.6

Source: MSUSA estimates and company reports. ESRX PE assumes five-year trading average versus 10-year and earnings are adjusted for the loss of the Anthem contract. RAD deal estimates based on MSUSA proforma estimates post WBA asset sales.

Based on our research, Amazon’s current focus in healthcare is to cross-sell AWS. Amazon could acquire one of these established players, run the business as a separate unit (and generate a lot of free cash in the process), but cross-sell into the customer base its existing profitable offerings including AWS (to businesses) and Amazon Prime (to businesses and consumers). We think CVS would provide the most cross-selling opportunities for Amazon, followed by ESRX and RAD. In our recent round of checks, we wanted to learn what Amazon is actually doing in healthcare to try figure out what makes the company tick. Amazon appears focused on cross-selling its existing capabilities into healthcare systems. When we think about the cross-selling potential a pharmacy player brings to Amazon, the opportunities look meaningful. This, coupled with the favorable cash flow dynamics in the industry, major M&A is not out of the realm of reality **if** this is actually a business Amazon wants to enter. *The chart above ranks the potential candidates on what we believe would be important to Amazon.* Below we summarize our thought process:

B-to-B. We think this is very important to Amazon to cross-sell its AWS and Amazon business. A PBM would give Amazon direct access/existing relationships employers, health plans and government entities since these organizations are the “buyer” of pharmacy. ESRX and CVS are the obvious targets and, *to a lesser extent*, RAD. RAD operates EnvisionRx, a full-service PBM that services roughly 21mm members, including 4MM commercial members and ~400K Medicare Part D members.

B-to-C (access to the patient). In order to gain access to the patient in a meaningful way, Amazon would need access to the patient via a PBM since pharmacy design is decided by the buyer (usually an employer or managed care company) and network decisions. A fast way to get in network is to buy a major PBM (like ESRX or CVS) that has the power to make you a network provider quickly.

Same-Day Delivery. We think Amazon would be focused on a target with same-day delivery capabilities to end users. At its core, Amazon’s efficiency distributing products is what separates it from competitors. If the company is going to get into the pharmacy space, it would strive to deliver products as quickly and efficiently as possible, which is why we think Amazon would be interested in a potential target that coincides with that philosophy and is able to offer same day delivery. The companies that currently have same-day delivery capabilities are CVS, WBA and RAD.

Generic Buyer/Inventory. We think an acquisition target that already has a presence as a strong generic buyer and the inventory to back it up would be important for Amazon. The working capital investment required for the pharmacy business are massive and, frankly, underappreciated by the Street. Companies such as ESRX, CVS, WBA, ABC, CAH and MCK all have

incredible warehouses that enable these companies to navigate the inventory challenges in healthcare. We only highlight generics given the profitability profile versus brand/specialty (even Amazon would not get discounts from brand manufacturers). Even though CVS, ESRX and WBA are not “drug distributors”, these companies buy generics directly from the generics manufacturer currently and handle the warehouse and distribution to their respective stores and/or mail facilities. As a result, the networking capital investment by Amazon would be limited. We would note RAD no longer buys generic directly as the company outsourced both the sourcing and distribution to McKesson.

*Our “Doomsday” prediction is that: Amazon **does not get into pharmacy**. If we are wrong and the press reports are correct, we think Amazon needs to enter in a **big way and through a major M&A to be competitive with the current players**. Maybe Amazon has figured this out. Prior checks suggest the company has been looking into the pharmacy space for up to two years. We know our Doomsday prediction seems extreme, but so is the stock reaction on press reports, especially given there is no obvious evidence besides the press reports suggesting Amazon is interested in pharmacy*

Below we summarize our recent checks to with healthcare systems on what Amazon *is actually doing* on the B-to-B front in healthcare. Our checks did not pick up anything that suggested Amazon is about to enter the B-to-C or B-to-B pharmacy business. Unlike the data points Amazon trying to sell AWS to hospitals coupled with its interest in medical supply distribution (that we summarize below), there are no leading indicators from our checks that Amazon is entering the B-to-C or even the B-to-B pharmacy space. We only spoke with hospitals that have had interaction with Amazon and all stated Amazon has not talked about B-to-B pharmacy. **Additionally, we checked every state’s pharmacy board to see if the company applied for license to dispense pharmaceuticals under the Amazon or Whole Foods names and, to date, we could not find any.**

What Makes Amazon Tick in Healthcare?

We performed another round of industry checks to get a pulse on Amazon’s healthcare ambitions. Since our stocks (retail pharmacies and drug distributors) are trading on the speculation Amazon might be entering the pharmacy space, we wanted to frame what Amazon is actually focused on in health care. Post our checks, we remain committed to our thesis that there is no evidence that Amazon is in entering pharmacy at this time. Instead we found real-world evidence that Amazon’s healthcare focus remains B-to-B (e.g. hospitals) with a focus on selling AWS and the cloud. Amazon is also focused on selling non-healthcare items into hospitals via AWS as well. It is also clear from our checks that Amazon is interested in entering the medical supply distribution space, but we suspect an acquisition is needed (similar to

pharmacy) if Amazon wants to become a larger player. The major conclusions from our checks are as follows:

1. **Cross-Selling Existing Amazon Offerings (Especially its Technology Capability) to Healthcare Facilities a Key Focus Currently...** This includes AWS and its cloud offering. Much of Amazon’s current healthcare hiring posts are related to technology. Amazon is also focus on cross-selling “rogue” products via Amazon Business and we even picked up data points Amazon is trying to cross-sell Whole Foods delivery to some hospitals.
2. **...But Medical Supply Distribution is Likely on the Horizon.** Checks indicate Amazon is talking to hospitals about the B-to-B medical supplies distribution business. Amazon appears to be testing the waters to see if hospitals would be interested in using Amazon for the distribution of non-physician preference items (PPIs). According to our checks, Amazon has been attending medical conference/ summits hosting groups to gauge interest.
3. **Similar to Pharmacy, an Acquisition is Likely Needed for Medical Supplies Distribution.** In order to be a player in the B-to-B space, we think an acquisition is likely needed. Besides access to the customer (the GPOs could be a hindrance for Amazon), *chain of custody of the medical product*—even for non-physician preference items—is very important. Hospitals are willing to pay a premium for this assurance. We think that Amazon could disrupt the industry by: 1) purchasing an existing medical supply distributor; 2) purchasing a GPO (unlikely in our view) or 3) eliminating the need for a GPO (which would be classic Amazon to disrupt a middle-man), which we ultimately think would give the company access to the customer.

What Amazon is Currently Doing in Healthcare

We spoke to several people involved in the hospital industry including directors of materials management at both small and large health systems as well the director of an independent pharmacy buying group. Post our checks, we still believe there is no evidence that this is a space Amazon will want to enter. None of the individuals we spoke with in the industry have seen any true indication that Amazon is pursuing the pharmacy market, ***which is in direct contrast to what our checks revealed surrounding AWS, Amazon business and potentially the medical supply distribution side.***

Cross-selling current Amazon offerings (especially its technology capability) to healthcare facilities, particularly hospitals, appears to be a key area of focus currently. This includes Amazon’s Web Services (AWS) and its cloud offering. Many of Amazon’s current healthcare hiring posts are related to

technology. Amazon is also focused on cross-selling “rogue” products via Amazon Business and we even picked up data points Amazon is trying to cross-sell Whole Foods delivery to some hospitals.

Web Based Services. Amazon Web Services (AWS) is a subsidiary of Amazon.com that provides on-demand cloud computing platforms to its clients. The business segment’s technology allows subscribers to have a virtual cluster of computers, available all the time, through the internet, which makes it easier for both small and large companies to access and maintain their IT needs. *More specifically, Amazon is trying to sell its cloud capability to hospitals and hospital systems.*

To store healthcare data, hospitals mainly use data centers, which are physical locations (either on premise or at a satellite warehouse in the vicinity) with hardware that stores data within an organization's local network. This is in direct contrast with the cloud, which stores data on the Internet. For most small businesses, the cloud is a more cost-effective option than a data center because building an infrastructure can take longer to get started and being responsible for the maintenance and administration of the center can be very costly. On the other hand, cloud computing does not require time or capital to get up and running and providers offer a range of affordable subscription plans. While data centers take time to build and maintain, cloud services are available much more quickly and offer outsourced maintenance capabilities.

Based on our checks, we think Amazon may want to be a leading back-end provider of technology based services for healthcare systems and small healthcare companies (we spoke with an owner of pharmacy compounding company that runs its business on Amazon cloud including claims adjudication). We think the hospital market is a newer customer segment for Amazon, based on our checks. To us, expanding into healthcare through this avenue is more logical than operating in the intensely regulated and complicated pharmacy space. The most obvious challenge for the company in this space would be to maintain compliance subject to the U.S. Health Insurance Portability and Accountability Act (HIPAA) as there is no HIPAA certification for a cloud provider such as AWS, but the company appears to already be addressing this. Amazon has a HIPAA-focused Whitepaper ([Amazon HIPAA Whitepaper](#)) which outlines how companies can use Amazon Web Services to create HIPAA-compliant applications and additionally has been hiring in this area. One position currently posted, for Compliance Lead, requires an experienced HIPAA professional. More details of the job description are presented below:

Exhibit 2: Amazon Compliance Lead Job Description

Compliance Lead The Compliance Lead will be an experienced HIPAA professional to own and operate the security and compliance elements of the project. As a Program Manager on this project, you will work alongside a team of systems engineers, software developers and machine learning scientists to define and execute on the program's strategic goals and day-to-day operations. Critical to the success of this program is that you have the ability to apply HIPAA requirements to novel technology products and work in tandem with AWS compliance and AWS security teams to deliver results. A significant part of your job will be to ensure that our software products meet our HIPAA Business Associate Agreement (BAA) requirements as well as the Guidance set forth at the national level. You will develop leading edge security & compliance practices to ensure AWS continues to be a leader in technology innovation and HIPAA security assurance automation. The ideal candidate should have proven HIPAA expertise in a fast-moving information technology setting.

Source: [Linkedin.com](https://www.linkedin.com)

Further, we are following the Amazon job posts weekly ([Tracking AMZN Pharmacy Job Posts](#)) and most healthcare-related jobs are within its AWS business segment, which to us suggests the company is interested in expanding its reach in this area in the healthcare industry. We continue to follow Amazon healthcare related job posts since the publication of our original note in August, and nothing has changed since that timeframe.

Amazon Business. Amazon is interacting with healthcare facilities and hospitals through the distribution of rogue products such as books, toys, clothes, educational material and a limited number of medical supply products (e.g. hospital gowns). For instance, one of the hospitals we spoke with is a teaching hospital so they use Amazon to purchase educational textbooks on anatomy and other medical-related topics. Another hospital was a “safety net” hospital so it frequently treats homeless patients without any clothes, in which case they use Amazon to purchase clothing for these individuals instead of “having to go to Target”. Another hospital has a large pediatric ward, so needs toys, books and coloring material for the patients. Amazon’s approach appears to be asking the hospital to put a list of all its “rogue”, non-medical related products together. Amazon is offering a discount (of at least 10%) to purchase all the materials through Amazon business. Some supply managers did note that senior leadership at the hospitals is concerned about the negative implications doing business with Amazon could have on small, local businesses and suspected the discounts offered by Amazon would have to be meaningful for leadership to pick Amazon Business.

Whole Foods. We picked up several data points that Amazon was trying to cross-sell Whole Foods delivery into hospitals with geographic overlap. According to several consultants, it is not uncommon for hospitals to use Whole Foods to get groceries from so there is food at the hospitals. These same consultants indicated the company is already trying to cross-sell these grocery capabilities.

Entrance into Medical Supply Distribution Appears Imminent

Checks indicate Amazon is talking to hospitals about B-to-B the medical supplies distribution business. Amazon appears to be testing the waters to see if hospitals would be interested in using Amazon for the distribution of non-physician preference items (PPIs). According to our checks, Amazon has been attending medical conference/ summits hosting groups and reaching out to hospital systems to gauge customer interest in the distribution of non PPI items. Based on our checks, we think there are inherent barriers to entry with medical supply distribution supply (chain of custody of the product and the GPO) and M&A is likely needed for Amazon to become a true competitor and a force in the space. We think it is plausible because our industry checks convinced us that *Amazon's end-game could be to sell its high-margin AWS and cloud technology to hospitals and other healthcare facilities and having a relationship with the hospitals via medical supplies is a great entry into the customer segment.*

We think Amazon is only interested in non-PPIs market. As a reminder, physician preference items (PPIs) are the more expensive, regulated medical technology items such as hip and spine implants, defibrillators and pacemakers that hospitals typically buy directly from the manufacturers. Most hospitals are part of a GPO (discussed below) that negotiates volume discounts for hospital systems. In many cases, hospitals systems are equity owners of the GPO and receive rebates back from manufacturers annually. Roughly 50% of a hospital supply costs are PPI and physicians have a significant influence in choosing which product the hospital buys.

We think Amazon will go after the non-PPI market, which are typically commodity products like gauze and gloves. Although a GPO is involved in negotiating discounts for these products, many times contracting for these items are done separately than the PPI products.

The three major medical technology distributors currently are Cardinal Health (represents roughly 10% of revenue and ~25% of profit for year-end FY17), Medline and Owens & Minor.

We think that Amazon could disrupt the industry by: 1) purchasing an existing medical technology distributor 2) purchasing a GPO (least likely scenario) or 3) eliminating the need for a GPO by becoming its own GPO and negotiating for the hospital systems (but Amazon would need buy-in from a lot of hospital systems to garner similar discounts).

Incremental Barriers to B-to-B Distribution

There are inherent barriers to entry in even the B-to-B space that we discuss below: chain of custody and the GPO.

Chain Of Custody Is Very Important. From several of our checks, we learned the importance of the control of chain of custody when it comes to medical supplies. Hospitals and other healthcare providers pay a premium for chain of custody. In other words, hospitals need to know where the product comes from, that it is FDA-approved and that it is sustainable for use. Amazon's current supply chain operations do not work this way. In many cases, Amazon does not vet suppliers and ordering through Amazon can result in a knock-off product with a label on it different from the true manufacturer. For general items this might be acceptable, but when a doctor is using gauze or gloves or anything else that goes into a patient, the chain of custody is paramount. All three major medical distributor companies manufacture their own products and distribute major brands. One hospital system that uses Medline stated they would be uncomfortable using Amazon given the chain of custody issue since the products purchased through Medline are "made in a Medline factory in China (for example), shipped on a Medline leased/owned boat, transported to a Medline distribution facility through Medline's freight system, delivered to the hospital by Medline's freight system and approved by the FDA by Medline". The consultant noted that, even though Amazon's logistics and distribution model is impressive, Amazon would need to reconstruct its supply chain operations entirely to be competitive in the healthcare arena since healthcare is "a different beast". Amazon's current model is beneficial to the public because it opens up the marketplace and allows for customers to buy anything they want through various merchants. However, in a healthcare setting it does not work this way. In healthcare, we think it would be easier for Amazon to buy these capabilities.

The three major medical technology distributors currently are Cardinal Health (CAH, rated Neutral), Medline (private) and Owens & Minor (OMI, not rated). **The industry experts we spoke with suggested Medline would be a natural fit for Amazon given its presence in home health distribution.**

GPO's Place in the Medical Supplies Landscape. While we do not cover the GPO sector, after learning how the distribution of supplies really work, we think the sub industry has a funny place within healthcare that Amazon could potentially exploit. GPOs contract and negotiate prices with manufacturers as well as with distributors in order to generate discounts for hospitals. Most major hospital systems use a GPO and many are equity owners. In most cases, hospitals do not pay the GPO. The medical supply or technology manufacturer does via a fee (usually 1-4% of sales purchased through the GPO). We suspect manufacturers would negotiate directly with Amazon if this fee is removed. However, the GPO is important for hospital system as they benefit from collective buying discounts and annual rebates from the manufacturer. Not having this capability would be significant barrier to entry for Amazon according to our checks. GPOs have access to

both the facilities and manufacturers. Could Amazon target a GPO? Maybe but we feel a medical supply distribution acquisition is more likely given the chain of custody issues and Amazon could create its own GPO to get access to the hospitals. Premier (PINC, not rated) is the only publically-traded GPO. Vizient is a large, private GPO. GPOs probably add a lot of value for PPI products, which are typically contracted separately from the commodity products. As a result we think this could be a potential area for Amazon to disrupt, at least on the non PPI side.

And Those Distribution Licenses ...

We do not want to spend too much discussing the licenses Amazon obtained since we addressed the issue in different note ([Thoughts on AMZN's Wholesale Distribution Licenses](#)). We continue to believe the licenses Amazon currently have support Amazon's B-to-B strategy of selling medical supplies to hospitals and, frankly, investors are over-simplifying the licensing issue. To be competitive in the medical supply space, the three main companies manufacturer "kits" that likely require some of the drug licensing that Amazon obtained. More importantly, to date, Amazon does not appear to have obtained the licenses needed to be a VAWD (verified-accredited wholesale distributor). Most recently, ABC highlighted this same message on its earnings call. The company noted that it had to obtain 70 licenses for its one new distribution center just opened. That is 70 licenses for one distribution center (and we think these are the licenses Amazon will likely need to obtain to be competitive in the current marketplace). Below we highlight some of the states where Amazon has licenses for wholesale distribution (we went through all 50 state pharmacy board websites).

Exhibit 3: Amazon Wholesaler Licenses

		<u>Amazon</u>	<u>Whole Foods</u>	<u>Comments</u>
1	Connecticut	Yes	No	Amazon has licenses for "wholesaler of drugs, cosmetics & medical devices" in addition to "Non Legend Drug Permit"
2	New Hampshire	Yes	No	License Type: "MAN/DIST/WHOLE/BROKER" in Pharmacy
3	Maine	Pending License	No	Pending "Pharmaceutical Wholesaler" License
4	Arizona	Yes	No	Amazon has licenses for "Wholesale" and "Nonprescription Retailer License". Whole Foods has "Nonprescription Retailer License as well
5	Alabama	Yes	No	Amazon has license for "Wholesale Distributor" but no pharmacy licenses
6	North Dakota	Yes	No	Amazon has a "Wholesale" license for durable medical equipment distribution, medical gas, or both"
7	Idaho	Yes	No	Amazon has a license for "Wholesaler - OTC Products/Legend Medical Devices License"
8	Michigan	Yes	No	Amazon has a license under type "Mfr/Wholesaler" and profession "Pharmacy" (Different from CVS licenses in state that are under profession "Pharmacy" and license type "Pharmacy")
9	Nevada	Yes	No	Amazon has Wholesalers license to distribute to pharmacies but does not have ability to distribute to patients. License is under "WH" type
10	Oregon	Yes	No	Amazon has a "Wholesaler" license in the state while WholeFoods has an "Over the Counter license" in five locations.
11	Tennessee	Yes	No	Amazon has licenses as "Manufacturer/Wholesaler/Distributor"
12	Louisiana	Yes	No	Amazon has a Wholesale License, more specifically a "Drug or Device Distributor" License but no Pharmacy License
13	New Jersey	Yes	No	Amazon has a "Wholesale" license but not a pharmacy license
14	Iowa	Yes	No	Amazon has a "Wholesale Drug" License but no pharmacy license
15	Utah	Yes	No	Amazon has a "Pharmacy - Class C" license, which is a license for wholesale/distribution
16	Montana	Yes	No	Amazon has "Wholesale Drug Distributor" Licenses but no pharmacy

Source: State Pharmacy Boards License Verifications

Price Target Calculation and Key Risks

Amerisource Bergen Corp.

Our valuation of \$92 is based on a blended approach; averaging our implied price target from using 14.7x our MSUSA adjusted calendar 2018E EPS and our implied target from using a 7% yield on FY17 FCF estimates. Risks to valuation include pricing pressure from government and private payers, soft prescription drug utilization due the economy, loss of major clients and a competitive pricing environment

Cardinal Health, Inc.

Our valuation of \$70 is based on a blended approach; averaging our implied price target from using 14.6x our MSUSA adjusted calendar 2018E EPS and our implied target from using a 6% yield on FY18 FCF estimates. Risks to valuation include pricing pressure from government, private payers and manufactures, soft prescription drug utilization, loss of major clients and a competitive pricing environment.

CVS Health

Our valuation of \$90 assumes the company will trade at a mixed valuation of a free cash flow yield of 6% based on 2017E adjusted FCF and a 12.1x PE on our 2018 adjusted EPS. Risks include continued soft prescription volume due to the economy, market share shifts resulting from the introduction of health reform, loss of key client contracts, increased government regulation, industry pricing pressure and increased competition.

Express Scripts Inc.

Our valuation of \$67 is based on a blended approach; averaging our implied price target from using 10.0x our MSUSA adjusted calendar 2018E EPS and our implied target from using a 6% yield on FY17 FCF estimates. Both methods are adjusted further for the potential reduction from the price check with a large client. Risk to valuation includes downside risk to EPS from its current contract negotiations with one of its largest clients, loss of key client contracts, continued soft prescription volume due to the economy, increased government regulation, and industry pricing pressure.

McKesson Corporation

Our valuation of \$168 is based on a blended approach; averaging our implied price target from using 11.5x our MSUSA adjusted FY18E EPS and our implied target from using an 8% yield on FY18 FCF estimates. Risks to valuation include pricing pressure from government, private payers and manufactures, soft prescription drug utilization, loss of major clients, a competitive pricing environment and integration of acquisitions.

Rite Aid Corporation

Our price target of \$2.25 is based on 8.4x FY19E proforma estimates, in-line with RAD's 10-year historical average. Risks include pharmacy reimbursement pressures, rising costs, a competitive front-store environment and declining operating trends.

Walgreens Boots Alliance, Inc.

Our valuation of \$94 is based on a blended, stand-alone approach; averaging our implied price target from using 14.7x our adjusted calendar 2018E EPS and our implied target from using a 6% yield on FY17E FCF estimates. Risk to valuation include exclusion of pharmacy benefit manager (PBM) provider networks, sales pressures due to the economy, increased government regulation, changes to pricing benchmarks, European exposure with the Alliance Boots acquisition and the FTC approval of the pending acquisition of RAD.

Companies Mentioned (prices as of 11/10)

Amerisource Bergen Corp. (ABC- Neutral \$75.00)
 CVS Health (CVS- Buy \$70.99)
 McKesson Corporation (MCK- Neutral \$137.61)
 Walgreens Boots Alliance, Inc. (WBA- Buy \$70.99)

Cardinal Health, Inc. (CAH- Neutral \$58.55)
 Express Scripts Inc. (ESRX- Neutral \$60.05)
 Rite Aid Corporation (RAD- Neutral \$1.57)

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Investment Risks and Valuation Methods can be located in the following section of this research report - Price Target Calculation and Key Risks.

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Buy: Stock's total return is expected to appreciate above the average total return of the analyst's industry coverage universe, on a risk-adjusted basis, over the next 12 months.

Neutral: Stock's total return is expected to be within the average total return of the analyst's industry coverage universe, on a risk-adjusted basis, over the next 12 months.

Underperform: Stock's total return is expected to depreciate below the average total return of the analyst's industry coverage universe, on a risk-adjusted basis, over the next 12 months.

RS: Rating Suspended - rating and price objective temporarily suspended.

NR: No Rating - not covered, and therefore not assigned a rating.

Mizuho Securities USA LLC investment ratings are based on the following definitions. Anticipated share price change is based on a 6- to 12-month time frame. Return expectation excludes dividends (prior to July 10, 2017).

- Buy:** Stocks for which the anticipated share price appreciation exceeds 10%.
- Neutral:** Stocks for which the anticipated share price appreciation is within 10% of the share price.
- Underperform:** Stocks for which the anticipated share price falls by 10% or more.
- RS:** Rating Suspended - rating and price objective temporarily suspended.
- NR:** No Rating - not covered, and therefore not assigned a rating.

Rating Distribution

(As of 11/10)	% of coverage	IB service past 12 mo
Buy (Buy)	43.62%	52.31%
Hold (Neutral)	51.01%	38.16%
Sell (Underperform)	5.37%	50.00%

For disclosure purposes only (NYSE and FINRA ratings distribution requirements), our Buy, Neutral and Underperform ratings are displayed as Buy, Hold and Sell, respectively.

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