

Consumer Observer

June 2024

Size Is King: Online Commerce Set for Medium-Term Acceleration, Consolidation as Leaders Extend Their Sprawling Services Reach

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Strengthening Services Reach Underpins Investment Opportunities in E-Commerce

The key takeaway for investors: the largest online marketplace operators in our coverage should see their take rates increase by nearly 2.4 points cumulatively over the next five years as they expand their reach further into auxiliary services like advertising, financial services, and logistics. This widening ecosystem reach looks set to strengthen moats in the space despite competitive pressure from international drop-shipping marketplaces like Temu and Shein. However, we expect growth in the US to slow to just 7.8% annually between 2023-28, reflective of a challenging macroeconomic environment that has consumers tightening their belts and shifting spending away from the discretionary categories toward which e-commerce has historically over-indexed. Nevertheless, we forecast strong growth for fulfillment-integrated marketplace players that outperform on value—a list that includes wide-moat names like Amazon, MercadoLibre, and Allegro. Growth abroad will likely be stronger than in the US as Latin America and Central Europe benefit from improving logistic services, internet penetration, and, in the case of the former, better formal financial inclusion, that have already played out in the developed US market. Investors would do well to stock up on high-quality names that trade at big discounts, like wide-moat Etsy and narrow-moat Chewy, though near-term risks represent strong headwinds to growth in 2024 and 2025. Wide-moat 3-star names like Allegro and Amazon also trade at decent discounts and warrant investor attention.

Exhibit 1 Etsy and Chewy Are Our Top E-Commerce Value Picks

Top Picks

P/FV	Company (Ticker)	Rating	P/FV	Moat	Mkt. Cap (\$B)
1.75 1.50 1.25 1.00 0.75 0.50 0.25	Allegro (ALE)	★★★★	0.82	Wide	9.8
We see substantial upside from Allegro's BNPL lending partnerships and underpenetrated retail media network that we believe are underappreciated. Strong regional marketplaces have been able to defend their turf thus far, and we see no structural impediments to Allegro ads expanding beyond 3% of GMV, from just 1.8% today.					

P/FV	Company (Ticker)	Rating	P/FV	Moat	Mkt. Cap (\$B)
1.75 1.50 1.25 1.00 0.75 0.50 0.25	Chewy (CHWY)	★★★★	0.79	Narrow	10.0
We believe that the market underappreciates the margin expansion potential of Chewy's advertising, healthcare, and private-label businesses (we expect 700 bps of margin expansion over a decade). Pet adoption trends are recovering, and we expect a return to high-single-digit growth as consumption spending improves.					

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Source: Morningstar Direct. Data as of June 12, 2024.

Consumer Observer

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Key Takeaways

We expect US e-commerce growth to remain depressed between 2023-28, averaging just 7.8% annual growth over that period (against an average of 18% over the prior five years). That's still 3.9 times faster than projected offline retail spending as retail sales continue to shift online.

- ▶ Longer term, e-commerce's position as the low-cost channel should cement durable market share gains. As fulfillment costs decline with higher route density and utilization rates, we expect the channel to be cost-competitive for a broader swath of lower-priced but higher turnover items.
- ▶ Even adjusted for fulfillment cost, the average online marketplace operator in our coverage is roughly twice as profitable as the average brick-and-mortar player, driven by strong square footage and headcount productivity.
- ▶ As online channels grow, offline merchants should consider partnerships similarly to how they treat the wholesale channel today, exchanging operating income margin for higher operating margin dollars.
- ▶ Regulatory-induced privacy changes and the retirement of identification for advertisers, or IDFA, and third-party cookie deprecation will increase the importance of retail media networks moving forward.
- ▶ We project that online marketplaces' advertising businesses (excluding Amazon) could account for roughly 31% of firms' market capitalization in 2028, up from an estimated 21% today.
- ▶ Extension into auxiliary financial services adds an important touchpoint for operators in emerging markets like wide-moat Allegro and particularly wide-moat MercadoLibre.
- ▶ While logistics services are expensive, costing 10%-12% of platform sales for fulfillment-integrated marketplaces, we believe that the service is a loss-leader that should cement ongoing market share gains from brick-and-mortar competitors, stitching the e-commerce ecosystem together.
- ▶ Importantly, net fulfillment expense should decline over time as cost-sharing arrangements with merchants improve and as paid membership programs grow.
- ▶ Paid membership programs like Amazon Prime, Meli+, and Allegro Smart! link together the service ecosystem, strengthening those firms' network effects around an increasingly comprehensive menagerie of consumer and merchant touchpoints.
- ▶ The net effect of sprawling services investments: an average 2.4 points of take rate expansion in the next half decade for our online marketplace coverage, with more than half (53%) of that driven by advertising.
- ▶ While Temu and Shein have enjoyed explosive recent growth, we believe that they generally compete for a different customer base than do the large marketplaces in our coverage, with lofty fulfillment cost, tighter merchant margins, and regulatory concerns relegating them to a small role in many Western e-commerce markets.
- ▶ Temu, Shein, and similar international drop-shipping marketplaces should be better poised to compete in Asia Pacific and in markets without a strong, fulfillment-integrated incumbent player.

Companies Mentioned

Name/Ticker	Economic Moat	Currency	Fair Value Estimate	Current Price	Uncertainty Rating	Morningstar Rating	Market Cap (Bil)
Amazon (AMZN)	Wide	USD	193.00	187.06	High	★★★	1,948
eBay (EBAY)	Narrow	USD	54.00	53.15	High	★★★	26.60
Etsy (ETSY)	Wide	USD	100.00	66.07	Very High	★★★★	7.65
MercadoLibre (MELI)	Narrow	USD	1,500.00	1,601.88	High	★★★	80.10
Chewy (CHWY)	Narrow	USD	29.00	22.68	Very High	★★★★	9.78
Allegro (ALE)	Wide	PLN	46.00	37.56	High	★★★★	39.61
Pinduoduo (PDD)	Narrow	USD	230.00	148.48	Very High	★★★★	204.0

Exhibit 2 Our Views Diverge from the Market Regarding Growth Opportunities, Competitive Risk

Topic	 Consensus View	 Morningstar's Take
E-Commerce Growth Prospects	E-commerce should return to high-single-digit percentage growth in 2024 and beyond after a challenging 2023. Average annual growth in the US between 2023-28 should clock in between 8.5% to 9%.	We expect just 7.8% average annual growth in US e-commerce over the next half decade, with higher interest rates taking a bite out of consumers' discretionary spending appetite. Separately, recovering savings rates add an additional drag. This does not mean that discerning investors can't find opportunities in the space.
Advertising Opportunity	Retail media networks, or advertising platforms run by retailers on their digital properties, are a nice tuck-in revenue stream for online marketplaces. Amazon captures mid-70% market share in its core US and European markets, and should continue to dominate.	We expect retail media networks to account for nearly a third (31%) of online marketplaces' value by 2028, excluding Amazon. That's up from 21% today. Privacy changes higher in the advertising funnel should drive strong market-level growth. While Amazon is set to remain dominant, it will not outcompete strong regional players in their home markets.
Competition from Chinese Drop-Shipping Marketplaces	Marketplaces like Temu and Shein are set to make deep competitive inroads in western e-commerce markets. Consumers will likely prove willing to absorb longer fulfillment lead times in exchange for rock-bottom prices. Amazon's decision to lower take rates on low-price apparel attests to the magnitude of competitive pressures.	We expect Temu and Shein to remain small players in most western markets with fulfillment-integrated incumbent players. Those firm's sky-high logistics costs and lower seller margins will make achieving deep inroads challenging in many markets. The former's decision to target 30% of global GMV in the US now (from 60%) is telling.

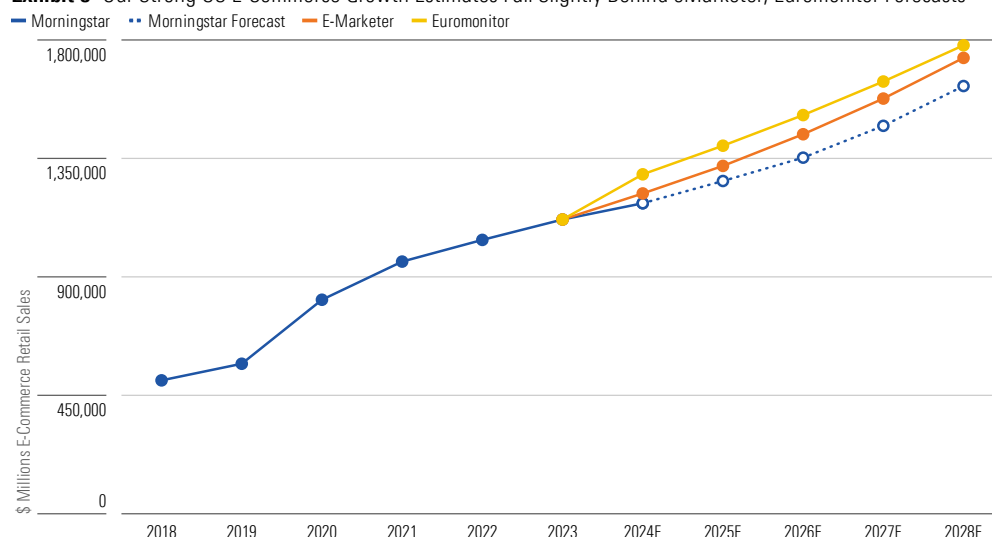
Source: Morningstar. Data as of May 31, 2024.

Consumers are Funneling Spending Toward Online Players; Investors Should, Too

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- ▶ While the pandemic pull-forward of online commerce demand has normalized, we continue to expect US e-commerce to outgrow offline retail spending by a factor of 3.9 times between 2024-28.¹
- ▶ Our estimates call for average online spending growth of 7.8% in the US over that period, with growth returning to north of 10% per annum by the end of our five-year forecast period.
- ▶ Our below-consensus view is reflective of our near-term consumption spending expectations, with higher interest rates and recovering savings rates representing potent headwinds.
- ▶ By 2028, that still means that nearly 20% of US retail sales will come through the online channel, up from 15%-16% today. We see no looming near-term ceiling, with online commerce's headcount and space efficient model looking cheaper to run (on average) than brick-and-mortar.
- ▶ Regions like Latin America, Poland, and Central Europe will see even faster growth, with our forecasts contemplating 12.4%, 9.8%, and 10.6% five-year compound annual growth rates, respectively.
- ▶ Complex service ecosystems and varying consumer preferences across markets look likely to result in the emergence of local or regional winners in large e-commerce markets.
- ▶ Sellers should treat the e-commerce channel like wholesale, trading operating margin percentage for higher operating income dollars.

Exhibit 3 Our Strong US E-Commerce Growth Estimates Fall Slightly Behind eMarketer, Euromonitor Forecasts



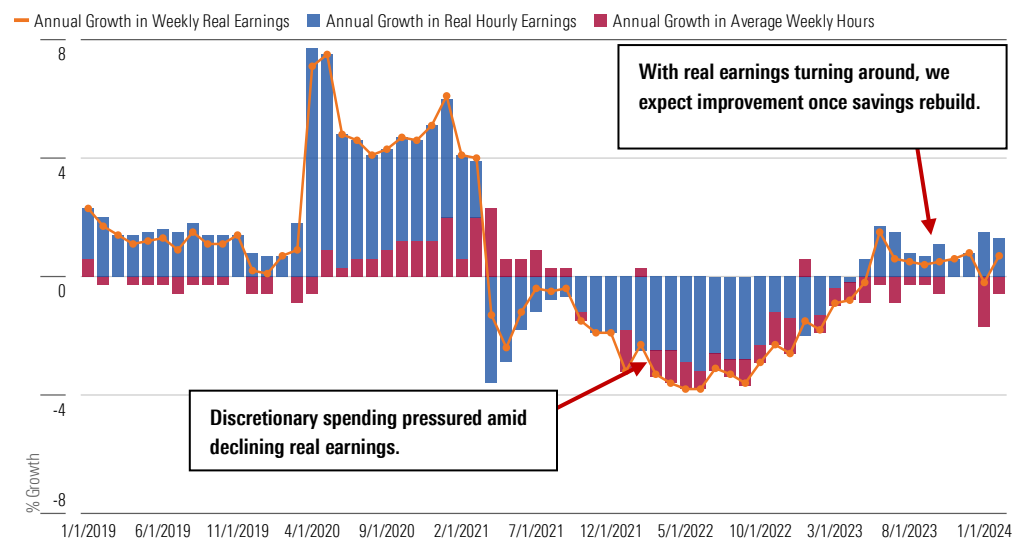
Source: Morningstar, eMarketer, Euromonitor International. Data as of May 29, 2024.

¹ Morningstar e-commerce estimates, eMarketer offline retail forecast.

Strong E-Commerce Growth in Recent Years Has Firmly Entrenched Regional Winners

A lot has changed in the retail landscape over the past four years, but one thing has not: the shift from brick-and-mortar retail toward online commerce is set to resume its inexorable march as consumers emerge from a challenging spell, armed with slow but persistent growth in real hourly earnings (Exhibit 4) and strong medium-term GDP expansion. With savings rates remaining stubbornly low—3.6% in April, against a 7.4% average rate during 2019—and with revolving credit balances still stubbornly high, at north of \$1 trillion in the US at the end of April, that recovery is unlikely to inflect until the first half of 2026. Despite this, the long-term trajectory appears clear to us. The net effect is strong top-line growth prospects for players in our online commerce coverage, offering long-term investors substantial opportunities in names like wide-moat Allegro, narrow-moat Chewy, and, wide-moat Etsy, that appear to be underappreciated.

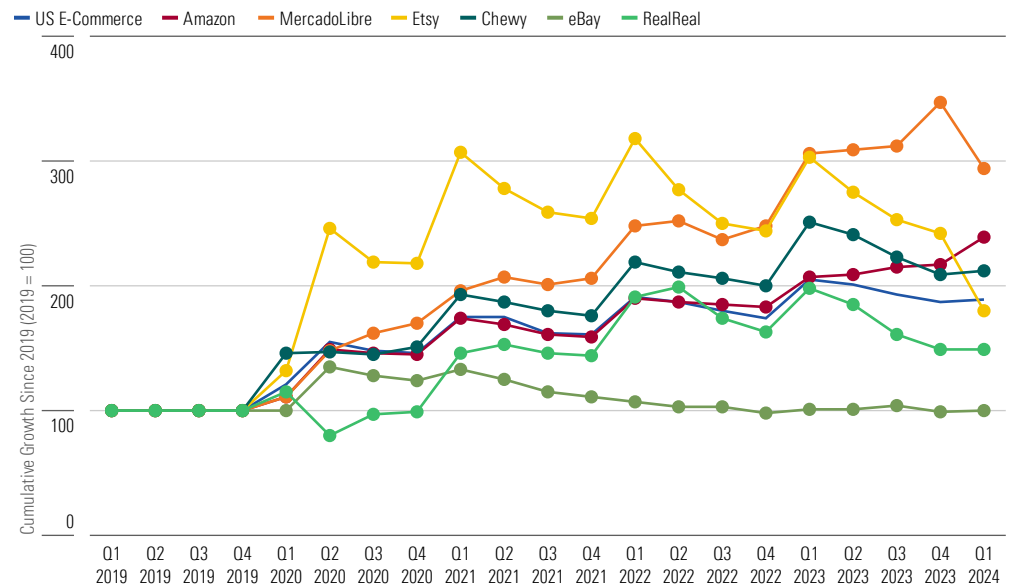
Exhibit 4 After Being Lean in Recent Years, Real Hourly Earnings Are Recovering



Starting from a macro lens and working toward more practical takeaways and drivers, the covid years (2019-22) appear to have driven a slight pull-forward in online penetration in the US, with 2023's 15.4% e-commerce retail sales mix comfortably edging the 14% we would have expected in that year otherwise, using five-year quarterly data (2014-19) and regression estimates. Effects varied widely by company and industry, however. Across our US coverage, it's clear that wide-moat Amazon, wide-moat Etsy, and narrow-moat Chewy emerged as winners, while narrow-moat eBay and no-moat The RealReal have struggled (Exhibit 5). While we expect a qualified turnaround at the former, driven by a "focus category" strategy that privileges its competitively advantaged non-new, in-season inventory, we continue to view the operator as a distant third place in the US e-commerce landscape, falling comfortably behind both Amazon and wide-moat Walmart. Our key takeaway is that in an industry that naturally lends itself to winner-take-all or at least winner-take-most dynamics, investors should be careful to funnel capital toward companies that dominate their niche and benefit from durable, self-

reinforcing marketplace network effects. Firms that have not yet consolidated market share and which operate without a proven economic model, like no-moat The RealReal, should be approached with an abundance of caution and carry substantial risk of economic value destruction. Business mix is also important — while we believe that eBay dominates in its core focus categories like collectibles, refurbished products, and even perhaps in certain luxury resale spaces, its business-to-consumer marketplace is meaningfully smaller and less competitive than that of wide-moat Amazon or even wide-moat Walmart, suggesting that market share losses within US e-commerce are likely on an ongoing basis.

Exhibit 5 Amazon, Etsy, and MercadoLibre Look Like US Winners After a Volatile Four Years



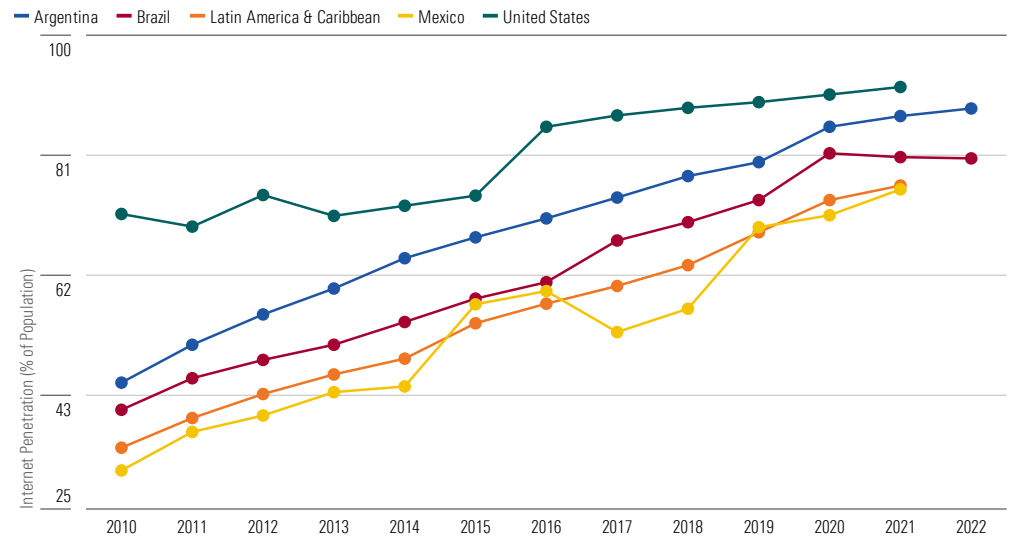
Source: Company filings, Morningstar. Data as of May 29, 2024.

Over the past few years, we've seen similar online commerce trends in developing international markets, often to a much greater extent than in the US given proportionately lower e-commerce and digital payment penetration (on average) around the globe. Brazil offers a particularly interesting case study, seeing the proportion of adults with a bank account jump to 84% from 56% between 2011-21,² driven in large part by the distribution of pandemic aid through debit cards issued in tandem with the country's three large, state-owned banks. Supported by surging digital inclusion, generous fiscal support, and a material uptick in channel trial amid the temporary shutdown of popular brick-and-mortar stores during the early stages of covid, wide-moat MercadoLibre enjoyed compound annual gross merchandise volume growth of 34% between 2019-23, a striking clip that drove its market share across the Latin American bloc to 33.7%, by our estimates, up from 28.7% prior.

² <https://brazilian.report/business/2023/06/02/debts-massive-banking-inclusion/>

Strong growth in online retail sales over the past four years in that region has come on the back of predictable, conventional drivers: improvements in smartphone, broadband, and online banking penetration and improving fulfillment infrastructure. That cocktail of factors should continue to provide a tailwind in developing markets like Brazil, Mexico, Chile, and Colombia, which still have room to run on these fronts, underpinning outsize market growth, to the benefit of MercadoLibre (Exhibit 6).

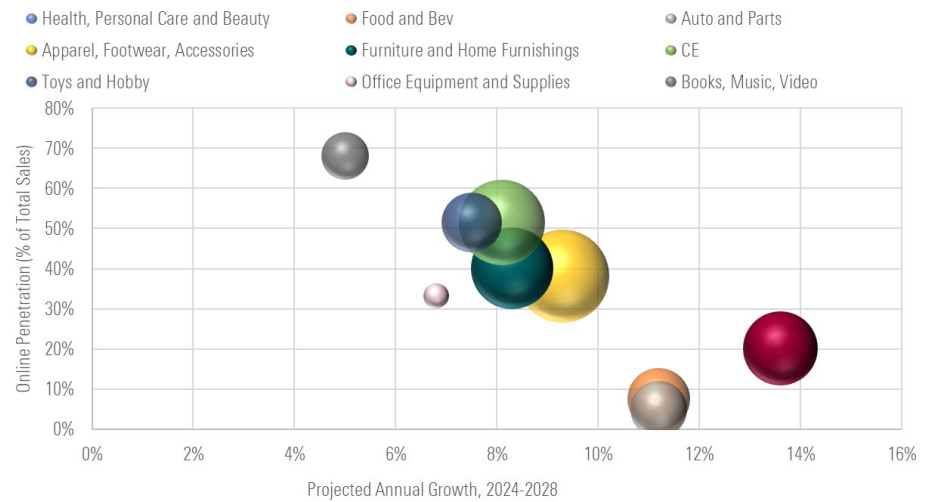
Exhibit 6 MercadoLibre Set to Benefit From Both Improving Infrastructure and Broader E-Commerce Trends



Source: World Bank, Morningstar. Data as of May 31, 2024.

In developed markets, however, we increasingly see growth coming from two key buckets: growing the online sales mix in large, underpenetrated categories like health, beauty, grocery, and automotive that have historically sat predominately offline (Exhibit 7) and the normalization of cost-of-living increases and a mix-shift toward experiences that have depressed e-commerce growth over the past couple of quarters.

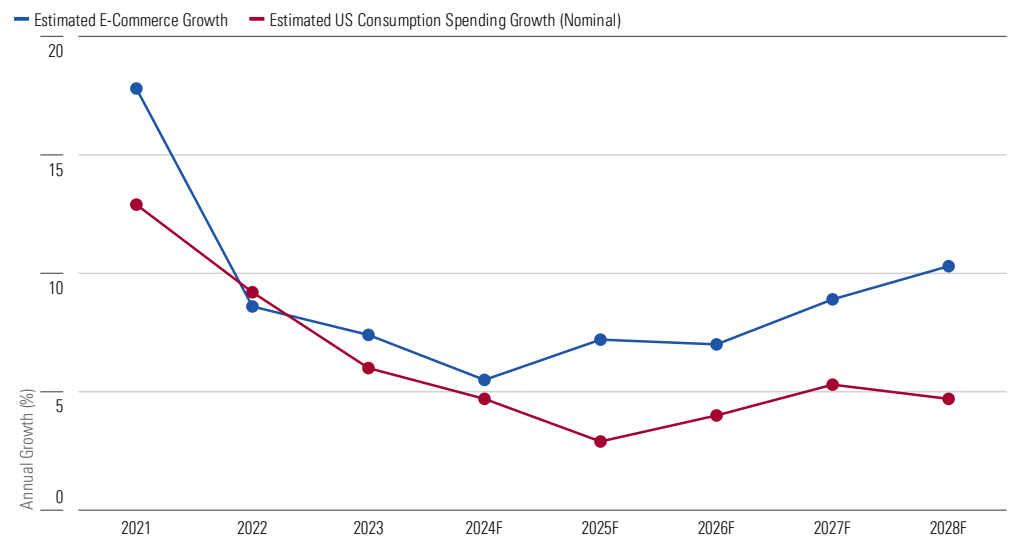
Exhibit 7 Online Mix and Percentage Growth Inversely Correlated as Category Penetration Set to Broaden



Source: EMarketer. Data as of June 5, 2024. Bubble size corresponds to the current size of the online market.

That said, our forecasts contemplate things getting worse before they get better. While consumers have started to move past the triumvirate of wallet-depressing factors that kept a lid on growth in 2023 — broad increases in cost of living, high inflation in the retail channel specifically, and a mix-shift toward experiences spending over goods — we envision an even more pronounced headwind from depleted savings, recovering savings rates, and commensurately lower consumption spending over the two years to come. Our hypothesis aligns with the estimates of Morningstar's Chief US Economist Preston Caldwell, whose estimates see personal consumption spending growth fall from just north of 5% in the most recent quarter to less than 3% in 2025 before a sharp 2026 recovery (Exhibit 8).

Exhibit 8 Our Tempered E-Commerce Industry Views Mirror Broader US Consumption Expectations

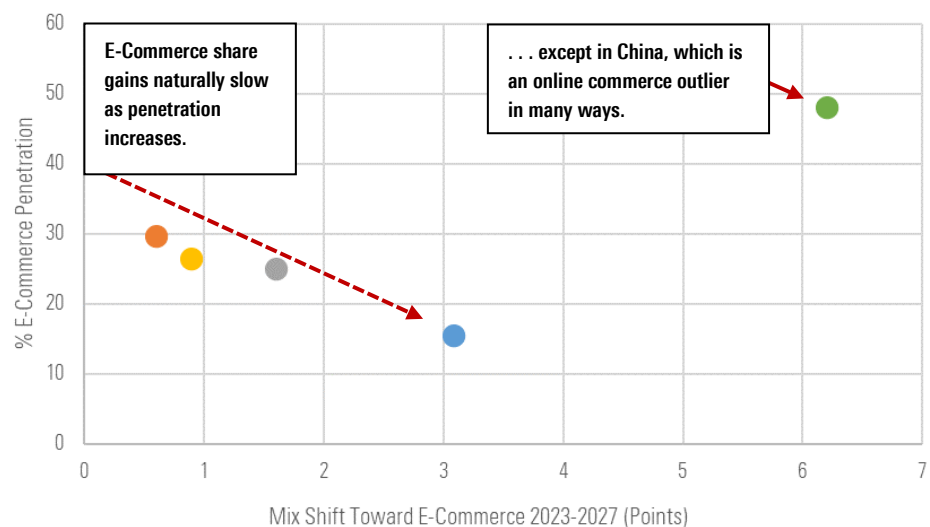


Source: Morningstar estimates, Federal Reserve Economic Data, Bureau of Labor Statistics. Data as of May 29, 2024.

We Expect Accelerating US E-Commerce Growth in 2026 and Online Consolidation Globally

The net result of slowing inflation and improving customer willingness to make a broader swath of purchases through e-commerce channels is strong, durable growth in online commerce after the current macroeconomic rough patch abates. In this portion of our report, we outline our growth projections for the US, Latin America, and Poland and Central European markets before defending them in the subsequent subsection. While the cadence of e-commerce adoption varies by region, the direction is consistent globally. Online commerce is set to continue to take market share from brick-and-mortar retail for the foreseeable future, and in most countries, we expect consolidation around a scaled online commerce marketplace provider and a large, omnichannel brick-and-mortar competitor — like the dynamic we've seen with Amazon and wide-moat Walmart in the US. While we're confident that online and offline commerce growth rates will eventually converge, as we've seen in markets with the highest levels of online penetration (Exhibit 9), we believe that it's very much day one for most global e-commerce markets as an increasing volume of consumer purchase occasions migrate online.

Exhibit 9 E-Commerce Growth Rates for Countries With Higher Online Penetration Definitionally Slow



Source: EMarketer, Morningstar estimates, FRED, BLS. Data as of May 29, 2024.

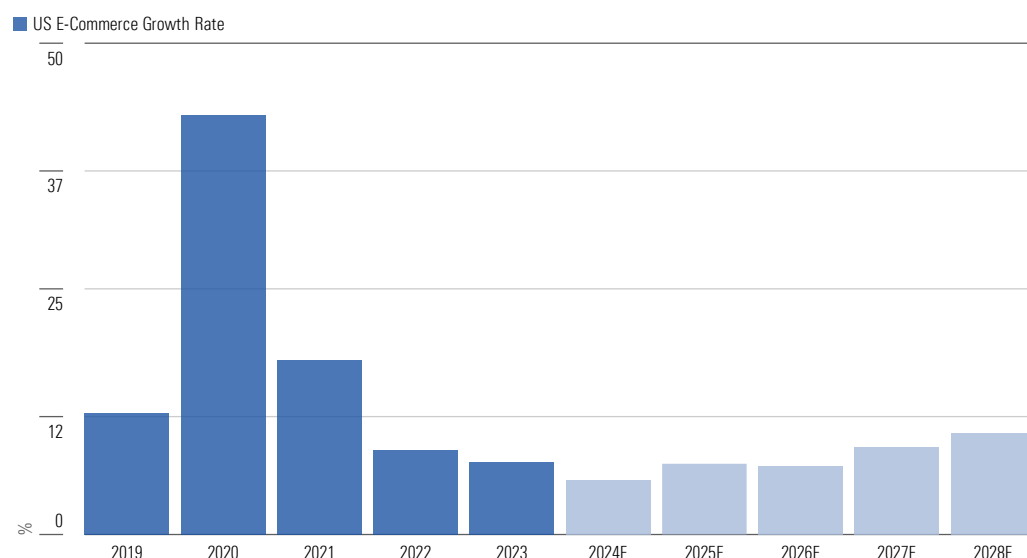
Unpacking our regional forecasts, we expect the US online channel to outgrow offline retail by a factor of 3.9 times between 2024-28, despite our out-of-consensus expectation for growth to fall below 6% in 2024. While we see our 7.8% annual growth estimate over that period as validating of both the online channel's strong economics and the alluring opportunities available for our e-commerce coverage, our prognosis clocks in comfortably behind both eMarketer (9%) and Euromonitor International (8.5%) forecasts for the same period. That's attributable, in our view, to our relatively dour near term macroeconomic projections, particularly as they pertain to consumer spending power.

More concretely, our multivariate regression analysis suggests that the majority (92%) of US online commerce growth can be explained by four key variables: online commerce growth in the prior quarter,

growth in personal consumption expenditures, growth in real consumer earnings, and an interaction term that captures the impact of covid on online consumption spending. These act in the way that economic logic would suggest--higher recent growth is predictive of higher future online commerce growth, given the trending nature of consumer behaviors. Consumer spending increases online both when they're spending more in general and when they're earning more on an inflation-adjusted basis. In this context, consumers spent an unusual proportion of income shopping online during the covid pandemic, since they had a tough time deploying elevated earnings in offline venues amid broad lockdown measures.

Armed with that information, we've built our online commerce forecast around our Chief US Economist Preston Caldwell's forecasts for consumption spending and real income—and with annual growth in consumption spending set to drop from 5.2% in 2024 to just 2.9% in 2025—we suspect that storm clouds will remain on the horizon for online retailers a bit longer than investors would want to see. That's largely attributable to the gradual rebuilding of the consumer savings rate, which, at 3.6% of disposable income in April 2024, is only about half of its prepandemic level in the US. This makes sense to us—with each dollar of after-tax income being either spent at home, spent abroad, or invested, it's logical that an uptick in consumer savings would pose a stout headwind toward growth in consumption spending, even as real economic growth remains positive. Said otherwise, while 2022 and 2023's 8.6% and 7.4% growth rates in US e-commerce retail sales were historically low, we believe that investors should still expect sluggish growth in both 2024 and 2025 as consumers continue to adjust to a structurally higher cost of living and as economic growth finally slows with restrictive monetary policy taking root. In summary, as it pertains to the domestic market, we're cautious in the short-run but optimistic regarding the online channel's long-term prospects—and encourage investors to remain discerning as they look for opportunities in the space with this in mind.

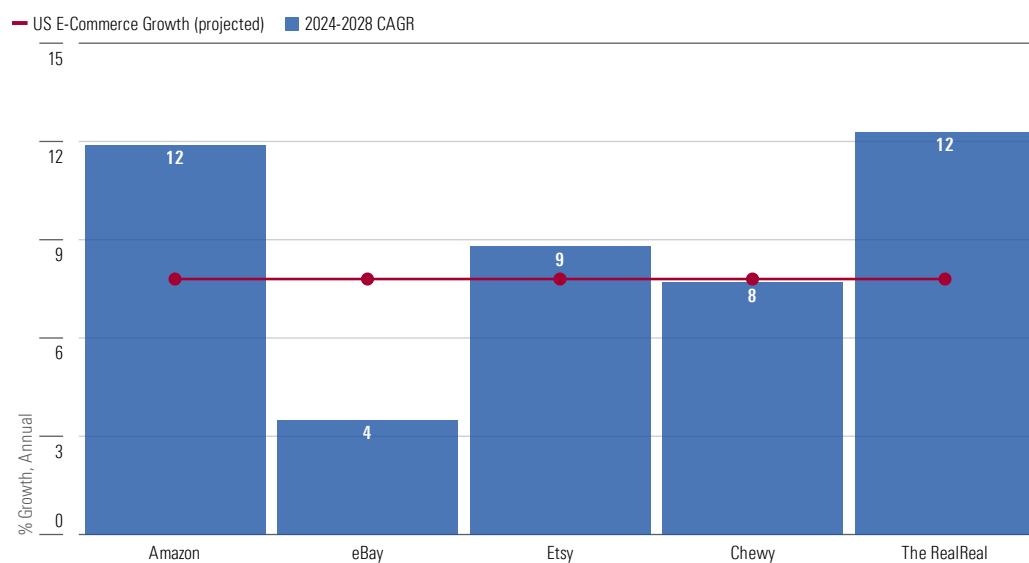
Exhibit 10 E-Commerce Growth Looks Set to Soften Before a Recovery to Double-Digit Growth Rates



Source: Morningstar, BLS, US Census Bureau. Data as of June 5, 2024.

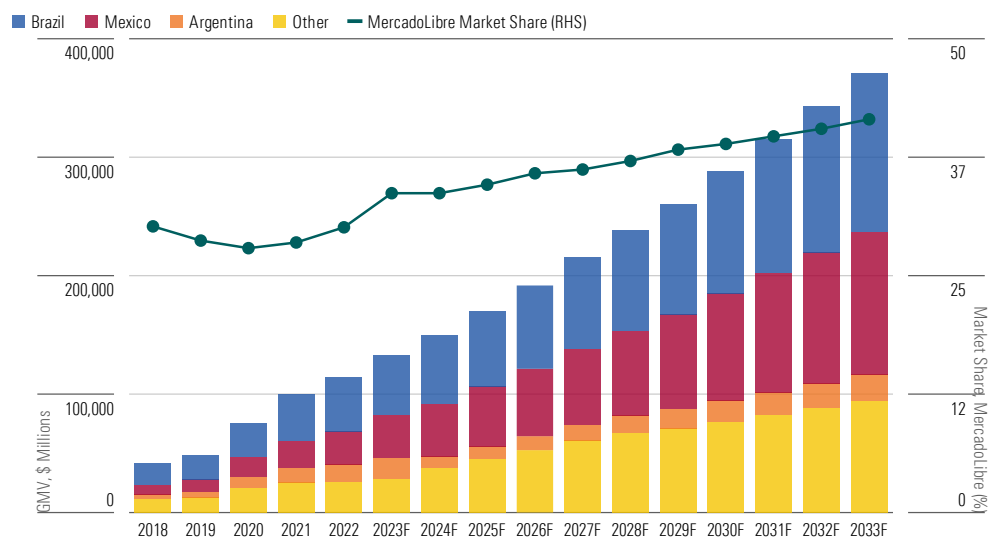
In this challenging environment, we continue to view the largest, best-capitalized players as best poised to win, with the most competitively advantaged of the players in our coverage set to capture market share in the medium term (Exhibit 11). The exception to the rule is The RealReal, which benefits from sitting in a very quickly growing e-commerce resale niche, despite losing market share in that subindustry.

Exhibit 11 Stronger E-Commerce Players in Our Coverage Largely Set to Outgrow the US Market 2024-28



Source: Morningstar estimates for gross merchandise volume, or GMV. Data as of May 29, 2024.

Pivoting to Latin America, we expect online sales growth at a striking 12.4% compound annual growth rate through 2028, comfortably edging our 7.8% US estimate. This encapsulates our five-year forecasts calling for average annual growth of 10.9% and 14.6% in Brazil and Mexico, respectively, providing a durable long-term catalyst for MercadoLibre, even without considering outside improvements across more nascent Latin American online markets. The region remains one of the fastest growing geographies in the world, with a slew of fintech companies providing consumers with heretofore unseen levels of access to the formal banking system, while improving logistics services—80% of MercadoLibre shipments now arrive in less than 48 hours—and expansion into fast moving consumer goods continues to increase both consumer adoption and transaction frequency.

Exhibit 12 MercadoLibre's Share of the Attractive Latin American Market Set to Continue Its Upward March

Source: Company filings, Morningstar estimates, EMarketer. Data as of May 29, 2024.

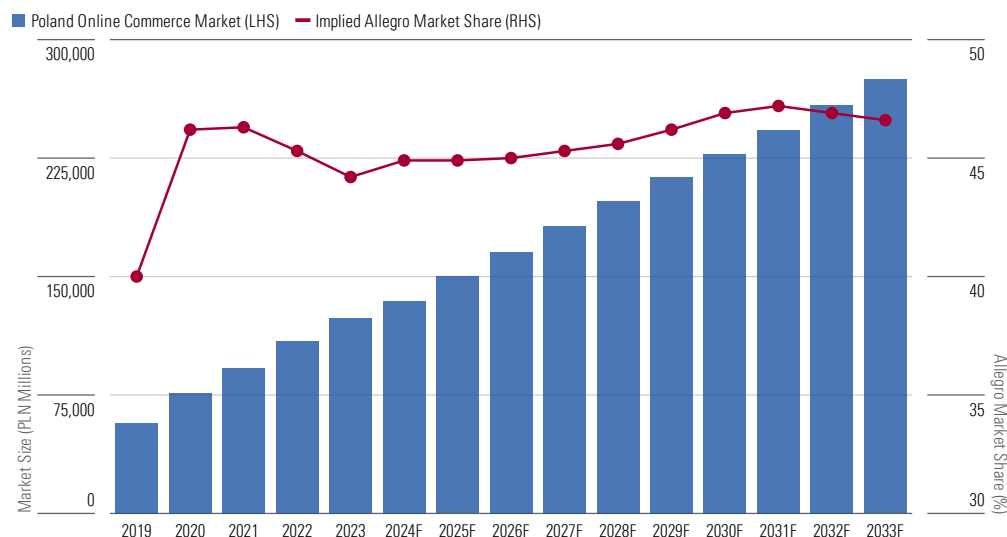
There are certainly risks tied to investing across the region, from nascent credit markets and nonexistent credit scoring for consumers who are new to the formal banking system to lofty government debt to GDP ratios, persistent fiscal deficits across the region, and runaway inflation in the Argentine market. Nevertheless, we believe that ethereal net interest margins, or NIMs, high hurdle rates, and attention to appropriate margins of safety mean that investors shouldn't gloss over one of the most dynamic geographies in our coverage, home to a handful of unicorns and to MercadoLibre, historically one of the best managed companies in our e-commerce coverage. With MercadoLibre's \$44 billion in 2023 gross merchandise sales and regional market share approaching 35%, the company's network effect grows stronger each year, and it has kept strong international competitors like Amazon, Walmart, wide-moat Alibaba, and no-moat Sea Limited in check across its 18-country footprint.

Closing out the survey of our online commerce coverage, we see plenty of upside in the still small Polish and Central European market, home to underappreciated wide-moat Allegro. Our forecasts call for 9.8% and 10.6% five-year compound annual growth in Poland and Central Europe,³ respectively, with the dominant regional marketplace provider set to defend its nearly 45% Polish market share (Exhibit 13) despite efforts by Amazon, wide-moat Alibaba, Temu (a narrow-moat PDD Holdings subsidiary), Shopee (a no-moat Sea Limited subsidiary), and eBay to enter Poland in recent years. The firm's prudent response was to invest heavily in fulfillment services, improving service levels, and defending the marketplace's value proposition in a way that would raise barriers to entry for marketplace competitors. While the financial pill was a bitter one to swallow, sending adjusted EBITDA margins from 51% in 2019 to about 35% today in the firm's core Polish segment, we believe that its increasingly competitive managed logistics services, while continuing to lean predominately on third-party suppliers (obviating some of the benefits of route density and fixed asset utilization that first party fulfillment offers, as we

³ Central Europe comprises the Czech Republic, Slovakia, Slovenia, Hungary, and Croatia, respectively.

explore later in this report), are a much strong deterrent to encroachment by global, fulfillment-integrated players like wide-moat Amazon, more effectively entrenching the firm in the attractive, growing Polish retail ecosystem.

Exhibit 13 The Increasingly Mature Polish E-Commerce Market Has Consolidated Around Allegro

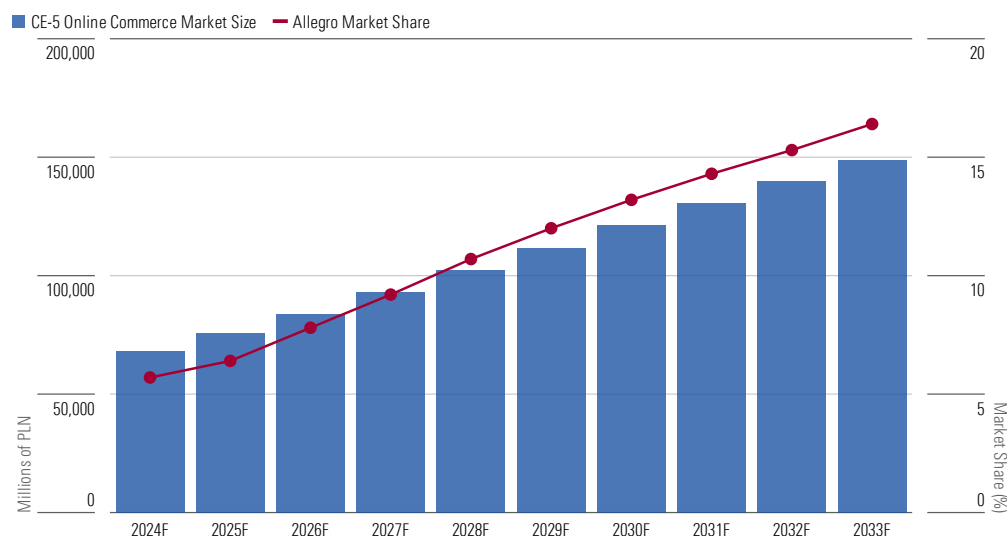


Source: PWC, Morningstar estimates. Data as of May 29, 2024.

We also expect growth to be strong across the firm's quickly growing central European footprint, though currency and linguistic differences suggest that tougher sledding awaits the Polish stalwart than it has seen at home. Investors often underestimate the difficulties tied to porting a marketplace across borders, from differing tax regimes (VAT rates, tariffs, and so on) to challenges catering to local design preferences, sourcing local vendors, and effectively managing initial marketing efforts. Allegro currently plans to invest roughly 20% of its Polish EBITDA behind its international expansion, with a target of achieving breakeven profitability roughly three to four years after launching in each new market.

While early signs from the firm's 2023 Czech Republic launch are encouraging, with a surge in user trial and strong membership program adoption, we maintain measured (mid-teens) market share expectations for Allegro across its non-domestic footprint and structurally lower profitability, with our expectations for 10% adjusted EBITDA margins abroad falling materially shy of our 35% EBITDA margin estimates for Allegro in its home Polish market (Exhibit 14).

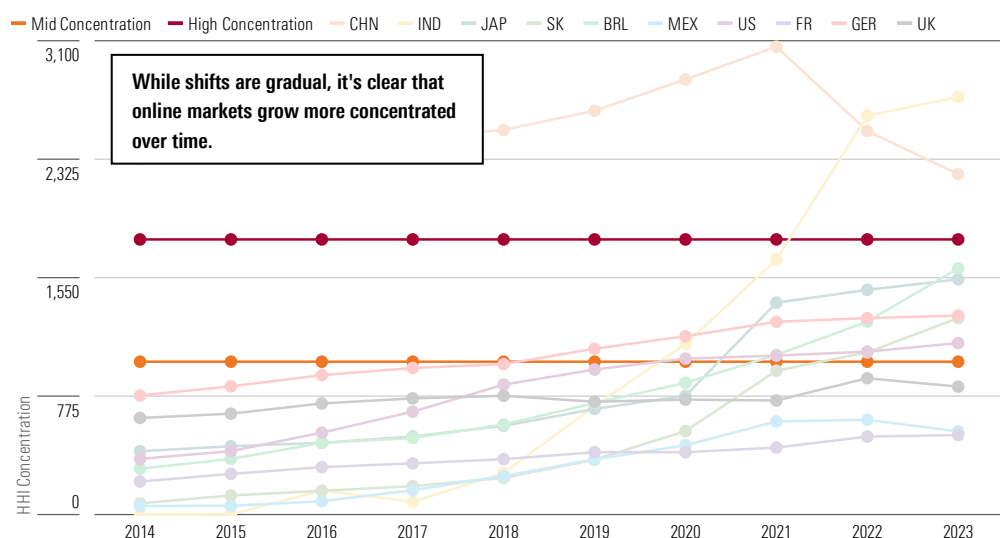
Exhibit 14 Online Commerce Growth Strong in Central Europe, but We're Reluctant to Crown a Winner Yet



Source: PWC, Morningstar estimates. Data as of May 29, 2024.

In summary, we're very bullish about the prospects for global online commerce growth, with consumers continuing to gravitate toward that channel for an increasing array of products, from consumer packaged goods to fast moving consumer goods, beauty, and even select auto parts and accessories. Even in strong e-commerce categories, like books and digital media, apparel, footwear and accessories, and consumer electronics, we expect the online mix shift to continue. We expect that each market will consolidate around a few scaled winners, with network effect dynamics and cost advantages tied to utilization — particularly for fulfillment-integrated marketplaces — favoring a winner-take-all or winner-take-most dynamic.

To this effect, it's clear from our data (Exhibit 15) that markets trend toward increasing consolidation over time, with the rise of narrow-moat PDD Holdings in China providing the one exception to that rule, if in an industry that remains highly consolidated. Finally, with proportionately muted cross-border trade volumes (generally averaging 20%-25% of total online sales) and high consumer expectations for service time, it seems likely that successful international expansion will necessitate local investment and, in many cases, the sourcing of local merchants. The advantage rests with incumbents, and a slew of high-profile failures — from Shopee in Poland and Brazil to Etsy in Brazil and India to ContextLogic's Wish.com pretty much everywhere — suggests that expanding a marketplace brand across borders is nowhere near as easy as some, including MercadoLibre and Amazon, have made it look.

Exhibit 15 Network Effect and Cost Advantage Dynamics Favor Consolidation in Online Commerce Globally


Source: PWC, Morningstar estimates, Euromonitor International. Data as of April 12, 2024. From left to right in the legend, China, Indonesia, Japan, South Korea, Brazil, Mexico, the United States, France, Germany, and the United Kingdom are represented in our data.

Our Forecasts Rest on an E-Commerce Channel Cost Advantage

While the conventional value proposition of online commerce is familiar to investors—competing for consumer purchases along the axes of broad selection, low prices, and fast delivery—there remains considerable uncertainty regarding the channel's long-term penetration prospects, the degree to which it can continue to take share from predominately offline merchants, and the extent to which seller economics are comparable across channels, aligning interests throughout the value chain. In this section, we'll defend our forecasts for durable online commerce market share gains. Our prognosis rests heavily on margin analysis, a look at retailers' economic incentives, and surveying the global market for clues regarding long-term equilibrium in the retail space. In a sentence, we expect online retail to continue to capture market share for the foreseeable future from brick-and-mortar competitors, but also expect that both will coexist in the long run, with the latter outperforming in categories with lower gross margins, higher shipping weight/value, and more extensive aftermarket service touchpoints. Below we outline the key takeaways for investors.

- ▶ E-commerce is cheaper to run than brick-and-mortar stores across many product categories for online native retailers.
- ▶ All-else equal, online marketplaces see six-point better operating margin performance than offline retailers.
- ▶ Retailers should view online marketplace sales as analogous to the wholesale channel, trading higher operating income dollars for lower operating income margins.
- ▶ Categories like specialty home and garden, off-price retail, and auto parts and accessories will prove more resistant to online encroachment.

Developing these ideas in sequence, we believe that running an e-commerce store is cheaper than a lookalike brick-and-mortar equivalent for categories with high gross margins, high shipping value/weight ratios, and fewer aftermarket service touchpoints—or at a minimum, service touchpoints that can be easily outsourced to an offline vendor like narrow-moat Best Buy. To isolate this, we looked at retail economics for vendors on Amazon's platform, given price transparency, readily identifiable cost of goods sold through Chinese B2B service provider wide-moat Alibaba, and the well-developed cottage industry and seller tools that facilitate the purchase of inventory from cheaper manufacturing countries like China and subsequent retail sale through the dominant US marketplace's third-party platform. The results are outlined below (Exhibit 6) for six of the most interesting products we looked at: marshmallow roasting sticks, a dog harness, tall bar stools, wooden plant stands, a 24-piece bartender set, and a waterproof phone case. These products were particularly intriguing as, in most cases, the Amazon stock image was identical to that of products sourced on Alibaba.com, suggesting that merchants likely don't even touch their inventory, instead shipping directly to Amazon fulfillment centers to be delivered to customers as inventory sells through.

Exhibit 16 Lightweight, High-Margin Products Can Be Extremely Profitable to Sell Online

Product	Retail Sales Price	Unit Sales	Total Revenues	COGS	Referral, FBA Cost	Advertising	Net Profit	Net Margin (%)	Gross Margin (%)
Universal Waterproof Phone Pouch	7.99	200	1598	104	638	147	709	44.4	93.5
rabbitgoo Dog Harness	16.98	100	1698	458	678	157	405	23.9	73.0
Zulay Kitchen S'mores Sticks - 8 Pack	12.99	100	1299	613	518	120	48	3.7	52.8
Yaheetech Tall Bar Stools	106.98	50	5349	2679	2135	493	42	0.8	49.9
Mkono Wood Plant Stand	47.49	100	4749	3350	1895	438	-934	-19.7	29.5
Maxam 24 Piece Bartender Set	24.95	100	2495	1843	996	230	-574	-23.0	26.1

Source: Amazon, JungleScout, Morningstar estimates, Alibaba. Data as of April 15, 2024. We use an average referral and FBA take rate just shy of 40%, consistent with JungleScout estimates for these higher-margin, lower-ASP categories, and an average advertising take rate of 9.2%, consistent with our estimated Amazon advertising revenue as a percentage of third-party GMV for FY 2023.

It's no coincidence, in our view, that products with lower gross margin are substantially less profitable to sell online—both those that have higher material cost and those with higher shipping cost, generally reflective of larger package sizes or higher weight. Driving this home, plant stands and bar stools do not appear to be particularly profitable categories for Amazon sellers, given much higher shipping weight and commensurately higher shipping costs as a percentage of the retail sales price, which depresses gross margins. In effect, the benefit of cheaper Chinese manufacturing for those products is outweighed by higher logistics costs than we'd see for less bulky, lightweight items. The anemic gross margin on the 24-piece bartender set was somewhat surprising, given what seems like a decent price/weight ratio, but it's plausible that the category is simply more competitive on Amazon than some of the others we looked at, or turning over less quickly (driving markdown behavior).

Regardless, even in the case of the Maxam bartender set, the linear relationship between gross margin and net profit margin holds steady. It's no surprise, given that dynamic, to see Amazon, eBay, and other global marketplaces charge lower final value fees on lower-margin categories like full-size appliances (8% on Amazon), low-price beauty products (8% under \$10), computers (8%), and consumer electronics (8%), than for higher-margin categories like video games and accessories (15%), media (15%), home and kitchen (15%), and jewelry (20%).

Another important derivative of our analysis was the recognition that online marketplaces with integrated fulfillment services can substantially increase seller returns on invested capital, further incentivizing the mix shift away from offline commerce, particularly for smaller sellers with a narrower assortment of inventory (Exhibit 17). A good way to think about this dynamic is to think of Amazon, MercadoLibre, and similar marketplaces as pooling buying power across millions of smaller sellers to access cost-effective real estate, to secure better pricing with third-party logistics providers, and to drive unit fulfillment costs lower as they benefit from better utilization rates than most retailers would in tackling the same problems on their own. While it's undeniable that those marketplace players capture a chunk of the economic rent they generate in doing so—Marketplace Pulse estimates that Amazon collects fulfillment fees ranging anywhere from 20%-35% of the retail sales price on items sold on its platform⁴—they provide an invaluable service for asset-light sellers looking to generate the highest possible return on assets and invested capital. In the offline retail world, an unleveraged cash payback period on a new store of four or five years (suggesting a cash-on-cash return of 20%-25%) is competitive. In the online world, top products like the dog harness we evaluated can provide returns on capital approaching an ethereal 100%, with inventory (and perhaps a small amount of accounts receivable) representing the only real capital investment. Operating leverage is no panacea--the tradeoff we see here suggests extremely high net income sensitivity to sales fluctuations that also applies in the negative, when markdowns increase or sales decline--but the centralization of capital-intensive fulfillment services appears to be a winning model, just like the centralization of capital-intensive computing resources has been.

⁴ <https://www.marketplacepulse.com/year-in-review-2023>

Exhibit 17 Marketplaces Are Extremely Capital Efficient for Astute Operators in High-Margin, Lightweight Categories

Product	Total Revenues	Net Working Capital	Asset Turnover	ROIC
Universal Waterproof Phone Pouch	1,598	104	15.4	681.6%
rabbitgoo Dog Harness	1,698	458	3.7	88.4%
Zulay Kitchen S'mores Sticks - 8 Pack	1,299	613	2.1	7.8%
Yaheetech Tall Bar Stools	5,349	2,679	2.0	1.6%
Mkono Wood Plant Stand	4,749	3,350	1.4	-27.9%
Maxam 24 Piece Bartender Set	2,495	1,843	1.4	-31.1%

Source: Amazon, JungleScout, Morningstar estimates, Alibaba. Data as of April 15, 2024.

It's clear from looking at the economics of Amazon wholesalers that their fulfillment costs, reverse logistics costs, and advertising cost as a percentage of sales are materially higher than we see for offline merchants. More than offsetting this, in the right categories, is the ability for online-native retailers to eschew costs tied to renting, developing, maintaining, and staffing expensive retail space. Our key takeaway is that in categories where online commerce provides better economics than offline commerce would, we expect market share to continue to shift toward e-commerce providers.

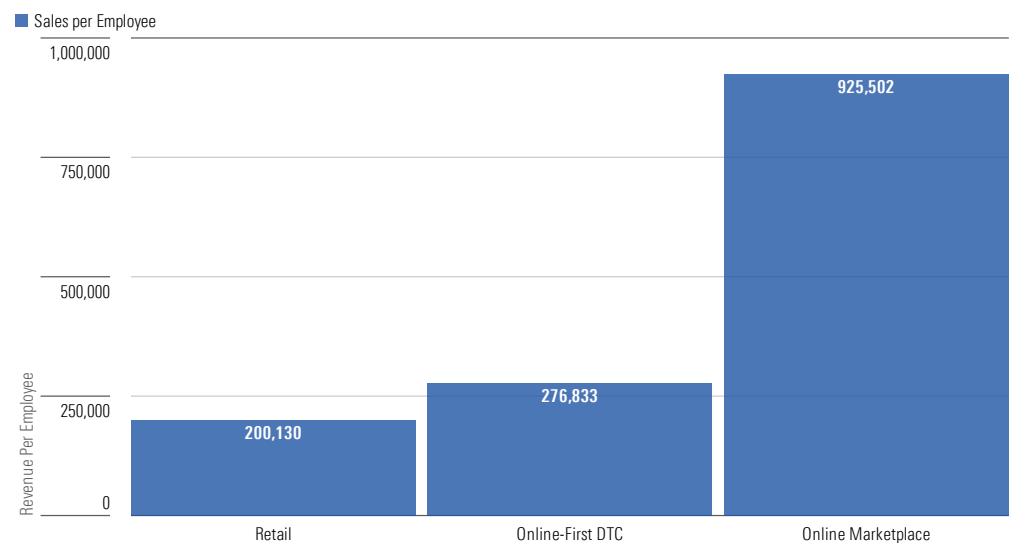
That's an important dynamic—by losing those high-margin sales and seeing commensurately slower top-line growth, we'd expect offline retailers to have to run to stay in place, as they are subject to relatively large, fixed costs (rent, utilities, common area maintenance) and need to find ways to offset steady inflation in both wages and cost of sales. Some retailers will prove more adept at this than others—our forecasts suggest that narrow-moat Best Buy is able to return to just shy of its prepandemic operating margin rates by leaning into its service touchpoints, growing its sales mix of higher-margin healthcare products, and driving stronger square footage productivity by closing underproducing stores—but it's not implausible that an increasing number of categories will become proportionately cheaper to fulfill online if brick-and-mortar retailers are forced to increase prices to offset inflationary pressure. It is this dynamic, where gradual sales deleverage in the offline channel drives higher prices and commensurately broader competitiveness in the online channel over time that will continue to shift some of the heretofore e-commerce resistant categories toward digital channels. Even for Best Buy, an increasing portion of the firm's operating profit ties to newer, higher-margin categories, like healthcare services, which are tougher to deliver through online channels—suggesting that margins in its core consumer electronics and appliances categories are continuing to gradually erode.

Our second key takeaway is that online marketplace players generate, on average, 6-point stronger operating margins than offline peers, firmly entrenching their position in the retail ecosystem. While this is a dynamic target, hanging in no small part on the revenue mix from first-party versus third-party sales, ever-evolving take rate schedules, and fulfillment unit economics, the wide margin of outperformance suggests that, in one capacity or another, e-commerce sales should inexorably continue to gain market share so long as consumer demand supports it. We identify three key drivers of this margin outperformance: scalable business models that allow online operators to generate ethereal sales volumes per employee (Exhibit 18), better square footage productivity, with speedy inventory turnover and impressive efficiency allowing marketplace operators to drive better platform sales per dollar of

leased square footage (Exhibit 19), and much lower cost of sales, with third-party sellers funding the cost of goods sold on marketplace platforms (Exhibit 20). We address these sequentially below.

Our first exhibit considers the volume of sales supported by the average employee at across a smattering of predominately offline retailers, DTC merchants like Casper, Warby Parker, and Allbirds, and e-commerce marketplace platforms.

Exhibit 18 Marketplaces Are Extremely Efficient in Terms of Revenue Per Headcount

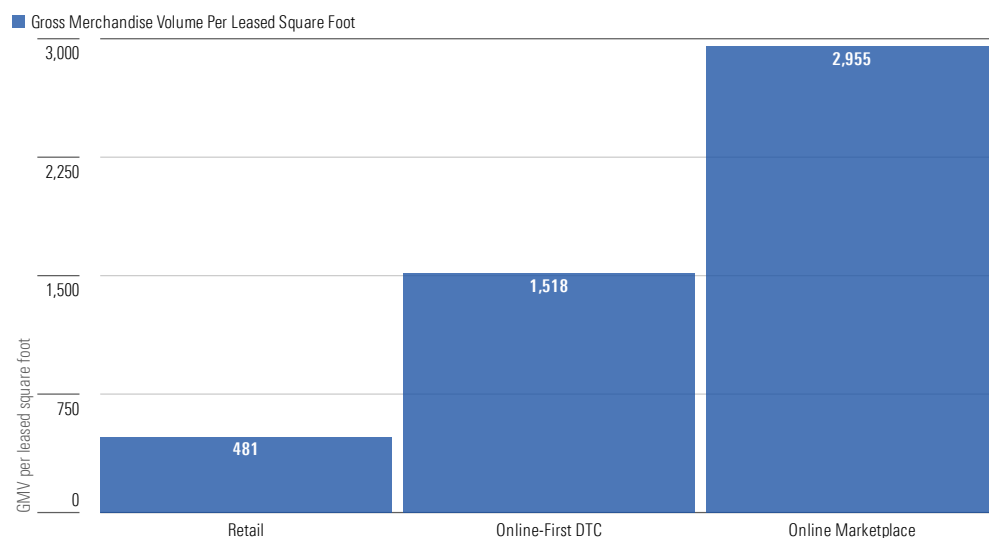


Source: Morningstar estimates, Company filings. Data as of April 16, 2024. Retail coverage includes Macy's, Nordstrom, Ulta, Target, Best Buy, Walmart, Dollar Tree, Five Below, Costco, Chipotle, VFC, Urban Outfitters, Lululemon, AutoZone, O'Reilly, Dick's Sporting Goods, Gap, Kohl's, Ross, and TJX. Marketplaces include Amazon, eBay, Etsy, Allegro and MercadoLibre. We use median margins in our calculations to avoid distortions. Online-First DTC includes Casper, Warby, Allbirds, and StitchFix.

It is clear from looking at this data that while marketplaces only capture a fraction of the revenue transacted on their platform, their ability to fulfill orders through multiple modalities (fulfillment, cross-docking, drop-shipping), eschew costly retail sales staff, and the scalability of online channels still results in much stronger sales capacity per employee than seen among offline competitors. Even Amazon and MercadoLibre, which both employ extensive warehouse staff, see sales per headcount of \$377,000 and \$926,000, respectively, comfortably outpacing the \$200,000 in sales per headcount sported by retail competitors.

Second, we see that Amazon and MercadoLibre, both of which maintain proprietary fulfillment services, generate substantially better square footage productivity than retail competitors (Exhibit 19).

Exhibit 19 Amazon and MercadoLibre's Fulfillment Square Footage Is Extremely Productive



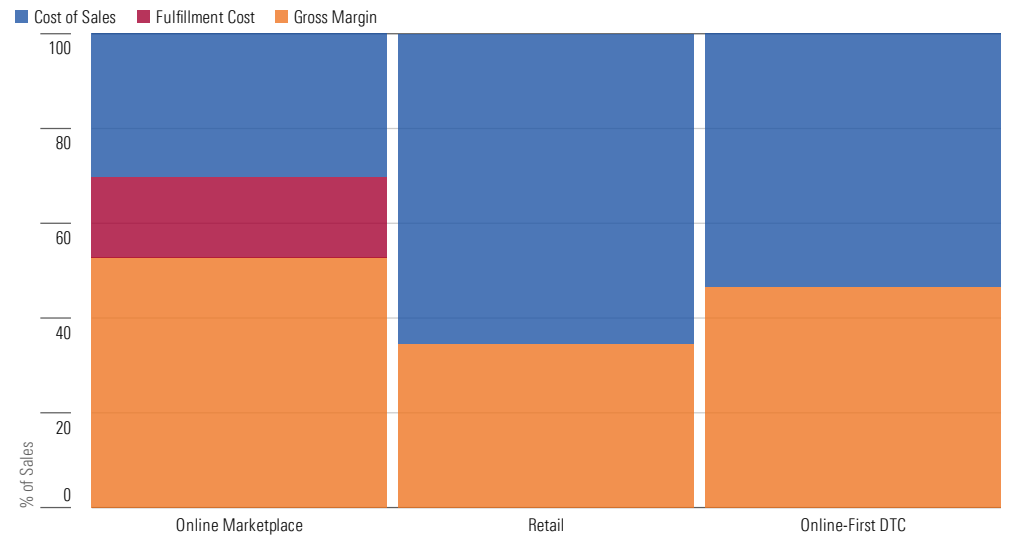
Source: Morningstar estimates, company filings. Data as of April 16, 2024. Retail coverage includes Macy's, Nordstrom, Ulta, Target, Best Buy, Walmart, Dollar Tree, Five Below, Costco, Chipotle, VFC, Urban Outfitters, Lululemon, AutoZone, O'Reilly, Dick's Sporting Goods, Gap, Kohl's, Ross, and TJX. Marketplaces include Amazon and MercadoLibre since third-party marketplaces don't lease fulfillment space. We use median margins in our calculations to avoid distortions. Online-First DTC includes Casper, Warby, Allbirds, and StitchFix.

While our analysis suggests that the conventional argument that marketplace operators derive a cost advantage from utilizing cheaper square footage outside of expensive urban locales doesn't seem to carry water — rent cost per leased square foot is consistent with brick-and-mortar competitors in dollar terms — more productive square footage suggests that those operators still derive a cost advantage from their physical footprints. We posit that the lack of savings on warehouse lease costs is attributable to competitive lease renewals in areas that are located near (a) major highway arteries and (b) third-party post carrier sortation centers, with competition among e-commerce and logistics players for that prime real estate obviating what would otherwise be a logical advantage tied to less expensive real estate.⁵

Finally, we see that the dominant driver of operating margin outperformance is the chasm between e-commerce marketplace gross margins (53%) and offline retail (35%), even after adjusting for fulfillment services that generally get booked as operating expenses rather than cost of sales by marketplace operators (Exhibit 20).

⁵ This view is corroborated by Christopher Mims' "Arriving Today: From Factory to Front Door—Why Everything Has Changed About How and What We Buy." Those same dynamics result in upward wage pressure for operators in ideally located markets, which is likely (over time) to increase what already seems like an insatiable appetite for automation within fulfillment centers. Said otherwise, more expensive labor increases the incentive to invest heavily in labor-saving automation as robots grow relatively/proportionately cheaper.

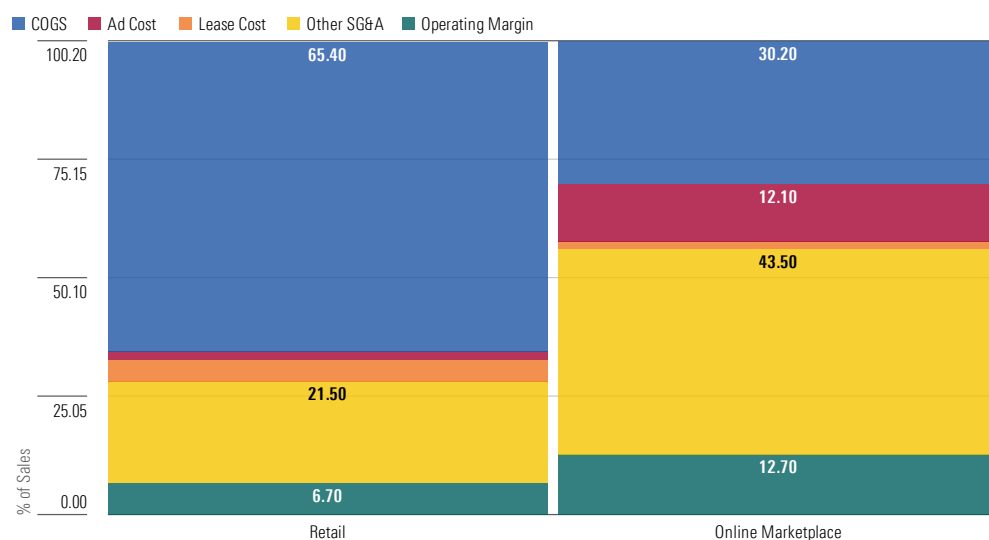
Exhibit 20 Even Adjusted for Shipping, E-Commerce Gross Margins Remain Materially Higher Than Offline Retail



Source: Morningstar estimates, company filings. Data as of April 16, 2024. Retail coverage includes Macy's, Nordstrom, Ulta, Target, Best Buy, Walmart, Dollar Tree, Five Below, Costco, Chipotle, VFC, Urban Outfitters, Lululemon, AutoZone, O'Reilly, Dick's Sporting Goods, Gap, Kohl's, Ross, and TJX. Marketplaces include Amazon, Allegro and MercadoLibre since all three provide fulfillment services as an agent or as a principal. We use median margins in our calculations to avoid distortions. Online-First DTC includes Casper, Warby, Allbirds, and StitchFix.

This is an attractive structural feature of the third-party marketplace model--third-party sellers front working capital and bear the cost of goods sold for inventory they sell on e-commerce platforms, underpinning competitive economic models for these moaty service providers. For firms which exclusively sell third-party wares, like Etsy and eBay, gross margins clock in at a striking 70%. For those companies, the only meaningful cost of goods sold ties to web hosting services and payment processing, underpinning a business model with outstanding incremental operating margins and margin expansion prospects.

Taken together, despite capturing only a fraction of platform sales as revenue (the marketplace "take rate"), bearing incremental shipping costs that offline retailers do not, and having to deal with return volumes nearly three times higher than in the brick-and-mortar channel, marketplaces generate double the operating profitability of the median brick-and-mortar retailer in our coverage (Exhibit 21). It's clear that the channel is cost competitive, with price competitiveness representing the primary driver of consumer purchase behavior in most surveys we've seen (convenience typically comes second), and it's also clear that marketplace sellers can be quite profitable, as outlined earlier in this section. We believe that this combination provides meaningful support for our strong US e-commerce growth forecasts. We hypothesize that, while gradual, retail sales will continue to shift toward the cheaper, cost advantaged online fulfillment channel over time, consistent with the patterns we've seen over the past couple of decades.

Exhibit 21 Despite Bearing Higher Operating Costs, Marketplaces Remain the Low-Cost Retail Players

Source: Morningstar estimates, company filings. Data as of April 16, 2024. Retail coverage includes Macy's, Nordstrom, Ulta, Target, Best Buy, Walmart, Dollar Tree, Five Below, Costco, Chipotle, VFC, Urban Outfitters, Lululemon, AutoZone, O'Reilly, Dick's Sporting Goods, Gap, Kohl's, Ross, and TJX. Marketplaces include Amazon, Allegro and MercadoLibre since all three provide fulfillment services as an agent or as a principal. We use median margins in our calculations to avoid distortions. Online-First DTC includes Casper, Warby, Allbirds, and StitchFix.

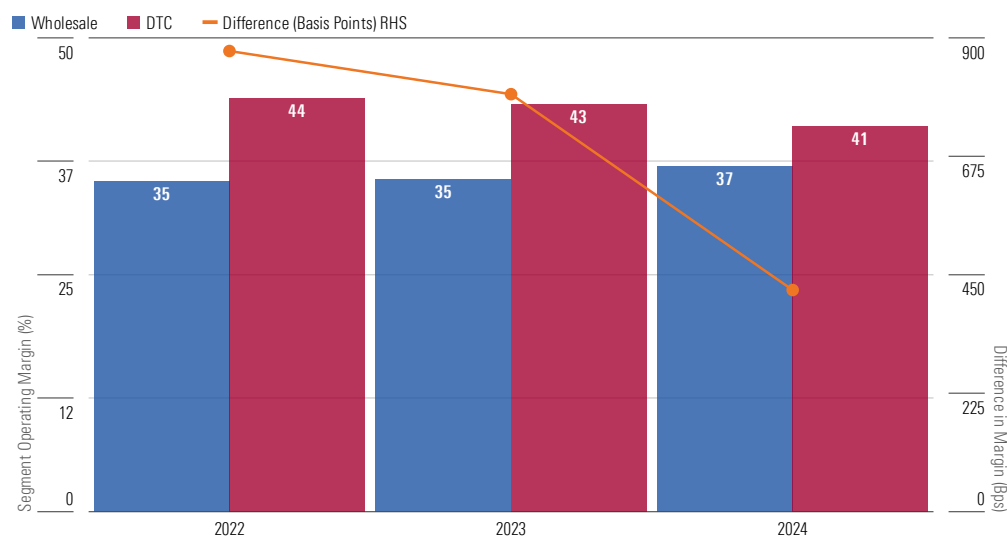
We expect that consumer comfort with online channels will only continue to improve, and the emergence of scaled online marketplace operators and retailers like wide-moat Amazon, wide-moat MercadoLibre, and wide-moat Allegro means that consumers around the globe will increasingly have access to abundant, low-cost products at the speed of want. As those channels continue their strong growth trajectories—e-commerce sales now comprise 15%-16% of total retail sales in the United States, up from just 9.6% in 2019—we posit that they will become simply too large to ignore for most companies, despite our assertion that offline retailers would prefer that customers make online purchases through their direct sales channels, all else equal. As a point of reference, 30% of pet category spending now sits online in the US, meaning that a pet food or hard goods company that elected to eschew the channel would forgo 30% of its addressable market, giving up operating income dollars in exchange for higher operating income margin (a bad trade, in our view). In most cases, we expect that pet brands will instead, if begrudgingly, forge alliances with operators like Amazon, Walmart, and Chewy as they elect not to leave a growing pool of customer profits on the table.

This leads us to our third point in this subsection: as a larger chunk of retail sales gravitate toward scaled, online marketplace providers, most manufacturers must offer their products on the platforms that their customers choose to frequent. We believe that e-commerce marketplaces should be considered as analogous to offline wholesale relationships from the perspective of brands and producers. While direct-to-consumer sales are more profitable and commensurately tend to be prioritized, marketplaces offer access to a (growing) incremental customer base and under the right operating conditions, higher operating income, as we illustrate with no-moat Revolve Group in exhibit 23. While it makes the most sense for brands to prioritize their direct sales channels, we expect that a much higher degree of concentration in online commerce relative to brick-and-mortar (attributable to

scale benefits, particularly in fulfillment services and in advertising) imply that the wholesale (marketplace) channel will be much substantially more important online than offline.

Like what we see in the brick-and-mortar wholesale channel, by inserting a mediator in between retail brands and final customers, the contribution margin for a marketplace must, almost definitionally, be worse than margins enjoyed through an owned online commerce site--said otherwise, a sale on bestbuy.com is more profitable for the consumer electronics stalwart than a similar sale through eBay or Amazon's platform. We illustrate this dynamic below with Canada Goose, one of the very few retailers that directly reports the difference between profit margins in its wholesale and direct-to-consumer channels.

Exhibit 22 The Direct Channel Is Measurably More Profitable for Canada Goose



Source: Morningstar estimates, company filings. Data as of May 20, 2024. Years cited are fiscal, not calendar years.

This difference has led many retailers, including Canada Goose itself, Nike, and narrow-moat Adidas to emphasize growth in direct-to-consumer business at the expense of wholesale channels. We see similar trends materializing in the luxury space. Even the strongest brands, however, maintain a sizable mix of wholesale sales, with most targeted mix shifts we have seen looking evolutionary, rather than revolutionary changes in the business model—increasing the mix of direct sales to 50% or more of global turnover from 43%, in Nike's case, for instance. If it is so clear that, all else equal, a sale through direct channels is more profitable than one through wholesale, why do we still see one of the strongest sportswear brands on the planet generate more than 55% of its global turnover through wholesale partners? We believe that brands have historically leaned on offline wholesale partners in exchange for access to unpenetrated or underpenetrated customer bases and purchase occasions, retail distribution networks through sprawling bases of physical stores, and the ability to scale globally without costly upfront investments in physical stores. Analogous dynamics very much appear to be in play with marketplaces like Amazon, MercadoLibre, Etsy, eBay, and Allegro, in our view.

Illustrating this further, we believe that brands are strongly and increasingly incentivized to partner with e-commerce players like Amazon as marketplaces' share of category sales increase, where cannibalization rates are lower, and in circumstances where take rates remain palatable. If Amazon boasts 30% market share in online apparel, footwear, and accessories, for instance, it represents a much more attractive partner for an apparel brand like Revolve Group as a source of potentially incremental sales than if it only boasts 10% share of that market. Similarly, if Amazon charges 35% take rates for the combination of fulfillment services, on-site advertising, and referral fees, instead of 50%, it is proportionately more attractive to merchants as well. In the exhibit below, we explore the tradeoff between cannibalization—looking at the percentage of sales through a marketplace channel that are incremental, or wouldn't otherwise occur through direct retail channels—and take rate—the proportion of sales captured by that marketplace—with Revolve Group, an upscale fashion retailer that sells predominately women's clothing and accessories.

Exhibit 23 Change in Operating Profit Is Positive at Lower Take Rates, Lower Cannibalization

Take Rate	50% Incremental	55% Incremental	60% Incremental	65% Incremental	70% Incremental	75% Incremental	80% Incremental	85% Incremental	90% Incremental
25%	-10.1	-1.1	7.9	16.9	25.9	34.9	43.9	52.9	61.9
28%	-13.4	-4.7	4.0	12.6	21.3	30.0	38.6	47.3	56.0
30%	-16.6	-8.3	0.1	8.4	16.7	25.1	33.4	41.7	50.1
33%	-19.9	-11.9	-3.9	4.1	12.1	20.2	28.2	36.2	44.2
35%	-23.2	-15.5	-7.8	-0.1	7.6	15.2	22.9	30.6	38.3
38%	-26.4	-19.1	-11.7	-4.4	3.0	10.3	17.7	25.1	32.4
40%	-29.7	-22.7	-15.7	-8.6	-1.6	5.4	12.5	19.5	26.5
43%	-33.0	-26.3	-19.6	-12.9	-6.2	0.5	7.2	13.9	20.6
45%	-36.3	-29.9	-23.5	-17.1	-10.8	-4.4	2.0	8.4	14.7

Source: Morningstar estimates, company filings, eMarketer. Data as of May 20, 2024. Our calculations reflect percent change in operating profit for Revolve based on the firm's \$1,080 million in 2023 sales, Amazon's 29% category market share, and varying degrees of cannibalization (top) and marketplace commission/take rate. Calculations are % change in operating profit at our projected 11% midcycle margin for the company.

It is clear that from the graphic above, given real-life assumptions, that Revolve would generate strong percentage increases in operating profit from opening up an Amazon shop in many situations where its sales are 65% or more incremental and the take rate that Amazon captures across its service touchpoints is under about 35%, provided that it saw a sales increase (net the cannibalization of first-party sales) directionally aligned with the market opportunity it "unlocks" by targeting the incremental 29% of category sales that flow through Amazon's platform.⁶ The step-line that we have mapped onto the table indicates the operating profit "breakeven" point, suggesting that the firm could very well generate a positive percent change in operating profit (above the line) under the right circumstances. Importantly, and consistent with our findings, e-commerce marketplaces have every incentive to ensure that merchants want to sell on their platforms, with the third-party marketplace model relying heavily on merchants to provide the assortment that marketplace customers desire with a sufficiently attractive value proposition—both price and fulfillment speed—so as to defend the channel's ongoing market

⁶ eMarketer category data.

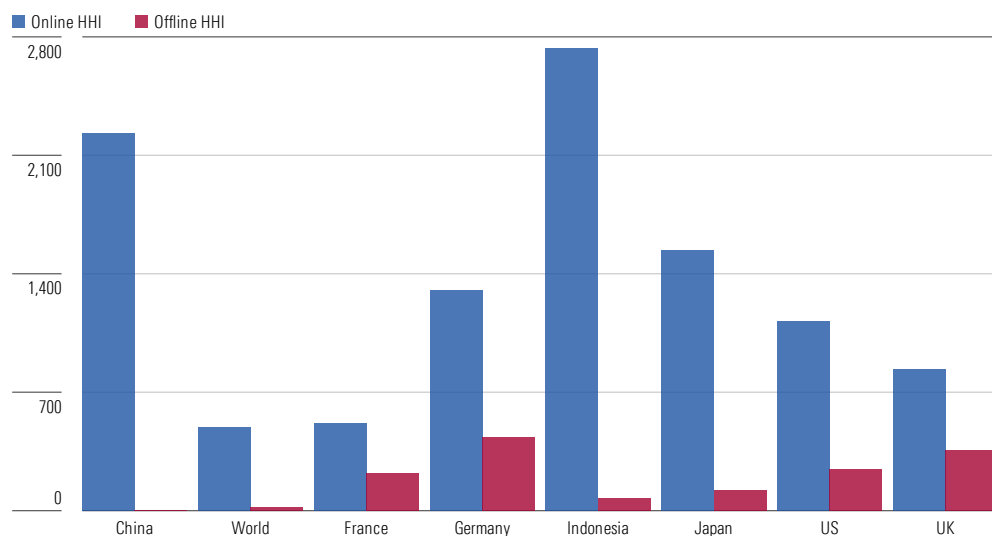
share gains vis a vis offline retail. This creates a dynamic in which incentives must be carefully aligned to achieve success, and one in which producers must carefully and consistently evaluate cannibalization and net contribution to operating profit dollars from such partnerships to assess whether an ongoing relationship makes practical sense.

There are, of course, other factors to be considered--Revolve is unlikely to sell on Amazon's platform due to the perceived risk to its premium brand cachet--but this sort of analysis suggests that the channels offered by these growing marketplace providers are set to grow increasingly important as their share of total retail sales continues to swell.

From a brand and producer perspective, a dollar of first-party sales is more valuable than a dollar of marketplace sales. This means that those players would do well to take proactive steps to ensure that customers remain their own and frequent more profitable direct websites wherever possible. Brands should, for example, reserve their top selling product lines and best offers for their own site, driving traffic through member exclusives, early releases, and where applicable, loyalty program benefits only through owned platforms. To reiterate the key point, we believe that there is every incentive for marketplace providers to make selling through their channel worth merchant's time and effort--allowing those manufacturers to benefit from growth in operating profit dollars for electing to do so--but it's clear to us that at high enough levels of marketplace take rate and cannibalization, select brands would be better off foregoing online marketplaces entirely, as we see in similar marketplace models like third-party food delivery.

Consistent with this thesis, we expect that the strongest, global brands, like Nike and Adidas, are likely able to continue to prioritize direct-to-consumer sales, but we expect the "wholesale channel" of online marketplace sales to be meaningfully more important to brands and to producers than the wholesale channel is in the brick-and-mortar world. This is reflective of a much top-heavier dynamic than we have seen with offline retail (Exhibit 24), with economies of scale in fulfillment services, payment processing, and retail media networks all pushing the industry much further toward consolidation than we see in comparable offline categories--a dynamic which appears globally consistent. With more than 60% of customers starting their product search on Amazon,⁷ it looks to us like most producers will have their choice of fewer, more powerful channel partners than they did in a brick-and-mortar world, albeit partners whose very business model depends on those producers' ongoing success.

⁷ <https://content-na1.emarketer.com/online-shoppers-search-on-amazon>

Exhibit 24 Higher Levels of Concentration Online Suggest Fewer, More Powerful Players

Source: Morningstar estimates, Euromonitor data. Data as of May 20, 2024. HHI is the Herfindahl-Hirschman index, which sums the squared market share of firms (in this case, the largest five) to arrive at a proxy for market concentration. Conventional measures of moderate and high concentration correspond to an HHI of 1,000 and 1,800 points, respectively.

Reviewing the extensive ground we've covered, we believe that scaled, third-party online marketplaces will perform an analogous role in the online channel to wholesalers in the offline one. Although direct-to-consumer sales are more profitable and tend to be preferred, growing online share of retail sales--and dynamics which favor consolidation around fewer, scaled marketplace players--suggest that those "wholesale" partnerships make sense for most brands in the long run. While operating margins are liable to be tighter than we see from owned channel sales, we expect that most firms will see an increase in operating profit dollars from such partnerships, particularly at reasonable levels of take rate and cannibalization, though producers should remain diligent about monitoring this dynamic and the scope of their partnership with online marketplace operators. Higher concentration in online commerce suggests that scaled marketplace operators like Amazon, MercadoLibre, and Allegro will be more important to the online retail ecosystem than wholesale players in offline retail have been historically.

Turning to our fourth and final point in this subsection, we want to be clear that the continued and growing influence of online marketplace players does not preclude the formation or defense of durable competitive advantages in offline retail. Many of the benefits tied to e-commerce that we outlined in the section above rely on products that tend to turn over more quickly, that map cleanly to a stock-keeping unit, universal product code, or alternative identifier, and that boast attractive value-to-weight ratios. Where these factors do not hold, we believe that offline retailers can be better suited to address a customer need.

To this effect, wide-moat home and garden retailers like Home Depot, Lowe's, and Tractor Supply do a very effective job at stocking and selling high-weight, lower-value items like lumber, drywall, cement, and rock salt. They generate durable economic profit through cost advantages, cross selling more

profitable products and services, and catering to professional clientele who tend to be less price elastic and need quicker fulfillment than the online commerce channel can reliably provide. Elsewhere in the subsector, discount retailers like wide-moat TJX and Ross rely on a stream of unique, branded inventory acquired at fire-sale prices which most brands would prefer to dispose of as surreptitiously as possible, deliberately eschewing the easy price comparison that buyers otherwise appreciate in the online channel as part of their value proposition to brand partners while benefitting from a "treasure hunt" shopping experience on the consumer side of the ledger. Auto parts vendors like wide-moat O'Reilly benefit from higher-touch services and knowledgeable staff—which is challenging to replicate through online channels—while their relative scale in a very fragmented DIY auto parts segment affords them a scale-driven cost advantage relative to a large base of independent competitors. To drive home the point, we expect e-commerce retail to continue to capture share from brick-and-mortar competitors in aggregate, but do not surmise that market share gains will be indiscriminate.

To summarize this section, we expect online commerce to continue to outgrow offline retail, with our five-year projections calling for an 7.8% CAGR in the US, 3.9 times faster than offline retail growth. Gains will be driven by both long-time anchors like apparel, accessories, and footwear and by increasing penetration in newer verticals like fast moving consumer goods and consumer packaged goods. Our growth prognosis is even more constructive abroad, with firms like MercadoLibre benefitting from increases in formal financial system participation, expanding internet connectivity, and infrastructure improvements that have largely already occurred in developed markets. Outsize e-commerce growth is attributable to extremely efficient utilization in square footage and headcount that drives a durable cost advantage for marketplace operators relative to offline retailers, though most merchants will find that their sales through third-party marketplaces come with slimmer margins than those that they generate via direct channels. Investors will do well to invest in e-commerce platform winners like wide-moat Amazon, wide-moat MercadoLibre, wide-moat Etsy, and wide-moat Allegro at attractive prices, with a winner-take-most competitive dynamic suggesting that those firms' competitive position grows stronger each year.

We continue to like narrow-moat eBay in its focus categories at the right prices, while narrow-moat Chewy looks like an attractive long-term play as the online pet consumable, retail, and healthcare market is divvied up between Chewy, Amazon, and to a much lesser extent, Walmart. Lastly, we approach names like no-moat The RealReal with an abundance of caution, given the lack of a proven business model and what looks like scant odds that the firm emerges as the winner in the luxury resale space. We see every possibility that second-tier players fade into irrelevance as markets condense around scaled winners in newer verticals like apparel resale, and it is not clear to us that smaller, verticalized markets need to exist on a standalone basis, rather than getting tucked into much larger firms like narrow-moat eBay. Said otherwise, e-commerce investors should invest in a small cadre of winners and avoid everyone else like the plague—or at least wait until their competitive position grows more secure.

Online Marketplace Moats Should Strengthen Further as Operators Expand Their Services Reach

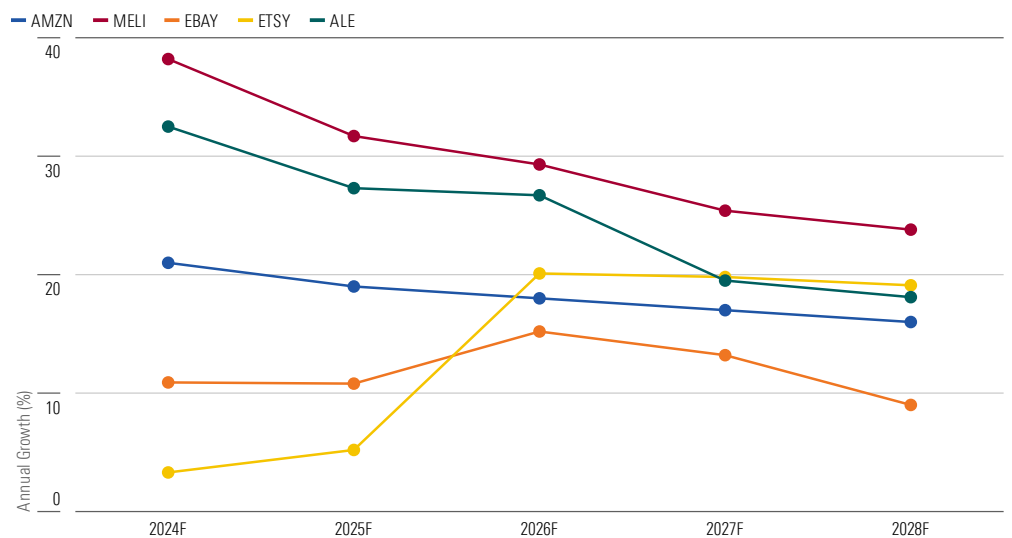
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- ▶ With privacy changes driving the retirement of unique identifiers at wide-moat Apple and wide-moat Alphabet, we believe that retail media networks (RMN's) will be a likely winner.
- ▶ Globally, RMN's are projected to grow at a 19% annual rate over the next half decade, with marketplaces like Amazon, Allegro, MercadoLibre, and to a lesser extent Etsy and eBay set to benefit.
- ▶ On balance, we believe that the ads business for online marketplaces (ex-Amazon) will account for an extra 10 points of market capitalization in 2028, representing 31% of those firms' value, up from 21% today.
- ▶ Expansion into fulfillment services like buy-now-pay-later lending can add a leg to gross merchandise volume growth, marketplace take rates, and profitability, as seen with Allegro. Firms that operate in credit-starved emerging markets like MercadoLibre should benefit disproportionately, increasing switching costs with small merchants by providing working capital lending.
- ▶ Fulfillment services are a loss-leader today but underpin online marketplaces' value proposition. Over time, better cost sharing with merchants and higher paid membership income should offset this drag, while improving route density and fixed cost utilization rates should drive cost efficiencies over time.
- ▶ Paid membership stitches together the ecosystem, encouraging increased traffic and spinning the marketplace network effect flywheel faster, while partially offsetting fulfillment cost.
- ▶ Taken together, we expect an average of 240 basis points of take rate expansion across our marketplace coverage between 2023-28, with more than half of that driven by retail media network growth.
- ▶ This dynamic favors fewer, larger, more competitively advantaged players, suggesting that recent consolidation trends in the industry are set to continue.

Privacy Changes in Advertising to Drive Profit Windfall for Online Marketplaces

We believe that accelerating growth in retail media networks⁸ represents the key near-term opportunity for our online marketplace coverage. As we see it, privacy changes upstream look set to drive a surge in performance marketing⁹ budgets funneled toward those platforms. Against this backdrop, it's no coincidence that MercadoLibre and eBay have launched first-party advertising platforms over the past few years, while Amazon, Etsy, and Allegro have doubled down on existing efforts. Importantly, that advertising revenue arrives at robust incremental margins—MercadoLibre suggests that its retail media network runs at a "high 70s [to] low 80s" EBIT margin,¹⁰ while Meta and Google reported advertising margins of 47% and 37% in 2023, respectively.¹¹ It's likely that those margins could be even higher for the big technology players if it were not for aggressive research and development investment in core social media and search platforms.

Exhibit 25 Our Forecasts Imply Strong Retail Media Network Growth Across our Marketplace Coverage



Source: Morningstar estimates, Euromonitor data. Data as of May 31, 2024.

As we see it, the sheer scale of projected growth in retail media spending cements it as the most important dynamic to monitor in the industry and one that looks likely to further strengthen already durable moats across our coverage. To this effect, we expect MercadoLibre, eBay, and Etsy to boast advertising businesses north of \$1 billion in annual turnover by 2028, representing compound annual growth of 30%, 12%, and 13%, respectively. Allegro's \$632 million clocks in a shade behind in dollar terms, but its 25% forecast annual growth over the period aligns directionally with its peers. While Amazon is set to remain the global pacesetter, with \$47 billion in 2023 advertising revenue across its commerce, streaming video, and alternative media properties representing a striking 41.1% of the global

⁸ Retail media networks are (largely) digital advertising platforms through which retailers sell advertising inventory on their own websites or platforms.

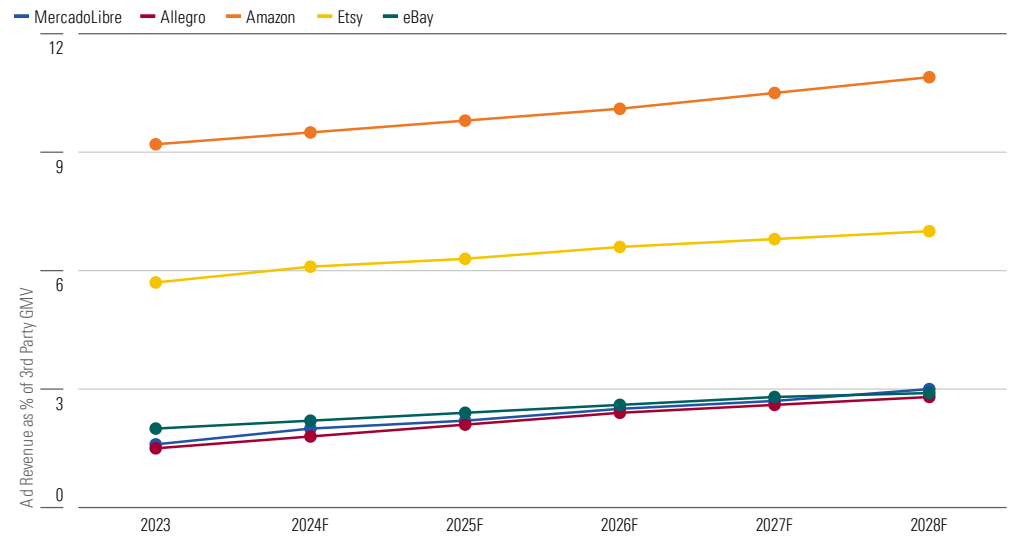
⁹ Performance marketing is digital marketing investment where advertisers only pay when a desired result is achieved—an impression, a click, a sale.

¹⁰ Q3 2022 earnings call

¹¹ For Meta, "Family of Apps," margin. For Google, "Google Services," which includes some lower-margin subscription revenue but is largely advertising.

market,¹² our projections see the firm approach \$110 billion in advertising sales by 2028, suggesting that even the market leader's growth narrative has plenty of running room. Notably, with Amazon's advertising revenue clocking in north of 9% of third-party gross merchandise volume, by our estimates, and continuing to grow healthily, we foresee no near-term glass ceiling for other players.

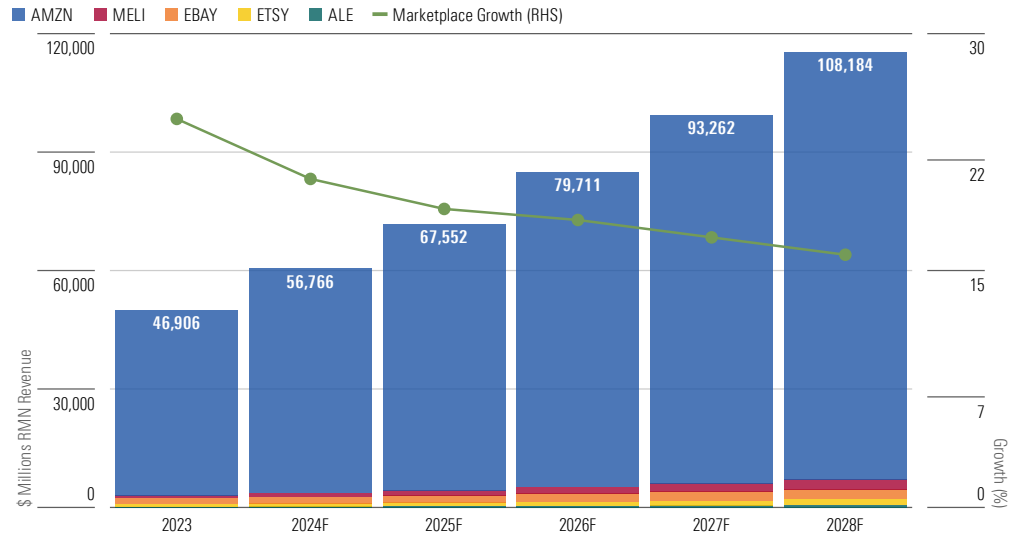
Exhibit 26 Amazon's Industry-Leading Platform Suggests Plenty of Headroom for Marketplace Competitors



Source: Morningstar estimates, company filings. Data as of May 21, 2024.

If anything, our forecasts may prove conservative, with our prognosis calling for the marketplace operators in our coverage to account for \$115.4 billion in global ad revenue or 42% of the market in 2028, down incrementally from those firms' 44% share in 2023. That's attributable, in large part, to strong growth in retail media networks among players who had previously been on the sidelines, including non-marketplaces (like narrow-moat Chewy) and brick-and-mortar mainstays like narrow-moat Best Buy, but also to expansion by strong retail players like wide-moat Walmart, whose retail media business (Walmart Connect) is expected to grow at a mid-20s rate in the intermediate term. While there's a cogent argument to be made for expanding inventory--higher ad load--driving down advertising prices, our base case assumption is that a modest mix shift away from mid-funnel marketing should provide a pricing floor for retail media networks, as we expound upon later.

¹² Morningstar Calculations, eMarketer data.

Exhibit 27 Strong Retail Media Network Growth Reflects Favorable Industry Shift

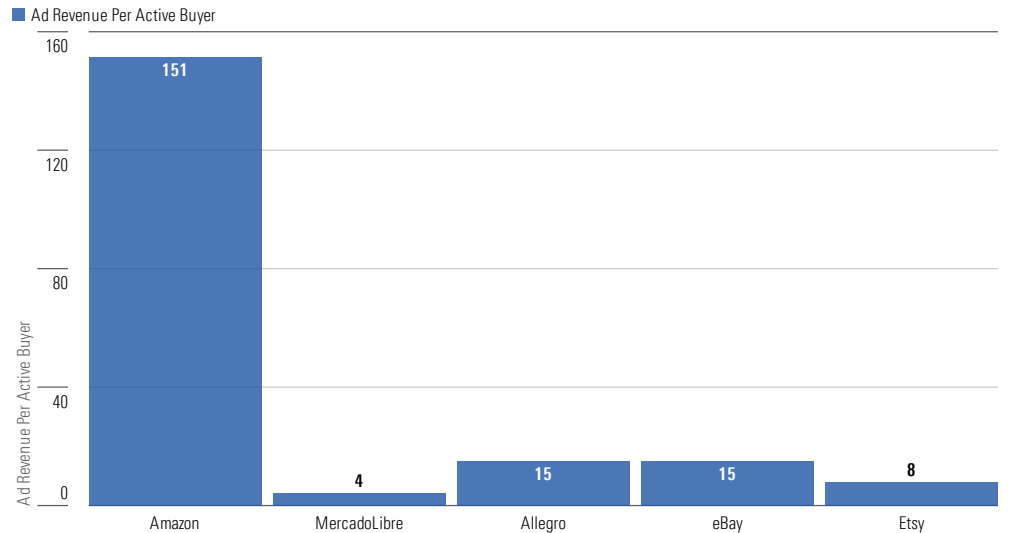
Source: Morningstar estimates, company filings, eMarketer. Data as of May 21, 2024.

Importantly, despite our projections for modest market share loss within the global retail media network market on the margin, our forecasts see each of the marketplace operators in our coverage expand their share of the lucrative digital advertising pie, which is set to grow at an 11% annual rate (eMarketer) over the next five years.

Conservatively assuming a similar margin profile to Google's search ads business (37%), midcycle company-specific tax rates, and our fair-value implied forward earnings multiples, we estimate that the firms in our coverage would derive \$911 billion of their collective 2028 market cap just from advertising income, or \$61 billion excluding Amazon. That means that the portion of those companies' value tied to their advertising revenue businesses (as a percentage of market capitalization) would swell to an estimated 31% by 2028, up from 21% today.

Rounding out our forecasts, it's important to note that advertising dollars flow toward the platforms which customers most reliably frequent. It's no coincidence that Amazon generates head-and-shoulders better monetization on a per-user basis (Exhibit 28), reflective of its sprawling global customer base, those customers' high purchase frequency and volume, and proximity to transactions, with the firm scoring uniquely well on all four facets of effective marketing platforms: automation, identification, shoppability, and attribution.¹³

¹³ Borrowed from "Selling the American People: Advertising, Optimization, and the Origins of Adtech", by Lee McGuigan.

Exhibit 28 Amazon's Unmatched Monetization Is Reflective of the Strength of Its Wide Moat

Source: Morningstar estimates, company filings. Data as of May 21st, 2024. Data is annualized. We use independent estimates of 310 million global buyers for Amazon's user base, which is reflective of Prime Buyers rather than total (biasing the data substantially upward). The relationship should be ordinarily correct, however, with Prime penetration exceedingly high (71% in the US).

The gap between "The Everything Store" and its marketplace competitors should certainly be perceived as an opportunity—in fact, our forecasts imply some convergence by MercadoLibre and Allegro—but is also reflective of Amazon's deep entrenchment with its customers, commanding services ecosystem reach, and the value of its network of more than 300 million global buyers.¹⁴ Consistent with Metcalfe's law, networks grow more valuable as they grow larger, and that relationship is nonlinear. We expect retail media network sales to align with the winner-take-most dynamics we see in online commerce more broadly, entrenching local marketplace winners like Amazon (US, Western Europe), MercadoLibre (Latin America), and Allegro (Poland, Central Europe) ever deeper in the local retail ecosystem.

Increasingly Sharp Privacy Regulation Underpins Our Forecast Shift

Having led with our key takeaways, we believe that it's important to provide context around the privacy changes that have underpinned, and will continue to support, this dynamic moving forward. In recent years, Apple has retired its unique IDs, IDFA, or Identifier for Advertisers, and Google has laid the groundwork for a gradual 2025 phaseout of third-party cookies, which have historically helped advertisers in myriad ways—from allowing for a more holistic picture of customer interests, following consumers from site to site during shopping journeys and allowing for more precise targeting, to allowing for frequency capping (or alternatively, retargeting), to returning important attribution data, allowing advertising purchasers to better link a specific advertising campaign to a consumer purchase. Given that those changes are clearly impediments to effective targeting and given that both Google and Apple are brokers of prime advertising real estate, it's clear that the catalyst for a heightened emphasis on user privacy is reflective of exogenous factors. Big technology firms appear to be making prophylactic concessions in response to sweeping policy changes, with regulation like the European Union's General

¹⁴ <https://amzscout.net/blog/amazon-statistics/>

Data Protection Regulation, or GDPR,) and California's Consumer Protection Act, or CCPA, looking increasingly threatening to the data brokers. To this effect, the former provides for fines of up to 2% of global turnover for data processing, security, and protection violations, 4% for more severe violations like the transfer of data to a third country or international organization or user consent, and increasingly severe violations for ongoing noncompliance.¹⁵ The legislation appears to have teeth, with Ireland announcing a EUR 1.2 billion fine for Meta in May 2023 and an EUR 345 million fine for ByteDance's TikTok in September 2023, while Luxembourg announced a EUR 746 million fine for Amazon in July 2021.¹⁶

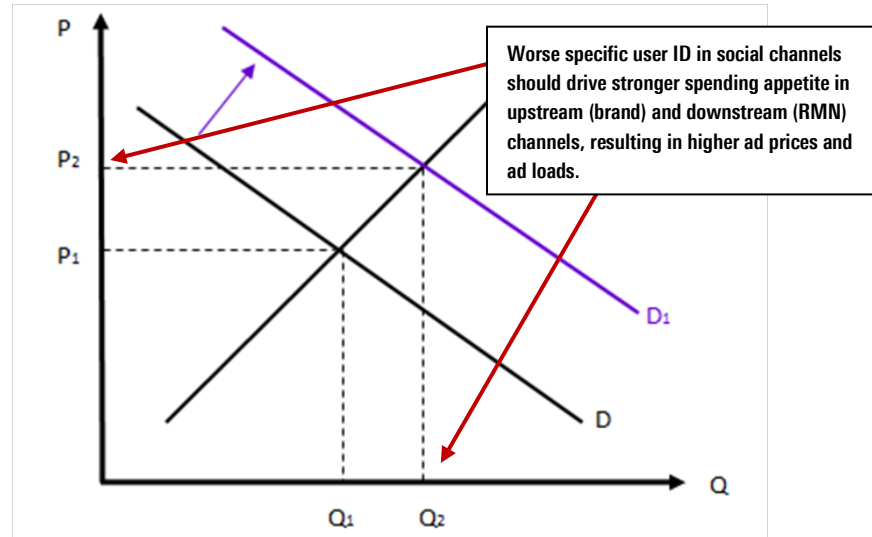
Though most of the largest fines continue to snake their way through appellate courts, the gauntlet has been thrown down, and we suspect that ad targeting and attribution, particularly in the middle of the funnel, where consumers are not actively shopping, is set to be permanently worse. While consumers can opt to share their data in exchange for better targeted ads, only a small fraction of users elect to do so—just 25% on iOS after the worldwide rollback of IDFA, per Statista. To be fair, a veritable army of firms is working to offset these changes, with companies like The Trade Desk achieving some degree of success, but a return to preprivacy change performance levels strikes us as unlikely.¹⁷ As we lay out in Exhibit 29, we expect this to result in an outward shift in the demand curve for upstream (brand) and downstream (retail media) advertising inventories. We expect those categories to be much less affected by regulatory changes, as the former often casts a broader net and requires less precise targeting, while the latter occurs so far downstream in the shopping journey—consumers have often progressed beyond awareness and interest into "desire and action" (using the AIDA purchase model)—that transactions frequently occur in a closed loop within marketplace ecosystems and attribution data (and ROAS) are commensurately clearer.

¹⁵ [https://gdpr-info.eu/issues/fines-penalties/#~:text=83\(4\)%20GDPR%20sets%20forth,to%20that%20used%20in%20Art.](https://gdpr-info.eu/issues/fines-penalties/#~:text=83(4)%20GDPR%20sets%20forth,to%20that%20used%20in%20Art.)

¹⁶ <https://dataprivacymanager.net/5-biggest-gdpr-fines-so-far-2020/>

¹⁷ One potential equilibrium, per our Telecommunications Director of Research Mike Hodel, is an environment where advertisers could target individuals without knowing the exact ad placement details.

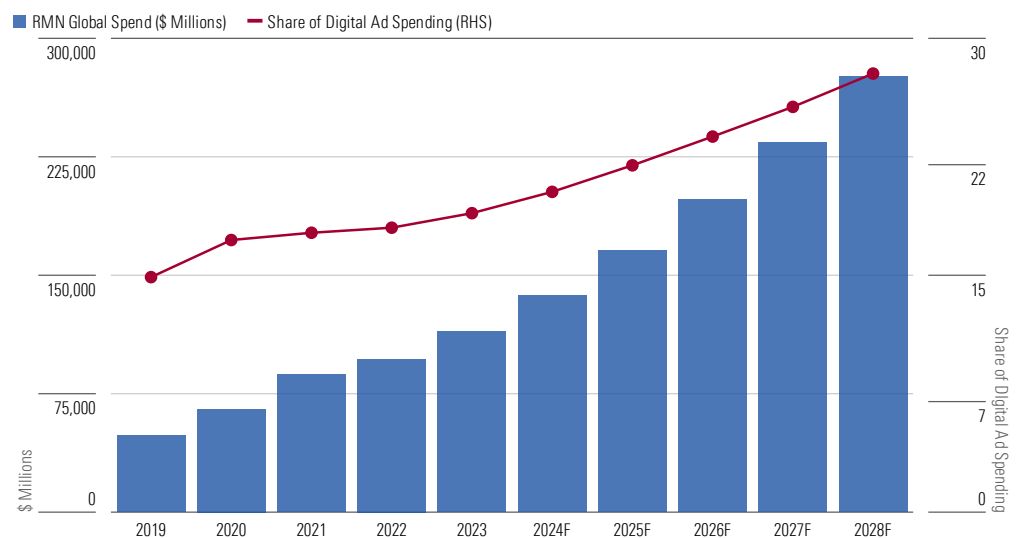
Exhibit 29 Declining Return on Ad Spending in Midfunnel Channels Should Increase Demand for RMNs



Source: Transtutors. Data as of May 21, 2024. The purple line indicates likely retail media network demand after an outward shift in the demand curve, with P2 and Q2 representing the new equilibrium prices and quantities we'd expect in that environment.

It's no surprise, against this backdrop, that eMarketer projects a striking 8.8 percentage points of market share gains for retail media networks between 2023-28, to 27.7% of total digital advertising spending (Exhibit 30). This appears directionally consistent with our forecasts, which call for north of 18% annual growth in retail media network revenue for online marketplace operators during that period.

Exhibit 30 Retail Media Network Growth Reflects Shifting Market Dynamics, to Marketplaces' Benefit

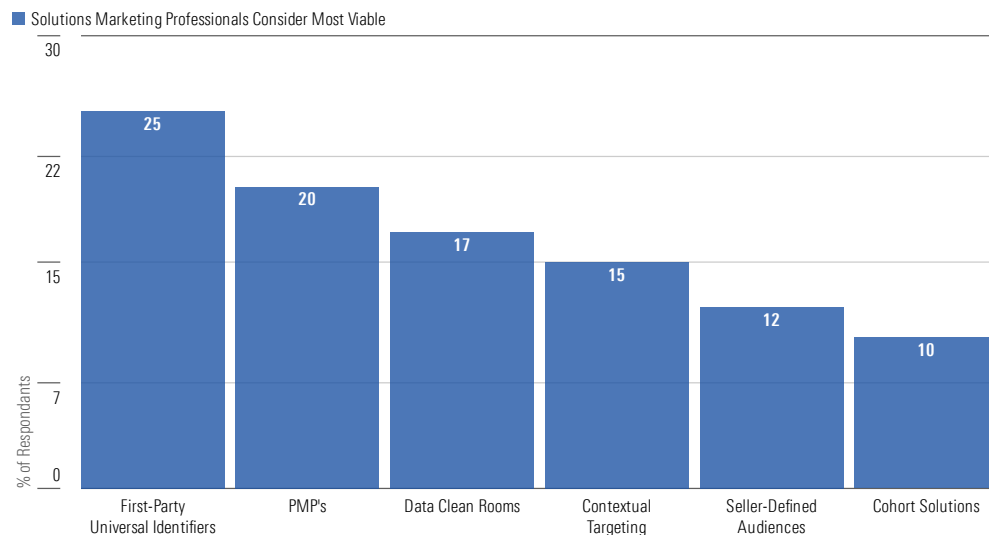


Source: EMarketer. Data as of May 22, 2024.

That's not to suggest that the industry is sitting on its laurels, by any means. Wide-moat Alphabet remains proportionately data rich in its search business, with the ability to track logged-in users' search

journeys across (if not within) websites, providing it with still valuable first-party data. It is rolling this into its Privacy Sandbox, a cookie-less alternative that allows brands to use cohort data to measure advertising campaign performance while protecting individual privacy. Meta, on the other hand, has invested heavily in contextual targeting solutions, leveraging artificial intelligence models to help match advertisers and interested users based on search text, keywords, and actions across its popular social media properties. Below, we outline the six solutions that the industry has proposed to deal with the retirement of IDFA and cookie deprecation.

1. **First-party universal identifiers.** In this solution, websites or platforms assign unique IDs to users based on their interactions with the platform. The more interactions a platform has with a user, the better this data (and subsequent targeting) will be. This is the preferred choice for most marketers (Exhibit 31) and the strategy that online marketplaces use, given a logged-in user base with access to zip codes, tokenized credit cards, and order histories, and shouldn't change much in light of evolving privacy regulation. The Trade Desk's UID2 is a third-party example of this, with changing encryption protecting individual user identities, while users who opt-in see their data cached in web storage, analogous to a first-party cookie, until they log out. The challenge, as seen with Apple's IDFA, ties to getting users to opt-in to the service.
2. **Private marketplaces, or PMPs.** Invitation-only auctions where a select group of publishers and advertisers transact on a specific inventory of premium advertising impressions.
3. **Data clean rooms.** A secure environment where entities can share and analyze data without exposing identifiable information. These are aggregated and anonymized, with strictly controlled access (Google's Privacy Sandbox can provide a version of this).
4. **Contextual targeting.** Delivering ads based on the context of the website, article, or content. Meta's efforts predominately focus on contextual targeting across its social media platforms.
5. **Seller-defined audiences.** Sellers define the demographics, interests, and behaviors of their audience, with distinct, target-able segments. Advertisers then select which segments to target based on seller criteria.
6. **Cohort solutions.** Another application of the Privacy Sandbox approach, whereby users with similar interests are grouped and marketed to.

Exhibit 31 Preference for First-Party Identifiers Favors Online Marketplaces (and The Trade Desk)

Source: EMarketer. Data as of May 22, 2024.

In general, marketers prefer the first-party universal identifiers that walled-garden ecosystems¹⁸ are best poised to provide. If advertisements and transactions both sit on the same platform, first-party universal ID should be an effective cookie substitute—but significant challenges remain, with retargeting users who have expressed purchase interest and frequency capping to avoid alienating consumers (and improve ROAS) becoming increasingly difficult without the ability to track individual behavior across websites. Partnerships with limited data-sharing across walled-garden ecosystems can help, but progress on this front remains in its early innings.

Consider, for instance, a shopping journey where an individual searches for an engagement ring on Google, then clicks through a couple of web pages, is served a handful of relevant (at that time) advertisements and, armed with that knowledge, goes ring shopping with their significant other. They elect to make a purchase from one of the online merchants, which then knows that the individual has already made their purchase, and would not, all else equal, voluntarily choose to serve them ads for engagement rings. Contextual targeting works similarly in the old environment and the post-privacy change one, whereby that individual would be served with advertisements that align with cohort interests and subsequent purchases—wedding venues, tuxedo rentals, wedding bands, florists, and so on. The big change in a world of aggregates, absent unique IDs, is that other players in the market no longer know that the customer has already made their purchase and continue to serve up (likely wasted) advertisements for engagement rings as that individual scrolls through Instagram or conducts Google searches. That persists throughout the engagement (we hope!) and wedding process, applying downward pressure to ad conversion rates and likely to ad pricing in middle-funnel channels. There are

¹⁸ Walled-garden ecosystems refer to environments where a single company controls access to users, data, and advertising within its platforms. The larger the ecosystem, the more holistic the picture of customer behavior, in general. The best examples are technology giants like Google, Facebook, Amazon, and Meta, though smaller firms like eBay and Etsy are technically walled gardens—they just have much fewer touchpoints and a less robust understanding of user behavior.

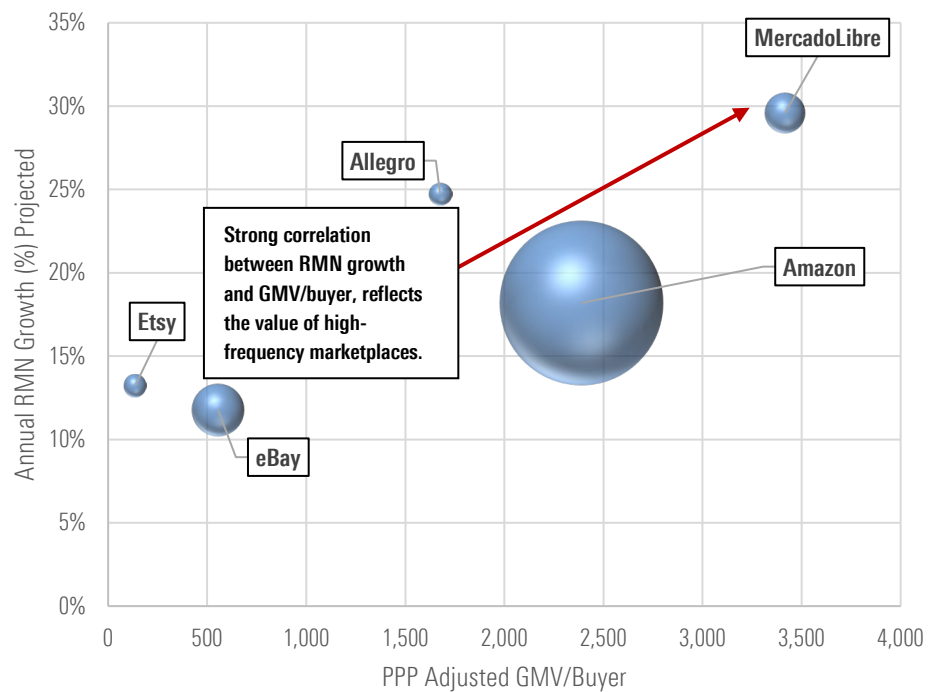
partial solutions to this problem, often enabled by AI--Google might identify that searches for wedding venues indicate that the ring purchase has been made, and signal jewelers to stop sending ads by moving the individual into a post-engagement cohort--but without direct attribution enabled by third-party cookies, there is a latent period in which inventory is wasted in a way that did not previously occur.

To be clear, Google and Meta remain an integral part of the digital advertising ecosystem and will grow increasingly competent at circumventing existing impediments. Advertising dollars flow to where consumer eyeballs are, and Meta's nearly 4 billion quarterly active users offer access to more than half of global internet users—a prospect too salient for marketers to forego. But it seems likely to us that retail media networks, which are far more likely to be closed loop ecosystems—serving advertisements and observing buyers convert on their own platform while logged in—are likely to be less affected by current headwinds. Ultimately, "intention to buy doesn't go on the [income statement], only the sales,"¹⁹ and marketing dollars will flow to the areas where they receive the highest return on investment. Our expectation for softer conversion rates in search and social channels suggests that retail media networks should be the principal near-term beneficiary.

Building on this, we believe that Amazon, MercadoLibre, and Allegro should emerge as clear winners of prevailing advertising trends within our e-commerce marketplace coverage, with high customer frequency and high share of customers' online spending solidifying them as keystone partners in their respective markets (Exhibit 32). We continue to view Etsy, eBay, and Chewy as likely beneficiaries as well, though softer gross merchandise sales per user and lower regional market share render them second-tier partners in the broader retail ecosystem.

¹⁹ Ronald Howard of MIT. Accessed via "Selling the American People," Page 239.

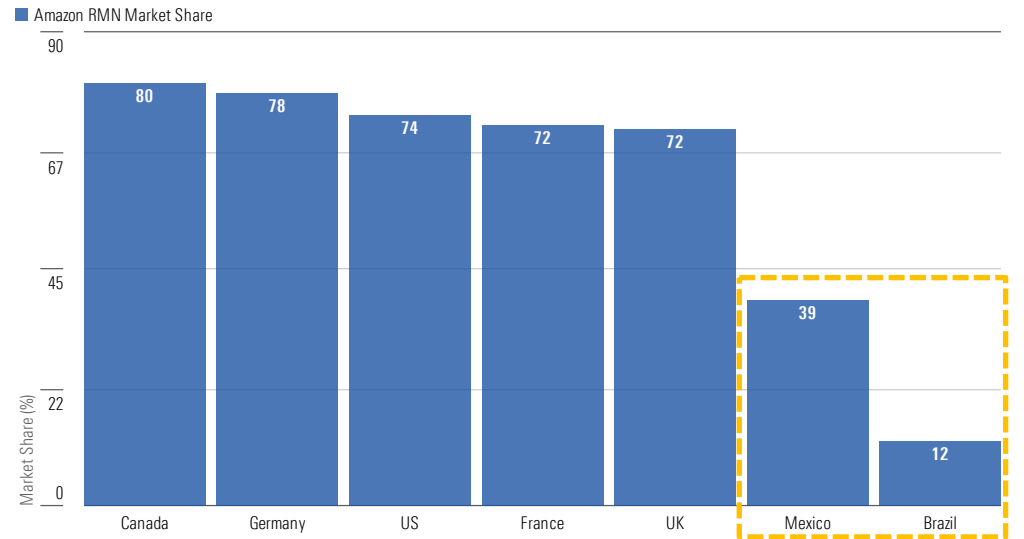
Exhibit 32 Strong Share of Spending Correlates With Outsize Growth Prospects for Top Regional Players



Source: OECD, Company filings, Morningstar estimates. Data as of May 31, 2024.

Finally, it's important to highlight that regional players can carve out a defensible edge in their local markets. Said otherwise, advertisers care about local marketplace network effects, local penetration, and local buyer frequency, all of which deliver the strongest return on their advertising dollar. This is best illustrated by Amazon's retail media network market share globally—the materially lower rates in Mexico and Brazil are reflective of wide-moat MercadoLibre's deep entrenchment in those online commerce ecosystems, suggesting that the best-of-breed operator in markets that are large enough to be self-supporting (including, in our view, Latin America and Poland) have every chance of stymieing encroachment from even large, well-capitalized competitors like mighty Amazon.

Exhibit 33 MercadoLibre's Latin American Performance Has Stunted Amazon's Regional Penetration



Source: EMarketer. Data as of May 22, 2024.

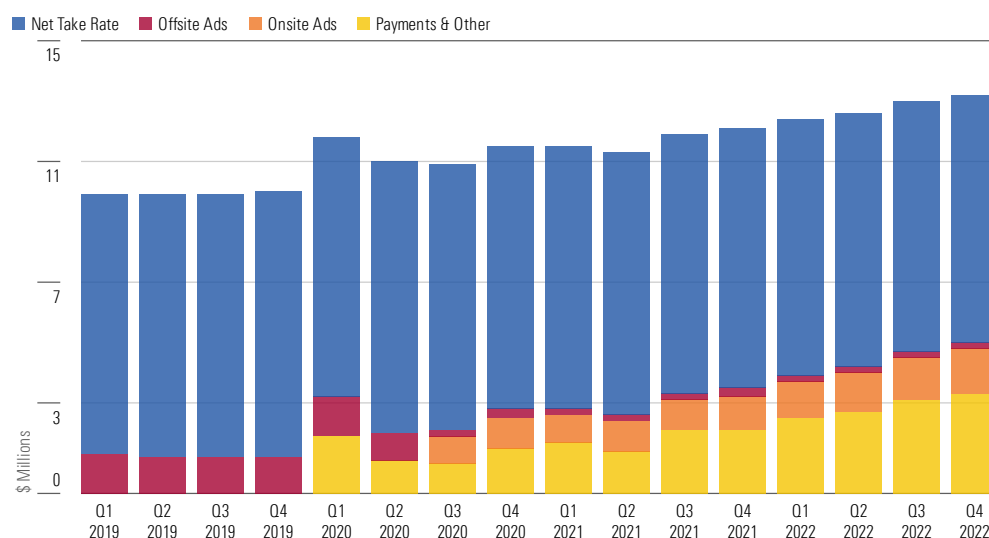
To summarize, regulatory shifts favor a pivot toward retail media network spending, a trend which should meaningfully benefit our online marketplace coverage. We estimate that the advertising portion of those businesses could swell to 31% of company value in five years, from 21% today, with the largest marketplaces that capture the highest volume of customer spending (Amazon, MercadoLibre, Allegro) set to benefit disproportionately. Importantly, advertisers seem to care most about local network effects, suggesting that judicious operators in developing markets would be well-served to prioritize the development of profitable retail media network businesses before large, global competitors do.

Financial Services Add Low-Risk Profits to Swelling Online Retail Ecosystems

Financial services represent the second leg in the three-legged stool of subsidiary online commerce businesses (advertising, financial services, fulfillment) and offer important, ecosystem-strengthening touchpoints for operators, particularly in developing markets. In this short subsection, we address recent strides made by marketplaces like eBay toward capitalizing on the profitable opportunity afforded by serving as a payment facilitator on the processing rails of low-cost processors like wide-moat Adyen and Braintree (a narrow-moat PayPal subsidiary), the importance of buy-now-pay-later lending, and the alluring runway ahead of MercadoLibre in its Mercado Pago fintech arm. We close with a brief discussion of financial technology trends in China, given that the market has arguably leapfrogged the US in fintech innovation through large super apps like wide-moat Alibaba's Alipay and wide-moat Tencent's WeChat Pay. Ultimately, we believe that the key learnings from China tie to the importance of incentive alignment to avoid the assumption of unnecessary systematic risk and the need to proactively manage regulatory relationships to avoid those transitioning from tailwinds to headwinds as integrated online commerce players expand the scope of their financial services offerings. The bottom line? Even operators in developed markets can drive substantial incremental return from auxiliary financial services, which help further spin the network effect flywheel.

Considering these points in sequence, we outline below the evolution of eBay's take rate between 2020, when its exclusive agreement with PayPal expired, and 2022, when its managed payments migration was largely completed.

Exhibit 34 eBay's Decision to Facilitate Platform Payments Added \$500 Million in Annual Operating Profit



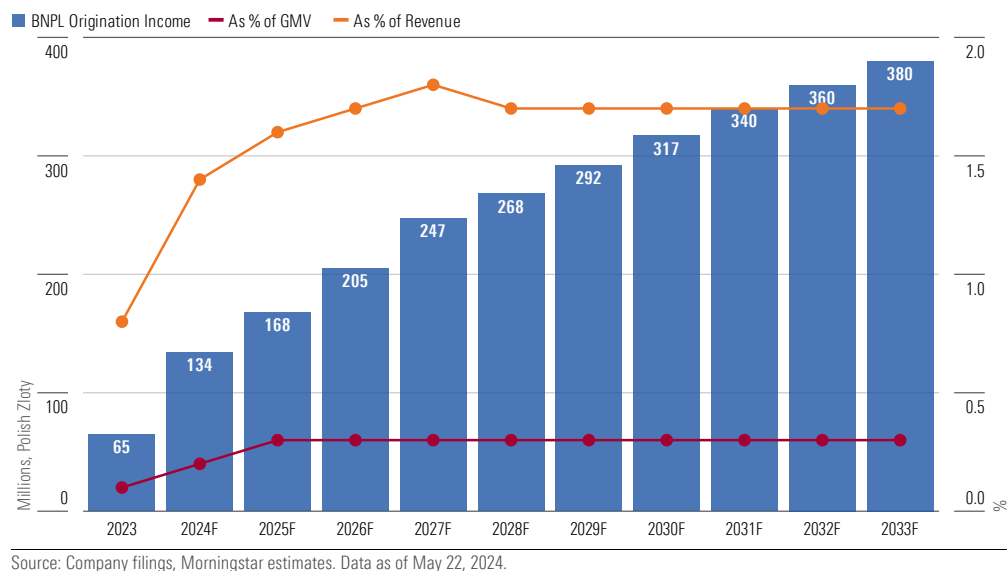
Source: Company filings. Data as of May 22, 2024.

The transition to acting as principal, rather than agent, in payment transactions meant that eBay was able to expand its gross take rate to 13.3% of gross merchandise volume in the fourth quarter of 2022, from just 9.9% in the first quarter of 2019, driven almost exclusively by growth in financial services.

Functionally, the firm acts as a payment facilitator (not unlike narrow-moat Toast in the US restaurant space), providing a white-label gateway for buyers but funneling processing volume through wide-moat Adyen. Adyen in turn provides all the requisite back-end services—clearing transactions with issuing and merchant banks, approving or denying transactions, and divvying up the interchange fee between those players and the card networks. For the small trouble of running transactions that were already occurring on its marketplace through its own managed payments system, eBay now receives a healthy 25% operating margin on a business approaching 3% of GMV. Said otherwise, with the assumption of effectively no additional risk, eBay earned roughly \$550 million in incremental operating profit at 2023 GMV levels, allowing it to invest more aggressively in platform enhancements like AI-enabled listings, pricing recommendations, and improvements to its competitively advantaged focus categories which now comprise 30% of annual platform sales.

We're somewhat incredulous that only 58% of digital commerce platform payment volumes are facilitated by the platforms themselves (eMarketer) and view this low-hanging fruit as table stakes for the industry moving forward. As we see it, managed payments provide a platform for subsequent innovation, with eBay targeting an incremental \$300 million in financial services revenue that it plans to build upon its managed payments ecosystem over time (a target we view as achievable). Even in developed markets, fintech innovation appears to have a role to play for large marketplace operators.

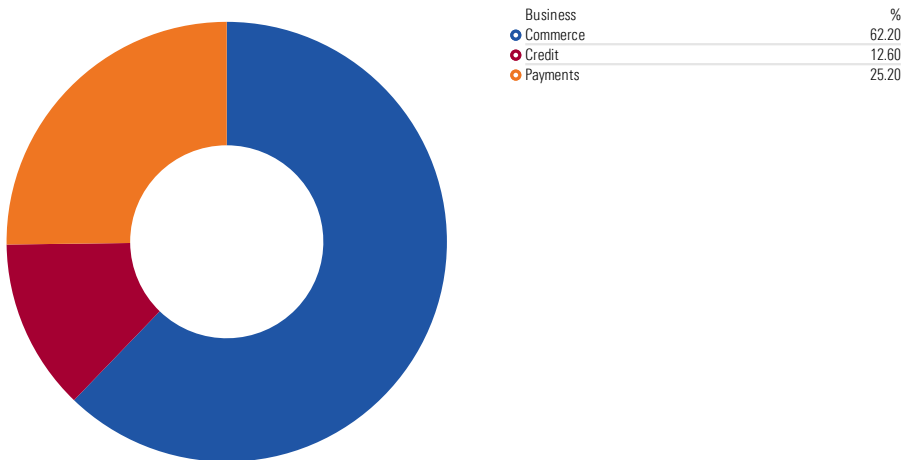
Illustrating this further, we believe that the embrace of buy-now-pay-later, or BNPL, services, even if only as a loan originator, can provide an important lift to GMV and operating profitability, further strengthening online commerce ecosystems. Here, wide-moat Allegro provides the best example, with its BNPL lending, originated through its Allegro Pay arm, adding roughly 12 basis points to its take rate and 90 basis points of operating profitability in its Polish segment at nearly 100% profit flow-through. Given the increasing size of that business, the firm now breaks out operating profit tied to its loan origination apparatus through a securitization partnership with Aion bank, booking PLN 65 million (approximately \$16 million) in operating profit during 2023 with effectively zero underwriting risk. Buyer preferences vary by market, but the service is extremely popular in Europe, accounting for more than 14% of Allegro's GMV and driving average order values that are 35% higher than non-financed transactions—with back-of-the-envelope math suggesting that it effectively provides a 5%-5.5% lift to consolidated GMV.



The roughly 170 basis points of incremental income directly tied to BNPL loans represent about 5% of the firm's Polish-segment EBITDA, by our estimates, and drives home nicely our contention that the addition of incremental financial services can strengthen existing online marketplace ecosystems with low risk, while platforms' sprawling reach makes them ever tougher to disintermediate for new entrants.

Notably, we believe that opportunities for fintech expansion are even more critical in emerging markets, providing substantial incremental opportunity for MercadoLibre in its growing payment acquiring and credit businesses. In many emerging markets, marketplace players seeking to grow the size of the online commerce channel have had to couple their core offering with some combination of financial and fulfillment services, addressing unmet needs in many of those countries. Said otherwise, MercadoLibre's Mercado Pago fintech services act not just as a facilitator of digital commerce volumes but as an enabler, with many regional consumers' first experiences with the formal financial system coming through fintech companies rather than traditional banks. The firm's sprawling business now spans not just payment facilitation and BNPL financing but also working capital lending for online and offline merchants, consumer credit cards, personal lending, asset management, insurance, bill pay, and the ability to transact in select cryptocurrencies. We expect MercadoLibre's fintech business to grow at a striking 27% 10-year compound annual growth rate, clocking in with north of \$20 billion in 2033 revenue and accounting for almost 40% of operating profits in that year (despite comprising just north of 20% of global revenue).

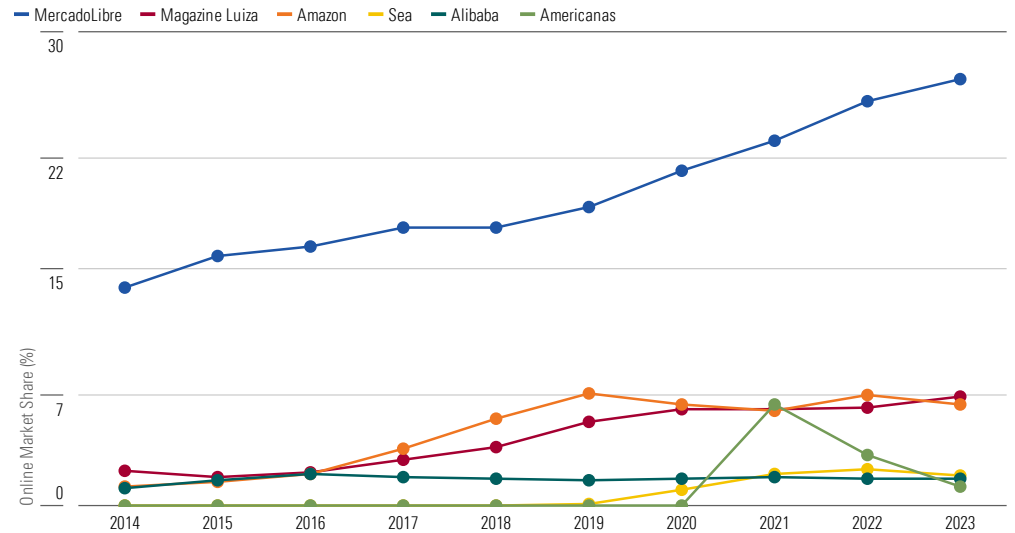
Exhibit 36 In Emerging Markets, Fintech Is Critical to Ecosystem Development



Source: Company filings, Morningstar estimates. Data as of May 22, 2024.

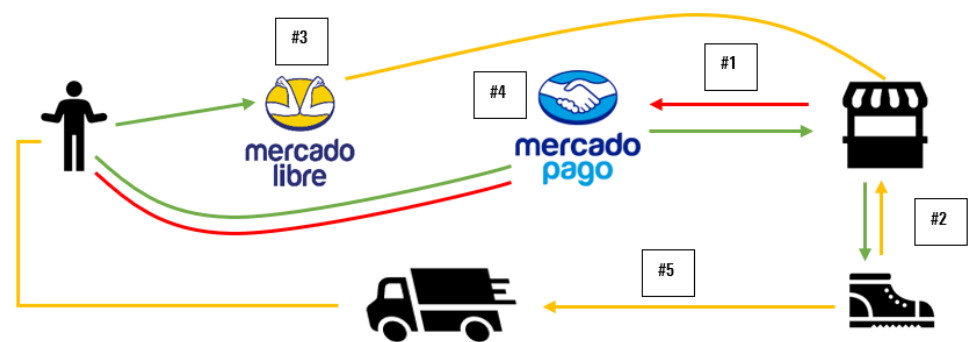
The net effects of Mercado Pago's robust, multipronged growth are an uptick in formal financial system penetration, with some of the strongest annual e-commerce growth rates in the world sitting across the firm's Latin American footprint, and swelling market share in its commerce business, with more than a third (34%) of regional online commerce volumes now funneling through MercadoLibre's commerce platform, up 5 percentage points since 2019. As we'll explore with our brief interlude on Chinese fintech later in this subsection, the complexity of MercadoLibre's ecosystem, cultural differences across Latin American markets, and access to sensitive and personally identifiable information through (predominately) the firm's payments and lending services have resulted in the evolution of a marketplace that's purpose-built for the countries it serves and one which has had to work closely with regulatory bodies to secure a variety of approvals--from its payment processing licenses in Argentina and Brazil to its more recent pursuit of a formal banking license in Mexico.²⁰ As we've seen with the firm's ability to repel competitive pressure from strong global competitors (including Amazon, wide-moat Alibaba, no-moat Sea Limited, Magazine Luiza, and Lojas Americanas), we believe that that combination—variance in local preferences, high ecosystem complexity, and access to sensitive data—favor the emergence of a local winner. Expansion in fintech services serves only to reinforce this dynamic.

²⁰ The firm announced its intent to pursue a formal banking license in Mexico in May 2024. That's reflective, in our view, of lower digital financial penetration and what the firm views as a compelling opportunity to achieve "financial preeminence" with those users in a quickly growing, relatively affluent market. The banking license would come with more stringent regulatory oversight and capital requirements but would allow MercadoLibre to offer a full suite of end-to-end financial services and, between the ability to take deposits and engage in cash sweeps, should mitigate a funding cost disadvantage that the firm would otherwise have relative to conventional banks. Since Mexico has tighter lending spreads and net interest margins than Brazil and Argentina, this appears to be the first logical market for MercadoLibre to target for conventional licensing.

Exhibit 37 Ecosystem Complexity, Diverse Preferences, Sensitive Data Favor a Local Commerce Winner


Source: Euromonitor International, Morningstar estimates. Data as of May 22, 2024. We use company filings and eMarketer market size data for our calculations, resulting in market share discrepancies (Euromonitor reports 27%, we calculate 33.7%). A chunk of this is tied to C2C volume, which Euromonitor excludes from its calculations.

We believe that the flywheel effect of a sprawling services ecosystem is best explained by an illustration of a potential transaction on MercadoLibre's commerce platform—with similar dynamics common for peers with integrated fulfillment services like Amazon and Allegro.

Exhibit 38 Broader Services Reach Allows Online Marketplaces to Expand Revenue and Profit Share


Source: Morningstar. Data as of May 22, 2024. Red lines denote flow of debt, yellow denote flow of product, green denote flow of funds.

- 1. Merchant borrows working capital from Mercado Pago.** Interest rates in the high-60% range are steep, but credit isn't available from traditional banks, and the terms improve the longer that the merchant extends its relationship with MercadoLibre, underpinning budding switching costs.
- 2. Merchant secures inventory.** As often as not, with nearly 50% fulfillment penetration, they'll elect to ship this to a MercadoLibre fulfillment center in exchange for a small storage fee.

3. Merchant lists inventory, pays for advertising. MercadoLibre earns roughly \$0.02 per \$1 of merchandise transacted on its platform through high-margin onsite advertising. With dominant online commerce share in Latin America, expansion into untapped advertising formats like offsite ads, and buoyed by declining returns on advertising spend in competing social channels, this should increase meaningfully over time.

4. Buyer seeks to purchase new hiking boots but wants to pay in installments. They turn to Mercado Pago for buy-now-pay-later financing, allowing them to make a much larger purchase. These loans are often merchant funded, in the form of higher merchant discount rates and, by extension, fintech take rates.

5. Mercado Envios fulfills the order within two days. Roughly 80% of orders are fulfilled in two days or less, compared with an average fulfillment time of three to four days for the Brazilian Postal Service Correios.

At each stage of the transaction, MercadoLibre plays a key role, becoming all but indispensable to its merchant partners, while offering the broadest selection and competitive prices for its swelling buyer base. It's clear from the example above that the ecosystem is self-reinforcing--strong contribution margins fund investments in improving fulfillment services and Mercado Pago loans, which in turn attract incremental sales to the platform. Merchant acquisition is accelerated by the firm's strong regional penetration, with roughly a third of Latin Americans transacting across MercadoLibre's marketplace or commerce properties in 2023, while merchant retention increases as their utilization of working capital lending and fulfillment services do. The stickiness of the platform for those merchants renders poaching by multinational competitors substantially more difficult, while barriers to entry grow stouter each year as MercadoLibre continues to invest behind its sprawling fulfillment apparatus. It's clear that, when managed appropriately, increasing ecosystem complexity and share of transaction revenue (take rate) correspond with increasing barriers to entry for competitors of MercadoLibre's ilk.

Wrapping up our discussion of the fintech evolution in the online marketplace space, we turn to China, where sprawling conglomerates like wide-moat Alibaba and wide-moat Tencent offer some indication of how Western markets might develop over the next five to 10 years. We believe that the most salient takeaways are the following:

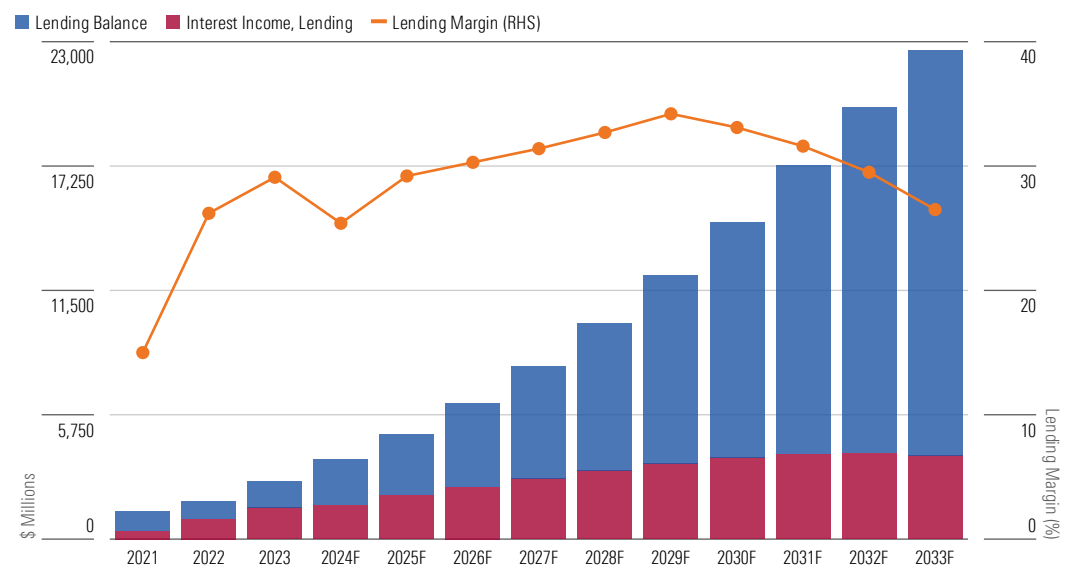
- Incorporation of nontraditional datapoints can underpin stronger underwriting and better credit performance for fintech companies than for conventional banks in emerging markets but require strong incentive alignment.
- Proactive management of regulatory risks is essential to avoid incubation of systematic risks and antitrust crackdown.²¹

Considering these in sequence, the walled-garden ecosystems sported by super apps like Alibaba and Tencent (and we believe, albeit to a lesser extent, the ecosystem supported by MercadoLibre) permit unprecedented levels of insight regarding consumer behavior that can be leveraged into an underwriting

²¹ Ideas regarding Chinese fintech evolution are traceable to Martin Chorzempa's excellent book, "The Cashless Revolution: China's Reinvention of Money and the End of America's Domination of Finance and Technology."

cost advantage. During its meteoric rise, Alibaba christened proprietary "Sesame Scores" that evaluated creditworthiness, considering not just users' past payment performance and public credit scores, but also proxies for responsible behavior like purchasing scratch pads for furniture, stability of residential status, their frequency of online shopping and on-time payment rates for utility bill payment. The net effect was substantially better underwriting than the inefficient system upheld by state-owned banks in China. We expect that MercadoLibre will benefit from a similar underwriting edge—at least in the near term—in Brazil, Mexico, and Argentina, a view corroborated by its exceptional mid-30% net interest margin after losses rate over the past few quarters (Exhibit 39).²² Not unlike what we saw during China's fintech hypergrowth period, where charge-off rates could hit a striking 40%, MercadoLibre is benefitting from a surge in previously unbanked users and historically credit-starved end markets, with ethereal interest rates in the high-60% range more than offsetting expensive funding costs and allowances for loan losses. The firm's position is further bolstered by open banking regulation, which requires that consumers can elect to share their financial services data from traditional banks and financial services providers via standardized application programming interfaces. No such regulation exists in the other direction at this stage. While we expect MercadoLibre's fintech margins to decline over time, particularly as the firm expands its reach into less risky categories like payroll and auto loans (which carry strong risk-adjusted returns but lower yields than its current personal lending, merchant lending, and credit card portfolio), we continue to expect strong performance from MercadoLibre's credit apparatus, consistent with Chinese marketplace benchmarks.

Exhibit 39 While Spreads Will Compress, MercadoLibre's Credit Business Is Quietly Exceptional



Source: Company filings, Morningstar estimates. Data as of May 22, 2024.

The one big caveat to our expectations here is that incentive alignment is critical to ensuring durable success of the firm's lending business. The most apparent risks to monitor, as we see them, are (a) any

²² "NIMAL," or net interest margin after losses, is calculated as interest income minus funding costs (interest expense) less loan charge-offs as a percentage of outstanding loan balances. It's analogous to net interest margin for banks.

uptick in loan securitization mix that shifts a disproportionate share of lending risk toward MercadoLibre's funding partners, as we saw with Alipay, and (b) consistent growth in the loan portfolio that doesn't mirror credit quality trends. Said otherwise, if the firm is responsible for pricing default risk but not for bearing it, we'd adopt a more cautious stance regarding its underwriting prowess, and if we were to see an increase in nonperforming loans in tandem with a commitment to expanding the loan portfolio (the firm has been very disciplined here, in the past), we would harbor substantial concern. That said, we believe that the early phases of Chinese fintech growth helpfully illustrate Mercado Crédito's potential, with our current estimates suggesting that the business will account for 12.5% of the firm's total operating profit in a decade and 33% of profit in the firm's Mercado Pago (fintech) segment.

Strong opportunities for incremental fintech profitability for MercadoLibre must be tempered, however, with a sober look at the Chinese fintech ecosystem in 2020 and beyond. Unchecked growth in that country resulted in threats to financial stability, best exemplified by the meltdown of its unregulated peer-to-peer lending platforms. Subsequent regulatory crackdowns revealed that Ant Financial (Alibaba's fintech subsidiary) had amassed a shadow banking lending portfolio of staggering size with a minimal capital buffer, resulting in scuttled plans for an initial public offering and materially stricter regulation. To avoid this, online commerce marketplaces expanding into fintech services must, at a minimum, transparently report total loan volumes, even when securitized, maintain capital consistent with Basel minimum standards for banks in cash and short-term securities, and incorporate financial segments under subsidiary holding companies. We'd also recommend careful attention to encrypting and anonymizing user data, particularly when shared externally (advertising, loan securitization where possible) to prophylactically address regulatory concerns. Ultimately, we believe that the spoils of expansion into financial technology services are potentially very large, particularly in developing markets like Latin America. In fact, we project that nearly 40% of MercadoLibre's operating profit will be attributed to its fintech apparatus by 2033, roughly double that segment's revenue contribution. Looking to China as a case study, such growth hangs on privacy and reporting safeguards, which we believe should help to mitigate regulatory risk and antitrust concerns. As Martin Chorzempa succinctly put it in *The Payments Revolution*, "... if super apps can no longer freely share data, they may lose some of their model's advantages." This is the key risk that sprawling marketplace operators should work to obviate.

In summary, financial services can provide low-risk incremental profit streams for marketplace operators while unlocking incremental GMV growth when appropriately deployed. Those offerings can strengthen marketplaces' relationships with both customers and merchants, while financial licenses and access to personally identifiable information lifts barriers to entry for foreign competitors. We believe that marketplaces should approach financial services judiciously, adhering to bank regulatory frameworks where possible, and with a proactive approach to relationships with regulators should benefit from access to alternative data as well as traditional lending data courtesy of open banking regulatory frameworks. These services appear to be of particular importance in emerging markets like those in Latin America.

Logistics Services Hold the Ecosystem Together, Underpinning Retail's Shift Online

Fulfillment services are the third big piece of the puzzle for today's online marketplace operators, improving the customer experience with ever faster fulfillment speeds and an increasing assortment of delivery options. While that service remains a loss-leader for wide-moat companies like MercadoLibre and Allegro (and may be for wide-moat Amazon), segment performance continues to improve for each firm as they grow more efficient, as vendors grow increasingly integrated with Fulfillment by Amazon, or FBA, Mercado Envios, and Allegro One—allowing marketplaces to gradually increase their fulfillment services rates—and as integrated fulfillment services spin the marketplace flywheel ever faster, driving growing paid membership bases. Ultimately, we view integrated fulfillment services as a capital-intensive analog moat source that deters market entry by newer marketplace competitors of those firms' ilk, given the growing upfront cost required to provide a similar degree of service and the lack of guarantee that such service would be enough to convince existing customers to transition away from current providers. In the words of Morningstar's Mathew Young, CFA regarding wide-moat UPS:

"An upstart would incur immense financial losses while trying to amass the volume and density necessary to absorb the remarkably high capital outlays and fixed costs associated with a global parcel delivery network. In replicating a network of planes, trucks, sorting facilities, and skilled employees, a new entrant would face massive investment before it could win a critical volume of customers from the entrenched incumbents."

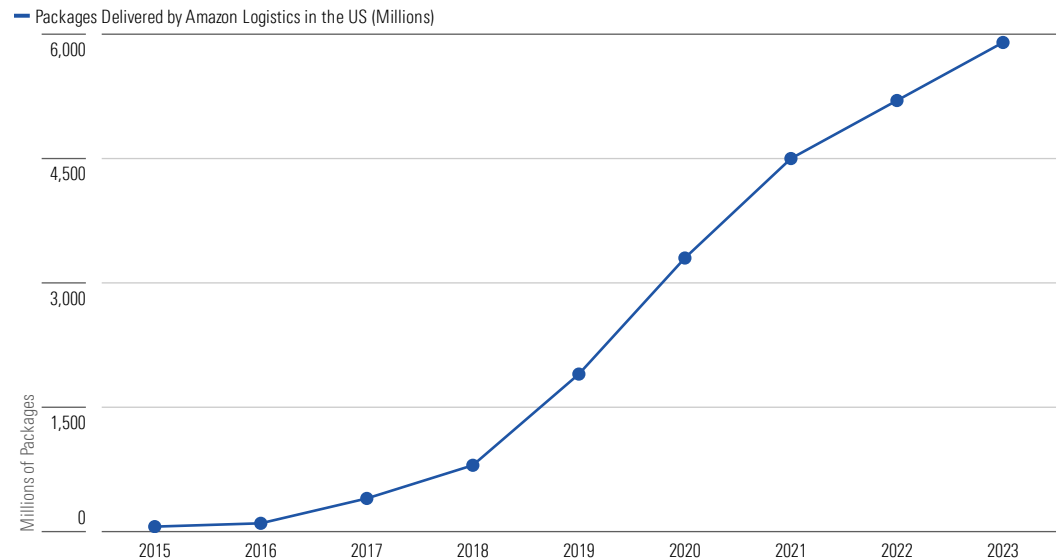
Reflective of this dynamic, we take a positive view on online marketplace fulfillment investments in general, and resolutely believe that they reinforce those firms' competitive positions relative to cross-border and asset-light marketplaces, with consumer delivery speed expectations only liable to increase over time. As we see it, wide-moat Shopify's decision to exit its owned-delivery business serves as further corroboration of our viewpoint.

Investments in fulfillment services are a classic example of the Jeff Bezos aphorism to "focus on what makes your beer taste better,"²³ with online marketplaces that manage their own fulfillment services generally proving able to drive improvements in fulfillment speed, order tracking transparency, and breadth of product selection. Given the extensive fixed costs needed to effectively manage parcel delivery, from rights to fly to skilled employees, effective order routing, and a sprawling asset base—fulfillment and sortation centers, rollers, aircraft, sprinter vans, and trucks—success in that endeavor was not a foregone conclusion when the firm opened its first fulfillment center in 1997. Fortunately, it didn't need to be as efficient as third-party carriers like narrow-moat FedEx or wide-moat UPS—it just had to be as efficient as those firms plus their profit margin (roughly 10% for FedEx ground), or else to provide superior service to customers that attracted incremental sales volume and outweighed the costs of shipping subsidies. While those investments look prescient in hindsight, allowing the firm to build a global Prime paid membership base with more than 300 million members (estimated) and to expand into higher frequency categories, they were controversial at the outset, with the logistics services industry's enormous fixed-cost requirements favoring cost advantage moats and consolidation around a few large

²³ <https://www.acquired.fm/episodes/amazon-com>

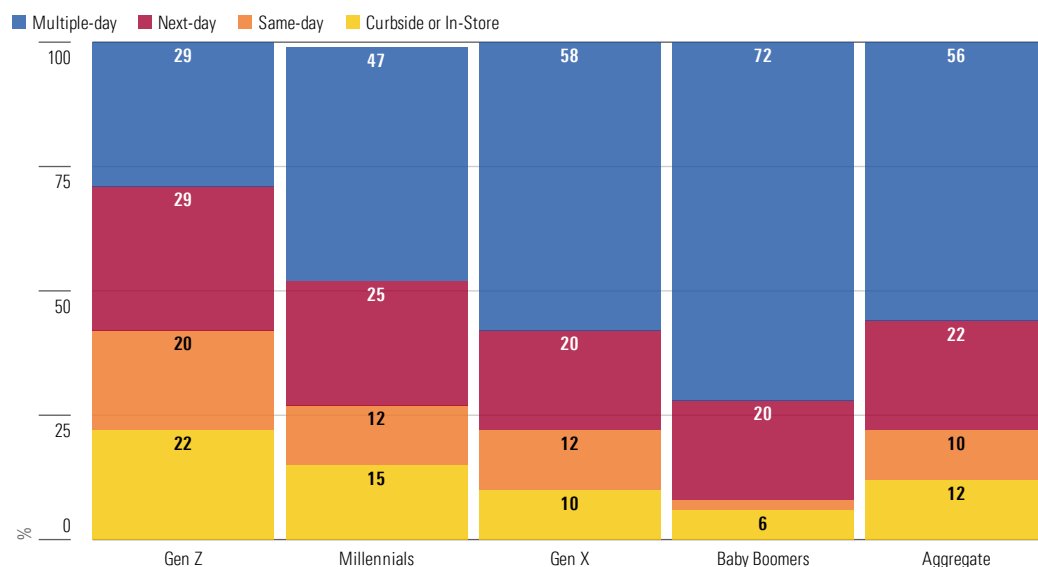
players. The strategic benefits, however, were undeniable, with fulfillment-integrated online marketplaces able to improve delivery times, storing high-frequency items in warehouses located near large population centers, to improve order tracking and delivery estimates, allowing the firm to compete better on the basis of reliability, and to enable a new cadre of sellers who drop-shipped inventory from lower-cost international markets to sell through the platform without ever taking hold of their products, unlocking a massive product assortment for marketplace buyers at ever-faster delivery speeds. In due course, strong route density, an improving ability to lower miles traveled per package with routing algorithms like Amazon Fulfillment Engine, or AFE, and a large base of captive parcel volume—the firm shipped a striking 5.9 billion packages in 2023, per Marketplace Pulse (Exhibit 40)—has driven extremely competitive fulfillment costs on a per-item basis. While we don't maintain estimates for Amazon expressly, we calculate a per-item shipping cost for online marketplace analog MercadoLibre of just \$3.67 in 2023, with improvements in bundling, order routing, and route density allowing marketplace operators to lower free shipping thresholds and expand further into lower average sales price products at positive contribution margin.

Exhibit 40 Amazon Delivered 5.9 Billion Packages in the US in 2023, up 7 Times in Just Half a Decade



Source: Marketplace Pulse 2023 Report, Morningstar. Data as of May 28, 2024.

It's clear that fulfillment has become a central part of the online marketplace value proposition, with e-commerce firms competing along the triad of competitive pricing, breadth of selection, and fulfillment services. To this effect, as seen in Exhibit 41, customer expectations for fulfillment service times appear to be growing with each subsequent generation—only 29% of Gen Z customers will accept multiple-day delivery, representing less than half of Baby Boomers' 72% rate. The Amazon effect is real and has sweeping ramifications for online commerce competitors moving forward as expectations have permanently reset.

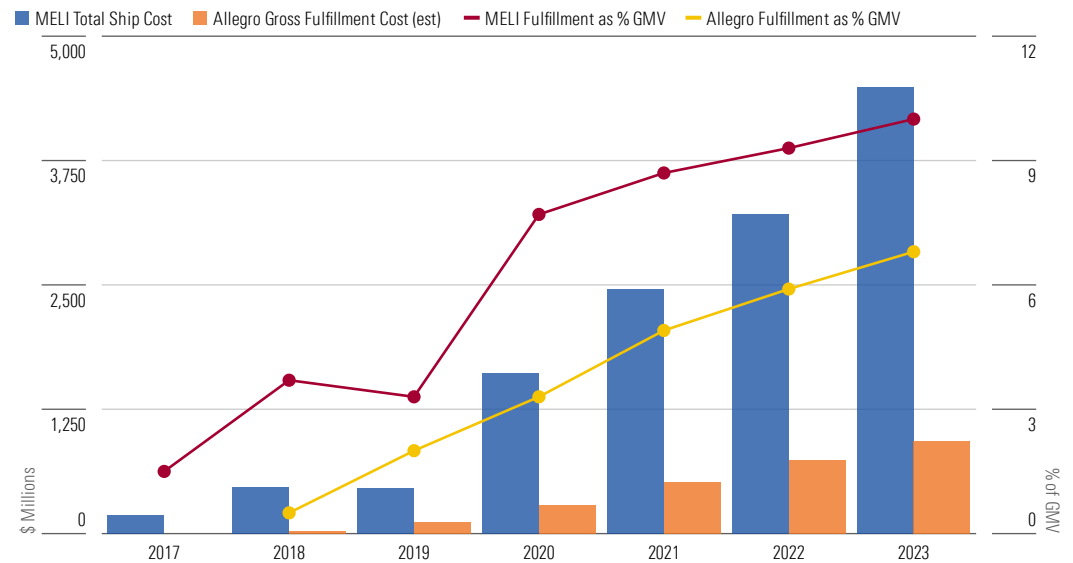
Exhibit 41 Customer Expectations Look Set for Inevitable Increase Regarding Fulfillment Speed

Source: McKinsey 2023 Holiday Study, Morningstar. Data as of May 28, 2024.

The stark demographic differences suggest that the online commerce customer of the future increasingly views fast (and generally free) fulfillment as table stakes. Most survey data we've seen corroborates this, with fulfillment speed and the availability of free returns generally representing the second and third largest contributors to online buying decisions, only falling behind price in the hierarchy of purchase decision drivers. The resultant shift has driven a sharp uptick in investment appetite, with both MercadoLibre and Allegro (astutely, in our view) pivoting their entire business models from asset-light, third-party marketplace models like eBay's to more costly but defensible fulfillment-integrated ones, taking a page from mighty Amazon's playbook (Exhibit 42).

For Allegro, heavy investment in fulfillment services was reflective of an increasing appetite for Polish expansion by Amazon itself, which has a large base of fulfillment centers in the country to capitalize on lower-cost labor than in neighboring Germany, and no-moat drop-shipping marketplace Sea Limited under its Shopee banner. While the firm's margin structure is permanently weaker than prior to its investment push--Polish segment EBITDA margins look likely to equilibrate around 35% of sales, down from 51% in 2019--its competitive position looks much sounder, and we view its mid-40% online commerce market share in that market as far more defensible than it was before those logistics investments.

Exhibit 42 Shifting Customer Demands Have Driven an Uptick in Marketplace Fulfillment Investments

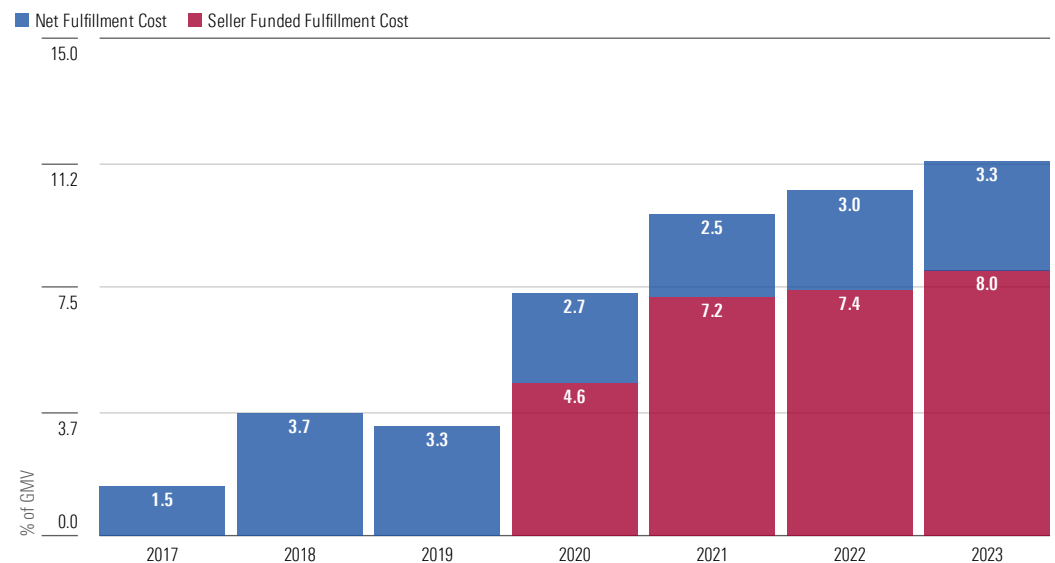


Source: Company filings, Morningstar estimates. Data as of May 28, 2024. We assume 40% cost share with merchants for Allegro in estimating gross fulfillment expense--the firm has historically relied on a 35/65 split but increased its merchant fees substantially in February of 2024 to offset inflation in service cost.

On a gross basis, fulfillment investments are similar in magnitude for smaller online marketplaces to those of wide-moat Amazon, whose shipping cost for marketplace sellers when last disclosed in 2017 was 10.4% of gross merchandise volume. On a net basis, operators have been able to pass along an increasingly large share of those costs to sellers (via higher fulfillment service fees) and to buyers (via membership programs), reflective of the increasing value that those services are providing.

We explore below that dynamic with MercadoLibre, which now appears to be subsidizing about 30% of total shipping costs today after starting to monetize its Mercado Envios investments over the past couple of years.

Exhibit 43 MercadoLibre Has Been Able to Pass Through a Good Chunk of Its Fulfillment Cost



Source: Company filings, Morningstar estimates. Data as of May 28, 2024.

Importantly, while the gross cost of fulfillment services has stayed reasonably consistent across the board, fulfillment service quality and the ability to share those costs with sellers have improved markedly. To this effect, MercadoLibre now manages 94% of shipments on its core commerce platform through Mercado Envios and fulfills 80% of orders in two days or less, up from 66% managed shipment penetration and 40% two-day fulfillment just half a decade ago. Our estimates suggest that Amazon, MercadoLibre, and Allegro see gross fulfillment cost clock in between 10%-12% of global GMV in equilibrium, while monetization, both through higher seller cost sharing and through membership programs (Amazon Prime, Meli+, Allegro Smart!) should offset an increasing portion of that cost on a net basis. For now, partial subsidies are par for the course, defending price competitiveness for those firms, increasing buyers' incentives to join paid membership programs, and encouraging those marketplaces' sellers to continue to migrate inventory toward warehouse and fulfillment services, further entrenching economic moats.

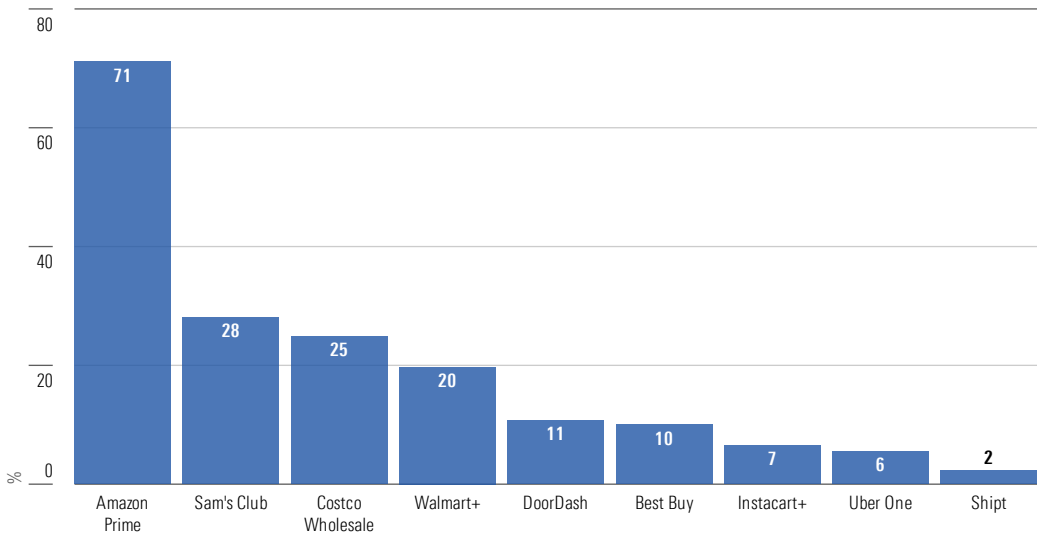
To summarize this third subsection, fulfillment services are a core component of the online marketplace value proposition, allowing operators to improve service times, grow their base of paid members, and increase switching costs for operators who elect to utilize storage and fulfillment services. Increased volume and a large degree of fixed costs should drive operating leverage over time, underpinning cost advantage moats for fulfillment-integrated online marketplaces and rendering their displacement by lookalike competitors less likely with each passing year. Improving route density and fulfillment center utilization should lower breakeven points on a per-parcel basis over time, allowing marketplaces to expand further into lower-priced merchandise at a positive contribution margin, or otherwise pass cost savings along to customers in the form of everyday low prices. While fulfillment services may be a loss-leader for Amazon, MercadoLibre, and Allegro today, they contribute materially to those firms'

ecosystems, and should grow less costly over time as merchant and customer membership monetization continue to improve.

Membership Programs Deepen Moats, Leveraging Online Players' Core Competencies

"Once I'm in the _____ ecosystem, why would I go anywhere else?" The goal of online marketplaces is to fill in the blank in that sentence—with Amazon Prime, Meli+, Allegro Smart! or any of the slew of alternatives now available on the market. To close our discussion of online marketplace's sprawling services reach, we'd be remiss not to briefly mention customer-facing paid membership services, which tie buyers ever closer to online platforms and commensurately increase platforms' allure to sellers in a dynamic that is quintessentially reflective of the network effect moat source. While the direct sales impact of paid membership is no more than a low-single-digit percentage of GMV, the ecosystemic benefits are massive, encouraging paid members to visit more frequently to generate a return on their membership investment. By investing to build out the membership value proposition, including benefits like members-only pricing, free, fast shipping at ever-lower thresholds, and access to any variety of auxiliary benefits (streaming audio and video services, cloud storage, and even offline discounts), operators drive strong repeat purchase behavior and organic traffic while increasing their allure to both sellers and advertisers.

Exhibit 44 Nearly 75% of Households Have an Amazon Prime Membership in the US

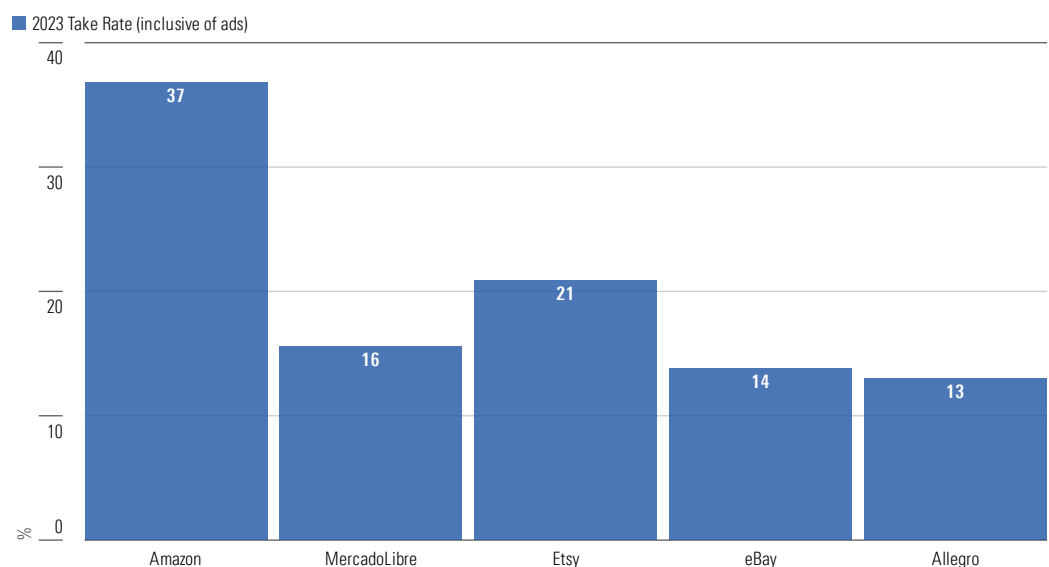


Source: eMarketer December 2023 Household Survey. Data as of May 28, 2024.

It's no surprise to us that nearly three in four households have an Amazon Prime membership, with the firm's extensive investments in fulfillment and streaming services as well as offline benefits through its Whole Foods stores underpinning an unparalleled value proposition for consumers, and consistent with network effect dynamics in general, paid memberships appear to be a "winner-take-most" affair. Over time, the Prime program has evolved from being purely price driven to being convenience driven, saving members time, energy, and effort through saved order histories, stored payment methods, and

personalization.²⁴ The net effect is that Amazon Prime has earned the right to the first crack at serving consumers' e-commerce needs, with 80% plus organic traffic²⁵ and more than half of product search starting on the US e-commerce stalwart's platform. Importantly, we view the key characteristic of a network effect moat source not in its ability to attract users but in its ability to monetize them, and even among a moat-endowed competitive set, Amazon remains head and shoulders above its competition (Exhibit 45). The firm's sprawling services ecosystem provides a blueprint that global competitors aspire to, and we suspect that, with the luxury of "predicting the past" in less developed online commerce markets, Meli+ and Allegro Smart! loyalty programs are purpose-built with the goal of achieving similar results over the long haul.

Exhibit 45 Amazon's Network Strength Is Evidenced by Its Unparalleled Monetization



Source: Company filings, Morningstar estimates. Data as of May 28, 2024.

From a practical perspective, we see two key benefits from strong paid membership traction: the increased purchase frequency that paid membership programs encourage is positive from a customer lifetime value perspective, allowing online marketplaces to spend more on customer acquisition at industry average returns (customer lifetime value to acquisition cost), and increased customer sales volume drives an uptick both in high-margin advertising revenue and in sellers' ability and willingness to invest in the channel. Separately, higher route density and fixed cost utilization drive cost savings in the logistic business, which can be reinvested, passed through to consumers in the form of everyday low prices, or returned to investors. Each of these, of course, spins the network effect flywheel even faster.

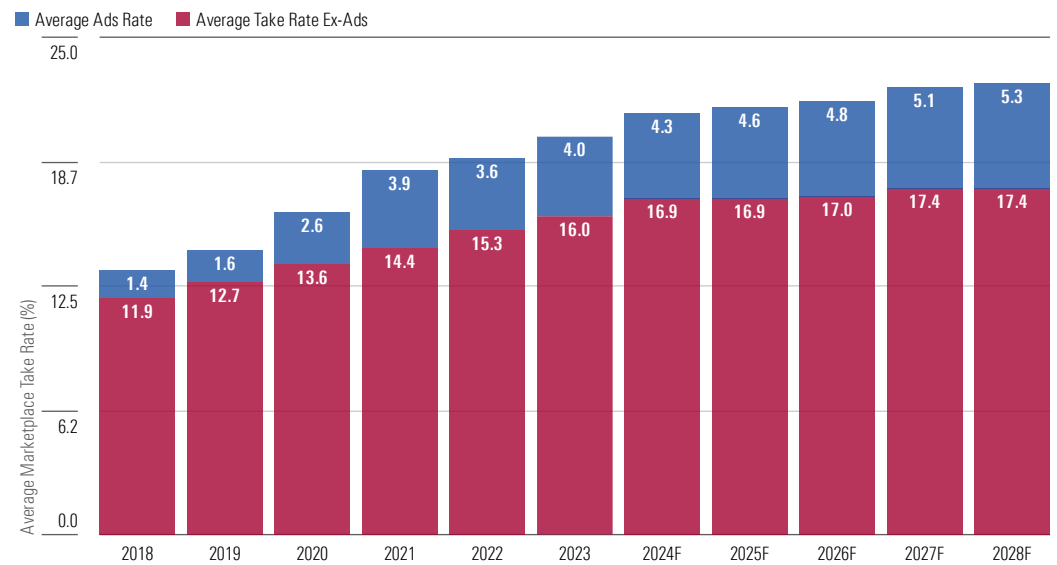
Tying the section together, we expect the largest, most deeply competitively advantaged marketplace operators in our coverage to deepen their moats by investing in a sprawling suite of auxiliary services: advertising, through quickly growing retail media networks, financial services, particularly in credit-

²⁴ Amazon: How the World's Most Relentless Retailer Will Continue to Revolutionize Commerce (Natalie Berg)

²⁵ SimilarWeb Data, May 2024.

starved emerging markets, and logistic services, with that loss-leader allowing online marketplaces to improve customer experience, grow profitable paid membership bases, and expand into lower-priced categories over time. The net effect is increasing consolidation in online commerce, with our estimates calling for median take rate increases of 2.4 points, or an extra \$2.40 in marketplace revenue per \$100 of GMV, over the next five years for operators in our coverage. Of that, more than half (53%) is tied to explosive growth in profitable retail media networks.

Exhibit 46 The Rich Get Richer: We Project Swelling Marketplace Take Rates Between 2023-28



Source: Company filings, Morningstar estimates. Data as of May 28, 2024.

Chinese Drop-Shipping Marketplaces Have a Niche but Will Not Overcome Existing Marketplace Moats

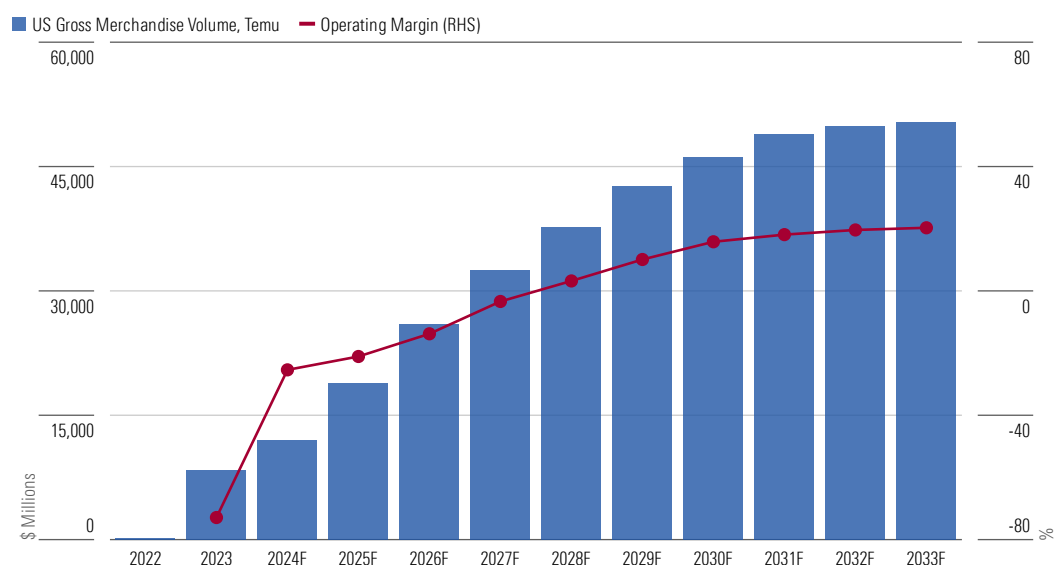
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- ▶ Chinese drop-shipping marketplaces like Temu and Shein have enjoyed explosive recent growth, stoking fears that the traditional e-commerce marketplace model is at risk of being displaced.
- ▶ Our out-of-consensus view suggests that these marketplaces will generate durable profitability (with our narrow-moat PDD Holdings analyst Chelsey Tam projecting that Temu will turn its first operating profit in 2028) but remain bit players in many Western e-commerce markets, with our projections calling for just shy of 2.5% market share in the US in 2028.
- ▶ That share is leaps and bounds ahead of efforts by wide-moat Alibaba's "AliExpress" platform in the US and ContextLogic's "Wish.com" historically, but a far cry from the online commerce paradigm shift that e-commerce investors fear.
- ▶ We believe that markets with a high portion of existing sales from Asian drop-shipping marketplaces and without a dominant local incumbent are more accessible for players of Temu and Shein's ilk, validating the firm's strategy to pivot its strategic emphasis from the US to markets in Latin America, the Middle East, Japan, Korea, and portions of Europe.
- ▶ Concerns regarding regulatory crackdowns or even an outright ban provide further support for PDD Holdings' strategic decision to de-emphasize its US expansion.
- ▶ While the Temu model boasts attractive features, it looks to us that expensive fulfillment costs, tighter seller margins, and challenges attracting local buyers limit its growth runway in markets like the US, particularly when PDD Holdings pulls back on subsidies.
- ▶ Ultimately, we expect the competitive impact from players like Temu and Shein to remain limited, with incumbent moats looking intact in the online commerce space.

Outsize Fulfillment Cost and Tighter Seller Margins Challenge Temu and Shein's Models

Lower seller margins and high fulfillment costs mean that Temu (a narrow-moat PDD Holdings subsidiary) and Shein are likely to remain small players in the US e-commerce market, though we envision them enjoying better success in Asia Pacific, the Middle East, and, to a lesser extent, in Europe. We believe that this view contrasts with market expectations, although with PDD Holdings' recent strategic pivot away from the US, consensus may quickly come around to our perspective. To be clear, we believe that the drop-shipping model can succeed across borders, with our estimates contemplating that Temu achieves low-20% operating margins in the long term, albeit with fulfillment costs that are multiples higher than integrated markets like Amazon, MercadoLibre, and Allegro as a percentage of gross merchandise volume. Ultimately, we envision their success coming predominately at the expense of other international marketplace players and perhaps dollar stores, rather than the moaty marketplace players in our online commerce coverage.²⁶ While it's undeniable that Temu in particular has made meaningful ripples in the competitive landscape, sending cost-per-click advertising prices soaring and inciting Amazon to lower its referral rate on low-value apparel, we expect that the PDD Holdings subsidiary will remain a niche competitor in the US. Our thesis rests on structurally higher fulfillment costs and looming challenges in attracting domestic sellers onto the Temu platform, given the firm's focus on everyday low prices and the lower unit margins that those beget, as we'll unpack in this section.

Exhibit 47 Our Base Case Suggests That Temu Doesn't Generate Its First Operating Profit in 2028

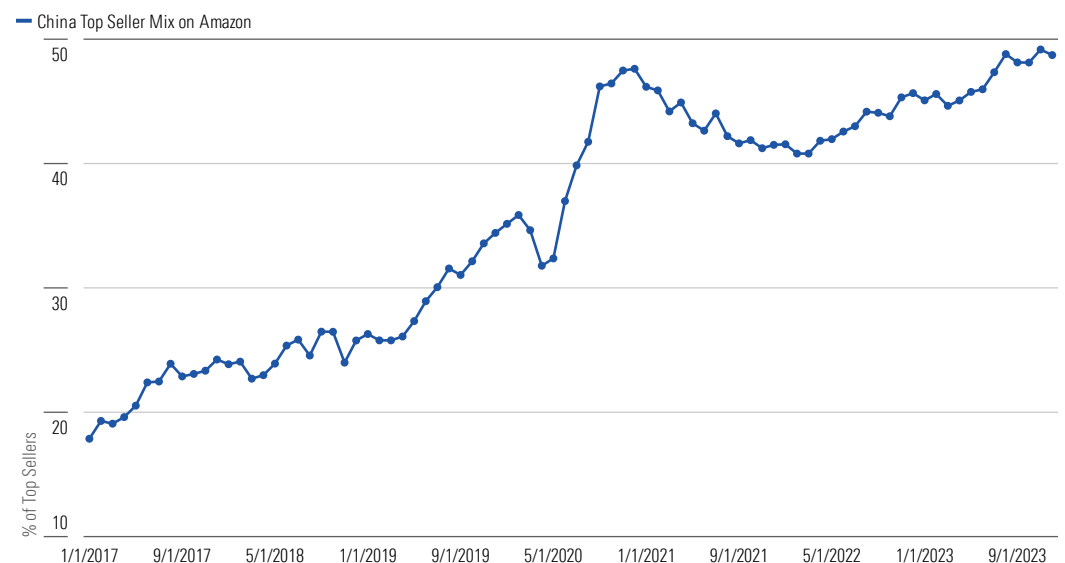


Source: Company Filings, Morningstar Estimates. Data as of May 30th, 2024.

²⁶ To this effect, Reuters reports that Temu had captured 17% share of the discount store market in December 2023, benefitting from increasing price sensitivity among low-income consumers. That squares anecdotally with declining non-consumables sales at narrow-moat Dollar General and no-moat Dollar Tree, though this could be attributable to broader pullbacks in discretionary spending among that cohort.
<https://www.reuters.com/business/retail-consumer/chinese-e-commerce-platform-temu-drawing-shoppers-us-dollar-stores-data-2023-12-06/>

While we've seen iterations of Temu and Shein's model before in companies like no-moat Sea Limited's Shopee and ContextLogic's "Wish.com," it looks like the current evolution has a better shot at success. Both of the formers' efforts are reflective of a broader evolution within the Chinese manufacturing industry, which has seen a progression from product made in China, to product sold by Chinese sellers, predominately on US marketplaces like Amazon and eBay, to product sales directly from Chinese marketplaces. The impetus for this pivot is no secret: strong margins at online marketplaces in the US suggest an opportunity for competitive disruption, while US consumers are increasingly comfortable with ordering Chinese goods without the veneer of American branding (Exhibit 48). As further corroboration, we'd reference the "rabbitgoo" branded dog harness in the first section of the report.

Exhibit 48 Growing Mix of Chinese Top Sellers Suggests Broadening Consumer Acceptance



At least in theory, cutting out the middleman (US marketplaces) should provide consumers with cheaper prices, while allowing firms of Temu and Shein's ilk to pocket some of those cost savings as profit. We believe that the assumption rests on a faulty premise, however, that the take rates charged by today's US marketplace operators are far higher than they should be, reflective of rent extraction from their competitively advantaged marketplace network effects. To this effect, Marketplace Pulse's 2023 report notes that for small sellers, Amazon's take rates can quickly balloon to north of 50% of average sale prices, a figure that is often cited when considering the potential for business disruption by these Chinese drop-shipping marketplaces. We believe that view is myopic, with take rates on marketplaces largely reflective of the value that those firms provide—only the headline referral rate (roughly 10%-15% of GMV) is a pure form of rent extraction, with the remaining fulfillment, payment processing, and advertising expenses most likely having to be borne by merchants regardless of the channel they selected (Amazon's low-single-digit commerce segment margins add a further leg of support to our view that it isn't unduly squeezing its sellers). Considering our sanguine view on the benefits of centralizing fulfillment to generate cost efficiencies, this severely curtails the ability of drop-shipping marketplaces to

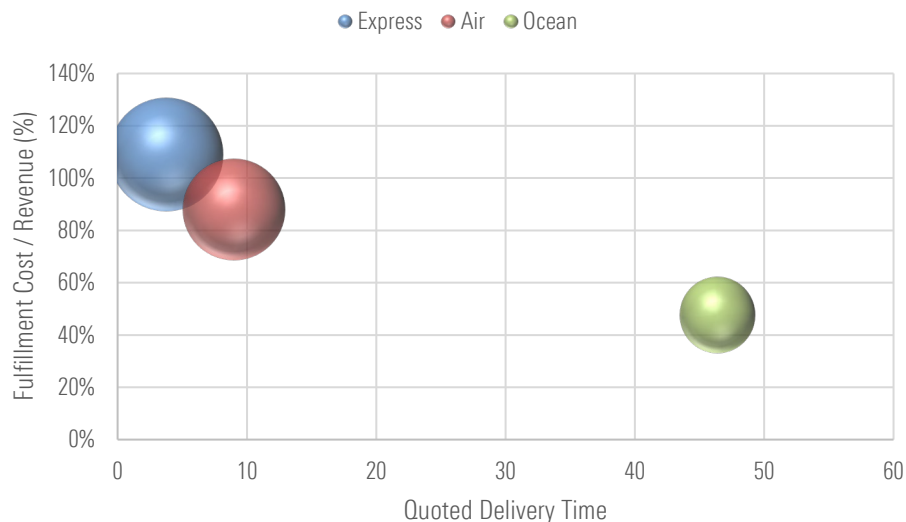
offer lower prices than scaled online marketplace competitors, forcing them to lean on costly subsidies and more aggressively squeezing sellers to make ends meet. As we explored earlier in the piece, e-commerce already tends to carry lower prices than offline retail and lower margins for sellers than white label channels, so curtailing unit margins further in pursuit of everyday low prices appears to be a disincentive for new sellers to join those platforms. In the near term, generous seller subsidies have helped attract merchants at the expense of lower drop-shipping marketplace revenue (Temu, Shein, and so on) and costly operating losses. Longer term, the value proposition for sellers may be much softer once subsidies and free commission go away, as we've seen with no-moat Sea Limited in Brazil and Poland (prior to exiting those markets) and ByteDance's TikTok Shop.

More succinctly, we see three key challenges with the current business model:

- ▶ High fulfillment cost.
- ▶ Customer retention once discounts abate.
- ▶ Reliance on auspicious regulatory environments, namely with de minimis exemption thresholds.

Considering these in sequence, pricing out shipping quotes for a palletized delivery to Morningstar's headquarters in Chicago, IL from Shanghai, we see that Temu is quite likely operating at a gross margin loss. That's attributable both to a limited appetite for price increases (consumers need an incentive to shift spending to the site) and to the firm's election to lean on air freight rather than forwarding inventory to fulfillment centers in relevant end markets. Given the firm's current "half consignment" model in which sellers store and ship inventory directly from China, it seems unlikely to us that this will change in the immediate term, putting the firm at a structural fulfillment cost disadvantage. Notably, the 18% gross profit loss implied by our back-of-the-envelope estimates with third-party freight pricing aligns reasonably closely with the 17% loss our analyst projects for 2024, with the high cost of fulfillment keeping gross margins below 30% even a decade out (in contrast to today's 70% rate at both eBay and Etsy). In exhibit 49 below, we compare fulfillment cost as a percentage of sales against quoted delivery time for each fulfillment modality, with bubble size representing average quoted cost across Freightos vendors.

Exhibit 49 Longer Lead Times, High Fulfillment Cost Posing Structural Issues for Drop-Shippers



Source: Freightos, Morningstar estimates. Data as of May 30th, 2024. We assume a 300% retail markup, consistent with the high end of FinaleInventory estimates.

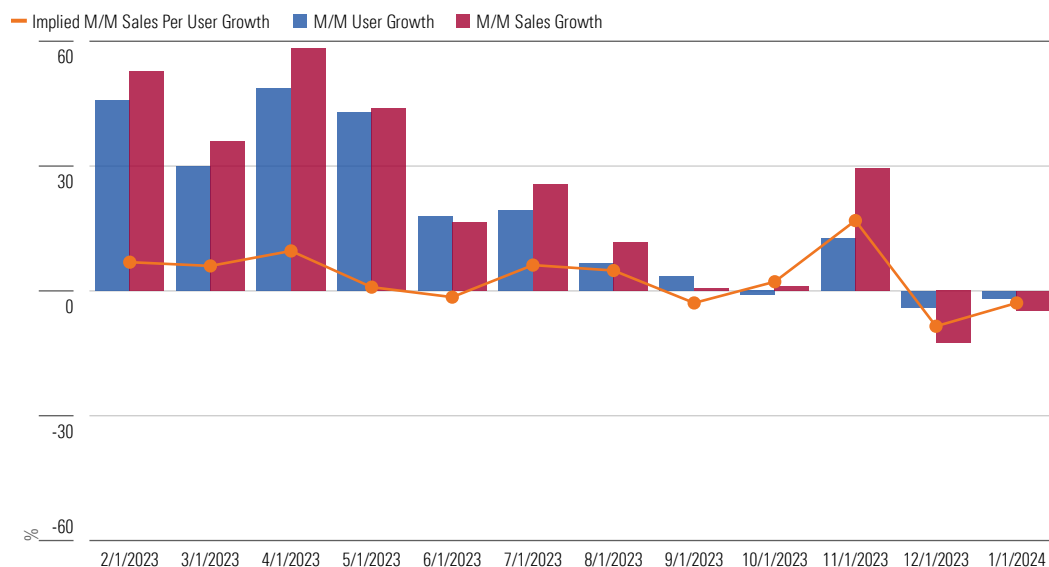
While this could be mitigated with the recruitment of local sellers, we suspect that lower unit margins for sellers serve as a deterrent to proactive marketplace adoption, a view reflected by FT interviews of Temu sellers in China, published in February 2024. To this effect, one interview in the referenced article suggested that a multi-marketplace factory owner earned 20% operating margin on bags sold through Shein's marketplace against just 15% through Temu, reflective of the latter's relentless focus on inciting price competition among its seller base.²⁷ Another suggested that they doubled or tripled production of clothes for sale on Shein, knowing that they could offload the remaining product to Temu if it failed to sell through. Tighter margins are likely to deter merchant adoption of those platforms until sales volume grows too large to ignore, in our view, and even at that juncture, it's not implausible that merchants utilize Temu as a liquidation channel while generally preferring sales on marketplaces with higher selling prices and lower required capital investment.

Secondarily, we harbor some concerns regarding user retention, with Temu's marketplace (in particular) remaining very dependent on both buyer and user subsidies to attract a critical mass of habitual buyers that renders the marketplace self-supporting. It's a tried-and-true strategy--one that Allegro is employing as it expands into the Czech Republic and Slovakia--but from a strategic perspective, we generally prefer to see firms invest in services that erect barriers to entry to support their network in the long term, like fulfillment or financial services (though wide-moat JD.com's experience in China shows that this approach doesn't always work). Said otherwise, discounting is an effective approach for attracting customers to a platform, but it's the experience on the platform, from search to purchase to fulfillment, that keeps them coming back. As our PayPal analyst wrote in a report for clients, "incentive programs to add accounts [tend] to have relatively poor economics, as accounts added through incentives [tend] to

²⁷ <https://www.ft.com/content/c0602a20-08a0-4e53-9d10-b2dca24897a4>

churn quickly." That lesson appears broadly applicable here, as well. Without hefty investment in the user experience, we fear that Temu (and to a lesser extent, Shein) risks renting, rather than acquiring, online commerce customers.

Exhibit 50 User Retention and Repeat Purchase Could Be an Issue for Temu in the US



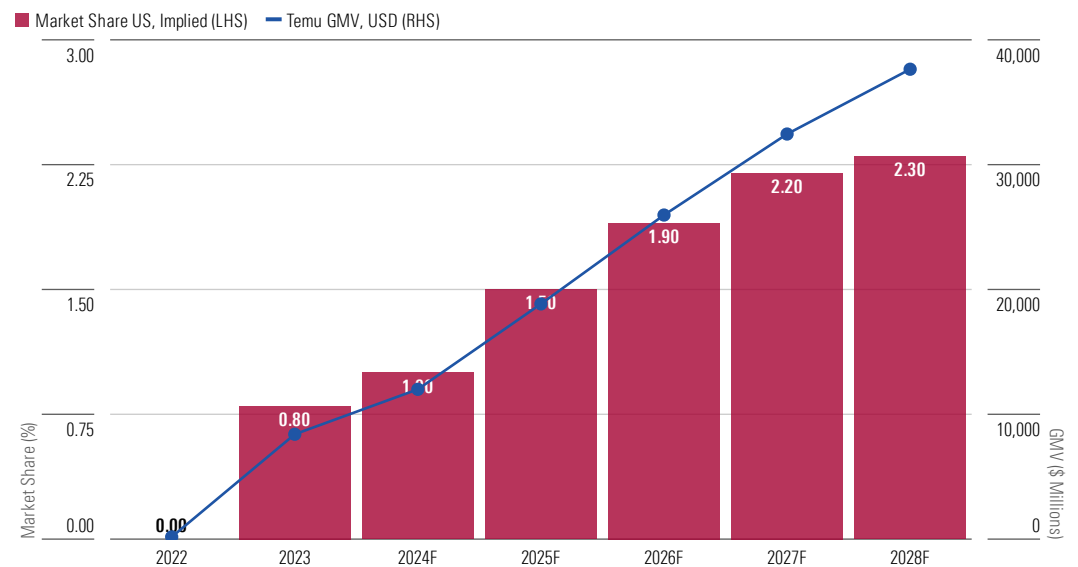
Source: Bloomberg Second Measure, Morningstar. Data as of May 30, 2024.

While the data is hardly timely for a business growing as quickly as Temu is, it's clear from Exhibit 50 above that month-to-month growth in both users and sales hit a speedbump in December 2023 and January 2024 in the US market. To turn this around, the firm may need to invest in domestic logistics services to shorten lead times and bring down fulfillment cost or otherwise find a way to acquire local merchants. The good news, from the perspective of PDD Holdings, is that investments in fulfillment centers for high-turnover stock-keeping units could help bring down logistics costs materially, while preserving the cost edge from shipments under \$800, which currently qualify for the de minimis exemption under section 321 of the Tariff Act. Ocean freight quotes from Freightos, while carrying 5.2 times longer lead times than air freight, clocked in a striking 46% lower--savings which would drive fulfillment cost down to 48% of sales for the operator, a key step in its march toward profitability. Even a multimodal approach here could bear meaningful fruit, with some investment in freight forwarding to capitalize on cheaper ocean shipping rates allowing the firm to compete on more level footing with fulfillment-integrated competitors. As we see it, to achieve breakeven profitability, Temu will either need to increase advertising and payment processing revenue enough to subsidize its everyday low prices, lower its shipping cost with fulfillment investments as outlined above, or raise prices on its platforms from current rock-bottom levels. We suspect that some combination of the three will be required.

Finally, the regulatory environment remains complex and a core part of Temu's low price proposition in the US, with the firm benefitting from tariff exemptions for shipments that fall below a \$800 threshold.

The recent crackdown on TikTok (owned by ByteDance) and the potential for increased enforcement for compliance with section 321, as outlined in a [Morningstar note to clients](#) on May 30, 2024, seems to point toward a step-up in regulatory risk for drop-shipping marketplace players. It's no coincidence, in our view, that Temu has trimmed its US GMV target to 30% of its global mix from 60% prior, stepping up investment in markets like Japan, South Korea, and Europe, where it anticipates a more favorable backdrop, in response to these measures.

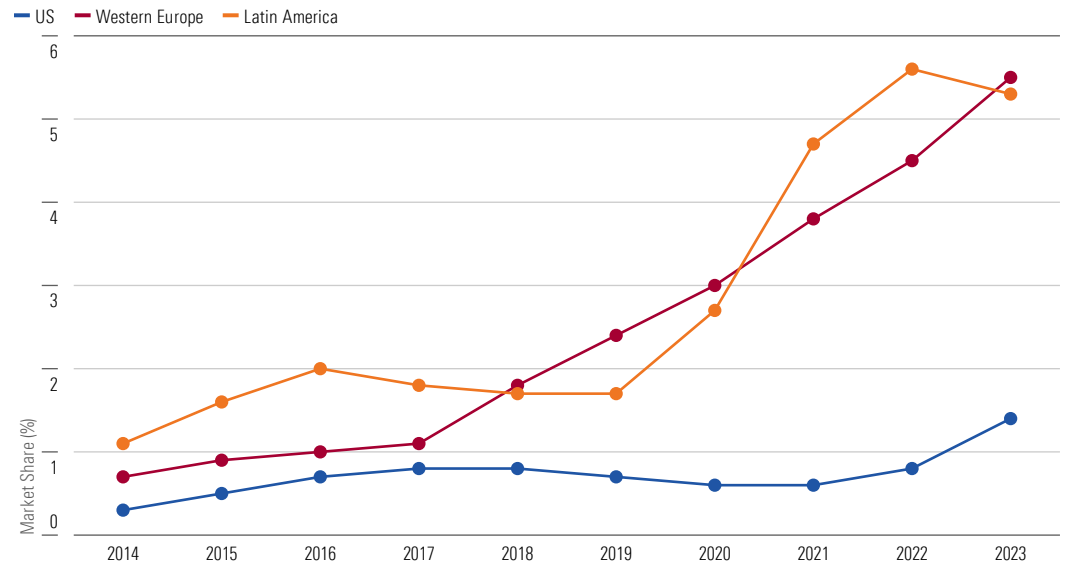
Exhibit 51 Despite Current Headwinds, Temu's Low-Price Model Should Drive Some US Market Share Capture



Source: Bloomberg Second Measure, Morningstar. Data as of May 30, 2024.

In general, markets in Europe and Asia Pacific have seen historically higher penetration by Chinese marketplace players and should represent commensurately more attractive targets for firms of Temu's ilk. The agglomeration of Alibaba, PDD Holdings, JD.com, Wish.com, Shein, Rakuten, and Sea Limited captures a striking 70% of online commerce share in Asia Pacific, so investments in Japan and South Korea strike us as cogent. Penetration of those marketplaces in the US remains stubbornly low (1.4%) as outlined in Exhibit 52, suggesting that select markets in Western Europe (5.5%) and Latin America (5.3%) might represent more fertile ground in the near term.

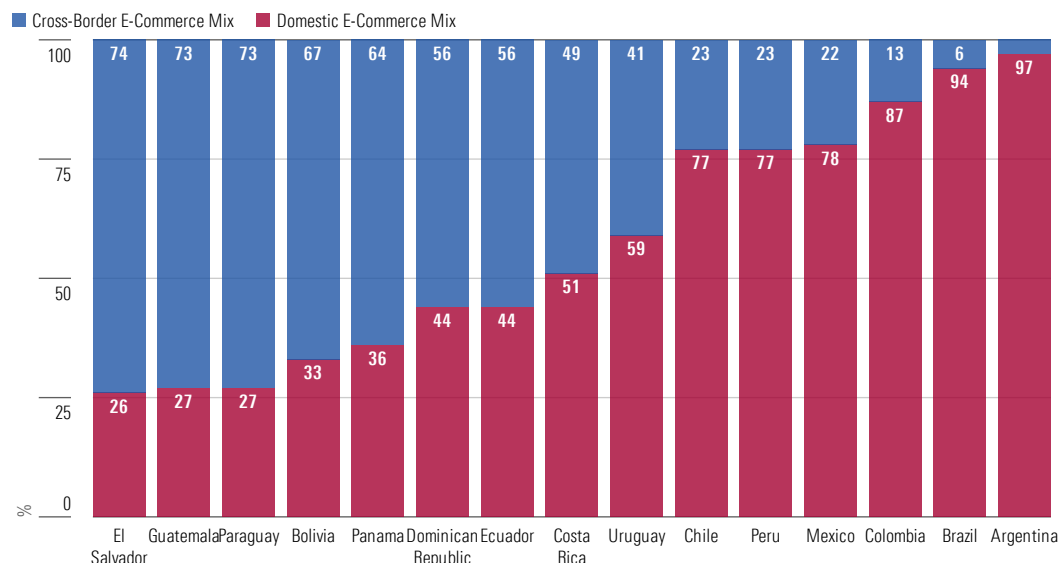
Exhibit 52 Europe, Latin America, Asia Pacific Look More Fertile Than US For Asian Marketplace Competitors



Source: Bloomberg Second Measure, Morningstar. Data as of May 30, 2024.

A final point of note is that cross-border trade thrives in countries where there isn't a "local champion" marketplace that consolidates share around local merchants and buyers, like Amazon in the US, MercadoLibre in Argentina, Mexico, and Brazil, or Allegro in Poland (Exhibit 53). As we see it, this means that smaller, more insular countries represent natural near-term targets for the likes of Temu and Shein, which should enjoy outsize success in those regions, though ultimate entry by fulfillment-integrated players remains a risk worth monitoring for those players.

Exhibit 53 Based on Latin American Results, Cross-Border Trade Thrives Without Local Incumbents



Source: EMarketer, Morningstar. Data as of May 30, 2024.

In summary, there are attractive features to the Temu model, which seeks to sideline toll-takers who charge high referral fees, lump fulfillment services into their value proposition, and generally source from China anyway. It's a model that has worked elsewhere for parent company PDD Holdings, with advertising and payment processing profits supporting a marketplace that charges minimal seller fees, though that model's portability outside of China remains heretofore unproven. As we see it, the marketplace will outperform in value-sensitive occasions that are delivery time inelastic, where consumers can either afford to (or must afford to) wait multiple weeks for product arrival. This squares with commentary from management at Allegro, which estimated that Temu's and Shein's market share in Poland clocked in in the "midsingle digits," largely appearing to come at the expense of wide-moat Alibaba. With that prelude, we view Asian drop-shipping marketplaces as niche players in a large, online commerce market, particularly in the United States, where we expect Temu to achieve just low-single-digit penetration by 2028, given constraints tied to lofty fulfillment costs and tighter seller margins than sellers can find on Amazon, eBay, or even Shein. Moats for the large, fulfillment-integrated marketplaces appear firmly intact, and may even be strengthening as those firms expand further into auxiliary services. ■■■

Research Methodology for Valuing Companies

Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. We think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (mines, for example), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term approach.

Morningstar's Equity Research Group ("we," "our") believes that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth.

Four key components drive the Morningstar rating:

- ▶ our assessment of the firm's economic moat.
- ▶ our estimate of the stock's fair value.
- ▶ our uncertainty around that fair value estimate.
- ▶ the current market price.

This process ultimately culminates in our single-point star rating.

Economic Moat

The Morningstar Economic Moat Rating is a structural feature that Morningstar believes positions a firm to earn durable excess profits over a long period of time, with excess profits defined as returns on invested capital above our estimate of a firm's cost of capital. The economic moat rating is not an indicator of the investment performance of the investment highlighted in this report. Narrow-moat companies are those that Morningstar believes are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those that Morningstar believes will earn excess returns for 10 years, with excess returns more likely than not to remain for at least 20 years. Firms without a moat, including those that have a substantial threat of value destruction-related risks related to environmental, social, and governance; industry disruption; financial health; or other idiosyncratic issues, are more susceptible to competition. Morningstar has identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Fair Value Estimate

Each stock's fair value is estimated by using a proprietary discounted cash flow model, which assumes that the stock's value is equal to the total of the free cash flows of the company is expected to generate in the future, discounted back to the present at the rate commensurate with the riskiness of the cash flows. As with any DCF model, the ending value is highly sensitive to Morningstar's projections of future growth.

Fair Value Uncertainty

The Morningstar Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the fair value estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, exposure to material ESG risks, and other company-specific factors. Based on these factors, analysts classify the stock into one of several uncertainty levels: Low, Medium, High, Very High, or Extreme. Our recommended margin of safety—the discount to fair value demanded before we'd recommend buying or selling the stock—widens as our uncertainty of the estimated value of the equity increases.

Market Price

The market prices used in this analysis and noted in the report come from exchanges on which the stock is listed, which we believe is a reliable source.

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