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Dear Partners,

Please find your quarterly statement attached. Coho Capital rose 2.2% during the second quarter and returned 3.3% through the first half of the year. This compares to an increase of 1.9% for the S&P 500 during the quarter and 3.8% for the first half of the year.

The global rout in equities earlier this year enabled us to deploy capital opportunistically and upgrade the portfolio in the process. Most significant, we jettisoned two long-term holdings: GM warrants and Fiat, and established a new position in Amazon.

A combination of loose financing, increased productive capacity, and an acceleration in sales incentives, eroded our confidence in the strength of the current auto cycle. Over a holding period of 2.5 years we made 26% on GM Warrants and doubled our money on Fiat.

Amazon is a business we have long admired. As an Amazon Prime customer for more than a decade, we have observed Amazon's increasing share of our wallet. We have always wanted to own the business within Coho Capital but uneven profitability and a lofty valuation have kept us away. A 29% reduction in market cap earlier this year prompted us to analyze Amazon with a fresh lens. We purchased shares at an average price of \$562 and Amazon now represents our largest position.

Our research uncovered what we perceive to be one of the most dominant moats in all of business, led by a visionary CEO with superlative capital allocation skills. Despite passing \$107 billion in sales last year Amazon's growth is accelerating. With large fixed costs and a rapidly scaling top-line, we believe Amazon is at an inflection point for margin expansion. Further, the company's cloud business represents an opportunity that could someday be worth more than Amazon's e-commerce business.

### **E-Commerce**

Amazon is most well-known for its e-commerce segment, which has more than 304 million global users (19% compound annual growth rate over the past five years) and a 41% share of online commerce. The next largest competitor is Best Buy with a 2.7% share. And yet despite its dominant position, Amazon continues to grow faster than the competition - capturing 60% of total US online sales growth in 2015, according to Forrester Research. Amazon's competitors are at such a significant disadvantage in selection and pricing one could argue that Amazon's e-commerce business has no credible competition.



Despite Amazon's dominant position within online commerce, the company has years of explosive growth ahead. It may be surprising to some, it was to us, that e-commerce stills represents less than 10% of all retail spending. According to the US Census Bureau, e-commerce sales represented 7.8% of all domestic retail sales as of March, 2016. Rates of penetration are even lower internationally at 7%.

### **What to Expect When You're Inflecting**

It is interesting to note that growth within technological products and services tends to see a dramatic acceleration at around 20% penetration levels. This is what is known as the "S-curve." Both smart phones and notebook computers reached a material inflection point once market adoption hit 20%. Contrary to how Wall Street typically prices growth companies, it is later-stage rather than early-stage growth that should be most highly valued. Once the S-curve has been breached, growth can be explosive. For example, digital music took a decade to reach 20% penetration but leaped to 50% in just four years. We are not there yet, but many will increasingly view the idea of driving all over the city to fill a shopping basket as an archaic exercise.

With Amazon's domestic infrastructure largely in place, we expect margins within the company's e-commerce segment to inflect materially higher as operating leverage continues to ramp.

### **Amazon Prime**

Consider the following business:

- Approximately 30% of US online shoppers have a membership.
- Over 63 million members exist worldwide.
- Membership numbers are up 50% on a global basis during each of the last two years.

Amazon Prime is a cornerstone of Amazon's growth strategy as Prime customers tend to spend more and embed themselves more deeply within the Amazon eco-system. According to Consumer Intelligence Research Partners, Prime members spend \$1,100 a year compared to \$600 for non-prime customers. For long-term Prime members, the numbers are even more compelling with those using the service for 7-10 years spending 8-10x more than non-Prime members.

Prime members are spoiled by Amazon with free shipping, unlimited photo storage and streaming of music and video. Amazon's ever-widening collection of free Kindle books, podcasts, music, Fire TV, Prime video, game playing, and now voice assistance through Alexa, are powerful inducements for Prime customers to stick around. As CEO Jeff Bezos put it, "If you're not a Prime member, you're being irresponsible."



It would appear that Prime benefits, as well as higher switching costs incurred through engagement with Amazon's digital services, do indeed inspire loyalty. According to Amazon, four fifths of Prime members who signed up for the service a month after it launched in 2005 are still with the company. More recent vintage renewal rates are even higher with 96% of customers that have been with Prime for two years choosing to renew for a third. It is easy to see why Amazon showers Prime members with benefits, for the lifetime value of these customers is very rich indeed.

From a competitive standpoint, the panoply of perks offered by Amazon is impossible to match. Firms can offer free shipping, but little else in the way of consumer inducements. Of course, no one can deliver free shipping at Amazon's unit costs so Amazon grinds the competitive screws tighter.

As an investor, one of the most valuable things one can find in a business is latent pricing power. Amazon Prime has latent pricing power in spades. At the end of 2014, Amazon raised Prime prices by 25%. Few businesses are capable of passing on such dramatic price increases without suffering from consumer churn. Yet, the next year domestic Amazon Prime members rose by 25%.

At \$100 a year, Prime represents an extraordinary value. We envision a future where consumers will view the convenience and benefits of Prime as an essential element of eliminating friction in their lives. When you consider the average consumer pays \$100 a month for their cable bill, an annual Prime payment of \$150-\$200 does not seem far-fetched.

With 110 million (expected by yearend) members paying annual fees of \$100, Amazon has an \$11 billion stream of recurring revenue at its disposal.

Like Costco, we expect Amazon to monetize its Prime members in myriad ways such as credit cards, travel, group buying discounts and car buying. It is not hard to envision a future in which Prime members utilize a Prime card to secure discounts in offline services and products such as dining, hotels, air travel and merchandise. In fact, it was announced today that Prime members would enjoy discounts on their student loans through a partnership with Wells Fargo.

### **If You Can't Beat Em, Join Em - Amazon Marketplace**

After twenty years of building an arc for a flood of online commerce, the rest of Amazon's competitors are patching up leaky row boats. In fact, with Amazon so far ahead of the competition it makes little sense for small and mid-tier retailers to build out e-commerce infrastructure.

Close to 50% of the units sold on Amazon are from third parties (3P). Third party sales comprise Amazon's Marketplace business where Amazon serves as the storefront but participating merchants are responsible for shipping, logistics and inventory management. Margins on 3P are higher than Amazon's regular e-commerce business with merchants paying Amazon a royalty of up to 15% on



sales. Apart from higher margins, Amazon Marketplace serves as a natural on-ramp to Fulfillment by Amazon (detailed later).

Units sold on Amazon Marketplace have grown at a 42% compound annual growth rate over the past five years. The enhanced selection fortifies Amazon's network effects, driving even more sellers and buyers to its marketplace. Incidentally, while many wonder about the destruction of main street retail at the hands of e-commerce, Amazon has been a great launching pad for future tycoons. Last year, over 70,000 entrepreneurs made more than \$100k through selling on Amazon Marketplace.

At present, Marketplace features sellers from 172 countries selling to customers in 189 countries. This is another network effects business within Amazon with winner take all economics. Sellers will naturally gravitate toward the platform with the most traffic, placing Amazon in a favorable position. It is still early days but we think Amazon's Marketplace has the potential to be a more globalized version of Alibaba.

### **AWS, Amazon's Crown Jewel**

Amazon Web Services (AWS) is Amazon's cloud computing business and the company's most profitable and fastest growing division. Launched nine years ago, AWS was a means to better utilize the company's server capacity by renting out remote storage and data management. Over time, AWS has grown to include over 70 IT Infrastructure and software services such as storage, analytics and data management.

Originally favored by lean startups eager to tap into high-end computing functionality at lower costs, AWS has since been embraced by large enterprise customers. Even companies as large as GE, Comcast, Kellogg, Vodafone, and Ford, find it cheaper to rent space at Amazon's data centers than to build out IT infrastructure on their own. And those who wish to Netflix and Chill can thank Amazon for delivering the experience.

Last year, Amazon broke out financial metrics for its Amazon Web Services (AWS) business for the first time and the numbers were a revelation. AWS grew revenue 70% to \$7.9B in 2015 and the division accounted for 83% of Amazon's operating profit. This year AWS is on pace to surpass \$10 billion in annual sales. If it were a stand-alone company, AWS would be the fastest to ever achieve \$10 billion in revenue.

AWS is the undisputed leader within the IT cloud space with more than one million customers. According to IT research firm, Gartner, "AWS is the overwhelming market share leader, with more than five times the compute capacity in use than the aggregate total of the other 14 providers." In terms of revenue, Amazon is five times the size of its next largest competitor, Microsoft.



AWS' scale confers significant advantages in unit costs, and similar to Amazon's e-commerce business, a healthy portion of those savings are passed on to customers (51 price reductions since launch), further widening AWS' lead over competitors. The differences between AWS' solutions and alternative offerings are stark. Consider AWS' database engine Amazon Aurora. Aurora offers up to five times the performance of competing solutions, at one *tenth* the cost.

One might think that such a model is a race to the bottom with relentless margin pressure. AWS' margin profile, however, contradicts this view with current margins north of 20% and rising rather than falling. Operating margins improved by 24% last quarter and should continue to improve as AWS benefits from scale economics and is able to lower the capital intensity of hardware purchases thanks to Moore's Law.

AWS' expanding margins are a clue that the cloud computing business is far less commodity-like than commonly understood. The AWS platform consists of a software layer, developer tools, ten kinds of storage and a variety of systems management options which run across 70 different services. AWS is premised upon simplicity but there is still a learning curve, which introduces a switching cost over time.

Apart from lowering prices, AWS is using its scale to leverage R&D spend. Last year AWS introduced 722 new features, an increase of 40% over the prior year. The pace of AWS' new product launches is two to three years ahead of competitors, compounding the company's lead in the marketplace.

Like its e-commerce business, AWS delivers the best user experience combined with the lowest cost, and due to the "flywheel" (detailed later) effect the advantages of AWS' model compound at ever faster rates.

"For all practical purposes, I believe AWS is market-size unconstrained." – Jeff Bezos

The potential market opportunity for AWS is staggering, one can go starry eyed thinking about the possibilities. The pivot from on premise hardware to IT in the cloud is a multi-decade \$trillion+ opportunity in its infancy. The current market is nascent with 3% of computing done in the cloud but many predict it will reach 50% by the end of this decade. Our research suggests AWS can grow at a compound annual growth rate of 30% a year for the next five years and achieve operating margins of 30%.

We think AWS' advantages will make it nearly impossible to dislodge it from its perch atop the cloud food chain. Similar to Amazon's e-commerce business, we view AWS as an on-ramp toll-booth to one of the most explosive business trends of the next couple of decades.



## **Fulfillment by Amazon (FBA)**

Fulfillment by Amazon (FBA) offers 3P merchants the opportunity to utilize Amazon warehouse infrastructure as well as packing and shipping services.

Similar to the company's AWS business, Amazon's FBA business enables Amazon to better utilize existing assets. By offering package delivery as a service to other e-commerce retailers, Amazon is able to leverage existing assets to win new business while improving infrastructure for Amazon customers.

"The stronger our market leadership, the more powerful our economic model. Market leadership can translate directly to higher revenue, higher profitability, greater capital velocity, and correspondingly stronger returns on invested capital." – Jeff Bezos, Amazon's first annual letter in 1997

Amazon's clout in shipping echoes its dominance in cloud computing. Last year, the company shipped one billion parcels in North America, 42% more than the next ten shippers combined and six times larger than its next largest competitor, Wal-Mart. Amazon's dominant position as a shipping merchant translates into significant pricing concessions from freight forwarders with the company achieving discounts of up to 70% when utilizing package carriers such as UPS and FedEx.

Demand for FBA was so robust last year that Amazon incurred extra costs during last year's holiday shopping season to rush-ship packages. In order to suppress demand, Amazon raised pricing on inventory storage fees by 213%. And this is what one comes to realize when studying Amazon: there is untapped pricing power everywhere.

While FBA is poised to become another dominant business within Amazon, investors are concerned about a new investment cycle pushing margin expansion further out to the future. These concerns may have merit with Amazon recently closing deals to lease 40 Boeing 767s, purchasing thousands of truck trailers and applying for an ocean freight forwarding license. In addition, the company registered with the SEC as a transportation company. Clearly, something is afoot. In internal documents from 2013, obtained by Bloomberg, Amazon laid out its vision, "Sellers will no longer book with DHL, UPS or FedEx but will book directly with Amazon. The ease and transparency of this disintermediation will be revolutionary and sellers will flock to FBA given the competitive pricing."

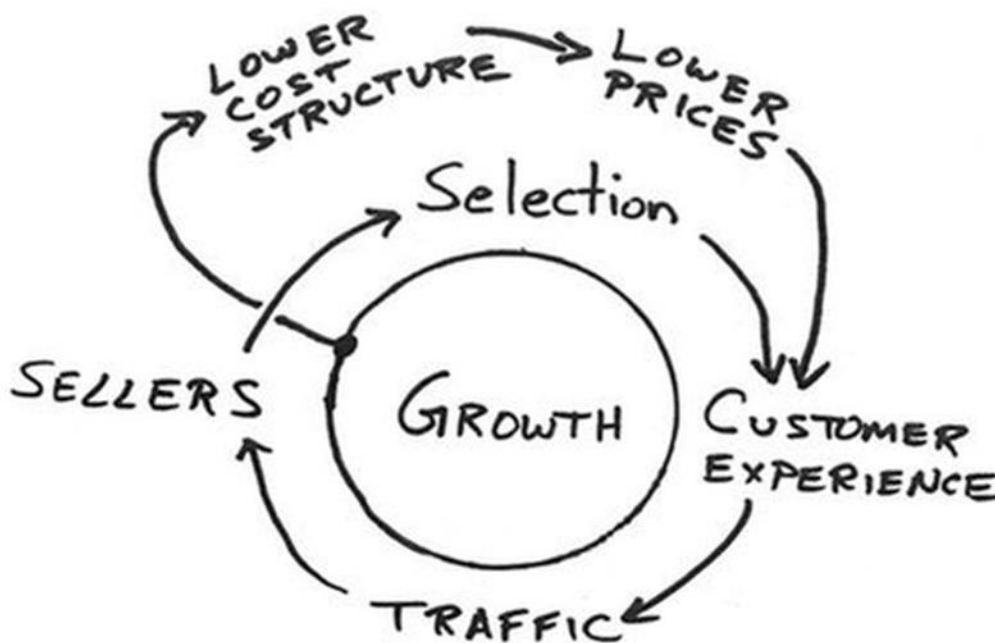
While shipping investment risk may delay immediate gratification it ultimately will play into Amazon's long-term strengths. Looking at Amazon's e-commerce and AWS segments, the playbook is clear: Amazon builds out a world class logistics network but can justify the cost as it will be the largest customer. Once appropriate scale and route density are achieved, Amazon can rent out shipping capacity to external customers, providing it the capital needed to further build out its



network and further lower unit costs, thus attracting more customers. And the flywheel spins round and round allowing Amazon to build out a global logistics operation that it can rent out like a utility.

### **Flywheel, A Virtuous Circle of Compounding Advantage**

Far from being a collection of disparate assets, Amazon's various businesses mutually reinforce one another in a virtuous circle. Bezos has referred to this compounding effect as a "Flywheel." Bezos sketched the concept on a napkin (are all great businesses hatched on a napkin?) to convince a deeply skeptical management team that allowing competitors to sell products on its site (3P) would be good for business.



Customers come to Amazon for great selection and low prices. The inclusion of competitor products drives selection, which drives more customers to the site, which in turn attracts more sellers, which enables lower costs per user and on it goes as the flywheel spins faster and faster.

There is clearly a network effect going on here where more users beget more users, but there is something else as well; Amazon recognized early on that its core value proposition was its platform and that its platform could be utilized beyond just serving its primary end customers. By renting out



its platform infrastructure, Amazon recognized it could generate new revenue streams while improving the customer experience and lowering its costs in the process.

Amazon's unique insight into platform rental is at the heart of its four primary business units; FBA, Marketplace, e-commerce, and AWS.

### Valuation

"Over the long-term, it's hard for a stock to earn a much better return than the business which underlies it earns. If the business earns 6% on capital over 40 years and you hold for that 40 years, you're not going to make much different than a 6% return, even if you originally buy it at a huge discount. Conversely, if a business earns 18% on capital over 20 or 30 years, even if you pay an expensive looking price, you'll end up with a fine result." – Charlie Munger

Amazon screens poorly on cursory valuation multiples, but we think its long-term earnings power is poorly understood. Most analysts take a linear approach to modeling and in our view fail to take into account the inherent operating leverage in Amazon's model. The company's operating leverage has historically been masked as Bezos has passed on savings to customers. However, as unit volumes grow, Amazon is able to leverage its large fixed cost structure, **even if it continues to pass on savings to consumers**. Over time, we expect a step change in earnings acceleration.

Given the higher margins on AWS, FBA and Marketplace, as well as increased operating leverage within Amazon's e-commerce business, we expect a sea change in Amazon's margin profile, making today's valuation far less challenging than it may first appear.

"When forced to choose between optimizing the appearance of our GAAP accounting and maximizing the present value of future cash flows, we'll take the cash flows." – Jeff Bezos, 1997 Amazon Annual Letter

The optics of Amazon's economics are obscured by the company's long-term orientation. As Bezos alluded to in his first annual letter, Amazon could care less about pleasing Wall Street or playing the quarterly earnings game. Amazon is focused on long-term free cash flow generation. To that end, Amazon has been minimizing tax outflows by reinvesting nearly 100% of operating cash flow into internal businesses with attractive reinvestment prospects. Compounding capital at 42% on a market cap basis over the past 19 years we are happy to let Bezos reinvest our cash flows.

Given Amazon's investment in infrastructure, perhaps a better way to examine the economics of the business is to look at operating cash flows. We believe Amazon is on pace for \$15 billion in operating cash flow this year and \$21 billion next year. At our purchase price, that represented an enterprise value/operating cash flow multiple of 12.8x, more than reasonable for a business that has compounded cash flow at 30% for the last decade.





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We believe Amazon is poised for a multi-decade period of excess economic returns. One can quibble with Amazon's valuation on a 12-month basis but if one focuses on the long-term economic potential of its multiple platform businesses, future returns will send many toward happy retirements.

To properly value Amazon, one needs to think about where its business can be in ten years, and on that measure Amazon is a fantastic value.

### **Conclusion**

At its core, Amazon is four operating segments with some of the most dominant moats in all of business. All four of these businesses are leveraged to multi-decade growth trends in cloud computing and e-commerce with reinvestment prospects as far as the eye can see. Each of these businesses possesses untapped pricing power, have sticky customer bases, and are poised for material margin expansion. To top it all off, the businesses are presided over by an owner-operator CEO focused on long-term free cash flow generation.

At Coho, we seek to invest in businesses that are inevitable. Amazon is the most inevitable business we have ever seen.

Respectfully yours,

Jake Rosser  
Managing Partner  
Coho Capital Management