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Shopify

The Invisible Selling Machine

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Publishing Date

2nd February 2023

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Executive Summary

- **E-Commerce Adoption** - E-commerce, as a proportion of total retail sales, will continue accelerating this decade. Whilst the biggest e-commerce markets will continue to dominate in Gross Merchandise Value (GMV), a significant shift in e-commerce adoption (and GMV) will occur in emerging regions such as India, Southeast Asia and Latin America. Shopify, as a global 'agnostic' end-to-end e-commerce platform, is uniquely positioned within this ecosystem.

- **The Shopify Product** - Each year, Shopify builds a stronger business model, underpinned by its core subscription solutions, and enhanced by a growing suite of products and channels that continues to drive merchant GMV. Core to these is Shopify Payments, which now accounts for over 50% of GMV. This product not only drives more GMV (and revenue for Shopify) but unlocks multiple other solutions for the merchant. Further, Shopify is actively building out the Shopify Fulfilment Network (SFN) to enable two-day delivery to 90% of the US population[1]. SFN is likely to expand to other core markets following successful early phases in the home market.

- **Product Investment** - Key to the success of SFN is Shopify's recent acquisition of Deliverr which, in conjunction with Flexport (in which Shopify is invested), aims to offer a seamless end-to-end logistics solution covering first mile (manufacturer to fulfilment hub) and mid-last mile (fulfilment hub to consumer) delivery. This solution enables an expansive network of first and third-party fulfilment centres powered by Shopify's autonomous fulfilment solution 6 River Systems. Other investments that are core to Shopify's success include Stripe (underpinning Shopify Payments), Affirm (BNPL) and Global-E (cross-border commerce and payments).

- **Risks** – There are ongoing macroeconomic headwinds over the short term, which has seen inflation surge and consumer confidence collapse. Further threats include competitive pressures (i.e. Amazon's 'Buy with Prime') and potential challenges in geographic expansion and product rollouts which are incredibly capital intensive.

[1] Shopify Tries to Out Amazon Amazon with Acquisition of Deliverr - SupplyChainDigest

E-Commerce Overview

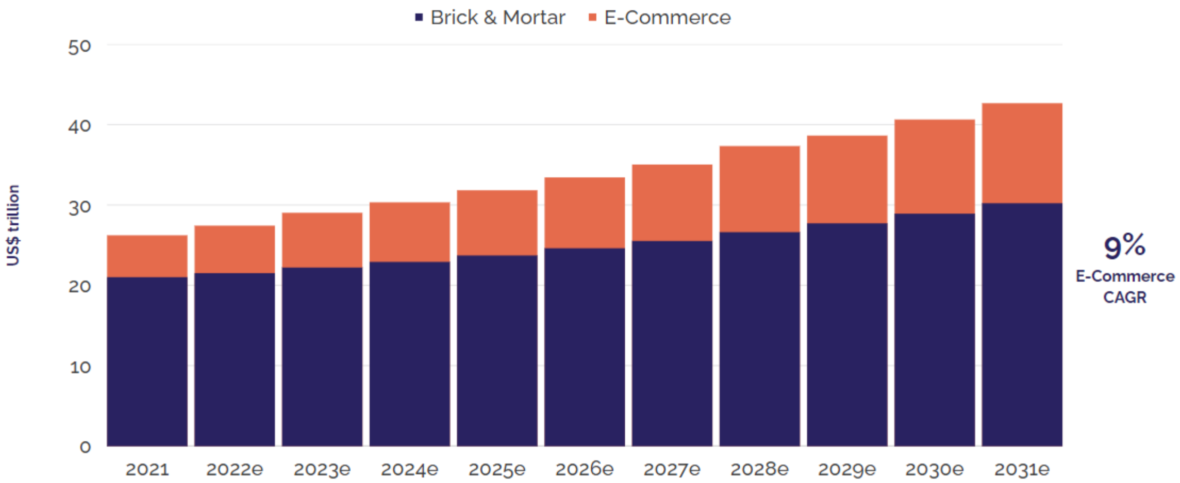
Globally, e-commerce GMV, or sales, is expected to reach $8.1 trillion by 2026[2], with China and the US accounting for 73% of global e-commerce sales in 2021 (equivalent to $3.6 trillion).

Even after adjusting e-commerce and retail growth assumptions (in light of the macroeconomic conditions), we still expect e-commerce turnover to grow at a CAGR of ~9%, reaching ~$8.8 trillion in 2026 and ~$12.5 trillion by 2031[3].

This growth is catalysed by an extensive global shift in buyer behaviour from in-store to online, triggered by accelerating mobile and internet penetration (particularly in developing economies). This is in parallel to improved delivery infrastructure (speed) and an overarching boost in consumer experience (CX) across the industry.

These, and many other factors, will likely drive an ongoing surge in e-commerce over the coming decade, where it will account ~30% retail sales by 2031 (up from ~19% today).

Figure 1 - Global Retail GMV Forecasts



Source: Granite Bay, with reference to Statista, ecommercedb, census.gov, globaldata.com, Shopify, Xinhuanet

[2] Global E-Commerce Sales Growth Report for 2021-2026 - Shopify

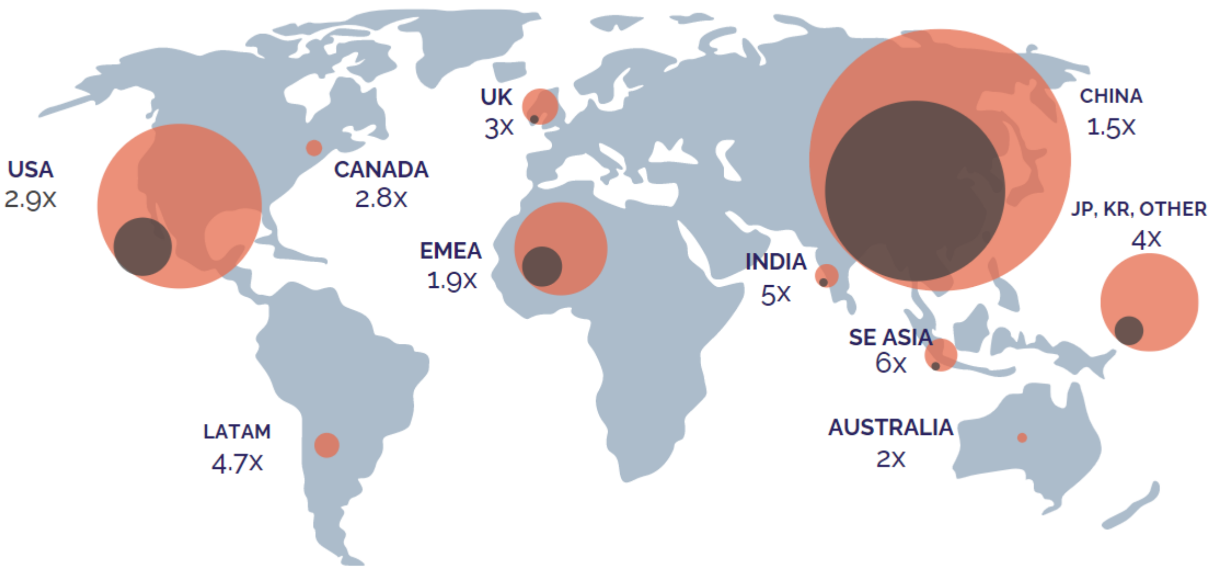
[3] Statista, SEA Digital Economy, Census Data

On a region-by-region basis, China is leaps and bounds ahead of others, with Alibaba and JD.com being dominant platforms in the country for e-commerce sales. By 2030, China's e-commerce volume could increase ~1.5x, which will make China ~one-third of global e-commerce volume.

This is visualised below to indicate the regional opportunity and to help put things in some perspective. Outside of China, the real opportunity for Shopify remains (explained through this report) in scaling their activity in the US, UK, Europe and wealthier regions throughout Asia (i.e. Japan and South Korea). Within China, Shopify have opened sales channels, via JD.com, for Shopify's global merchant network to access the Chinese conglomerate annual active user base of over 500m shoppers.

No doubt, longer-term opportunities will present themselves in developing regions like India and Latin America (which is why Amazon and Walmart have made such aggressive inroads); however, the logical path forward for an organisation like Shopify remains within its core markets over the short-medium term.

Figure 2 - E-Commerce Growth by Region



Source: Granite Bay, Statista, census.gov, Xinhuanet, Global Payments Report

Wealth

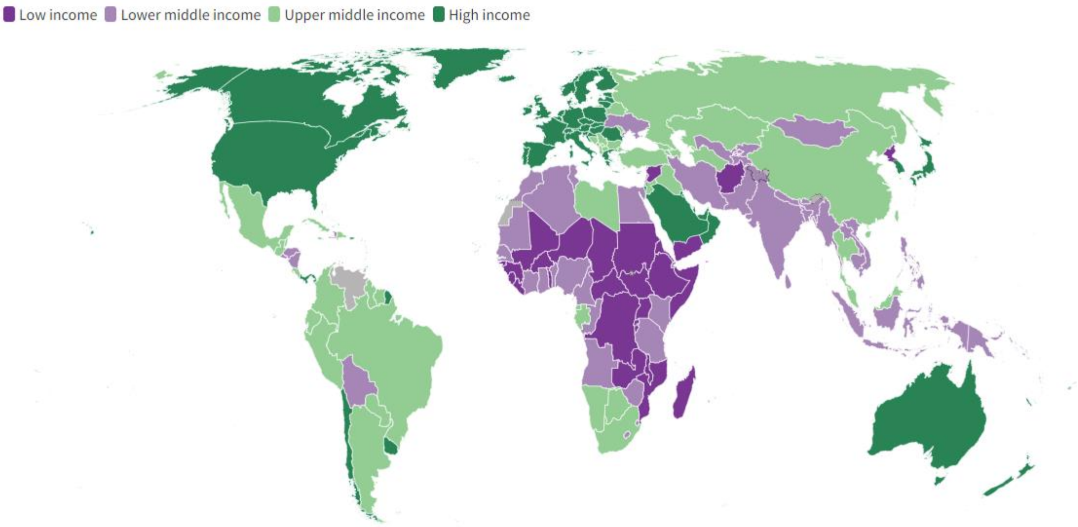
Wealth and disposable income are the biggest drivers of retail consumption[4].

This is most evident in countries like China, where GDP has grown from $3.68 trillion in 2000 to $27.31 trillion in 2021[5]. On a per capita basis, this equates to a 6.5x increase from $2,917 to $19,338. Note, we measure GDP here based on the Purchasing Power Parity (PPP) which measures the absolute purchasing power of a countries' currency through a basket of goods.

Further, the proportion of Chinese citizens classified as middle-class[6] has increased from ~3% in 2000 to over 50% by 2018[7].

Despite current macroeconomic headwinds, there is likely to be longer-term strength in GDP growth in China and other developing regions like Latin America, Southeast Asia and India as more citizens shift into the middle-income bracket. PWC articulate this opportunity well, with an expectation that the major emerging economies (E7) will see GDP (PPP) triple from 2016-2050 (reaching US$140t), ultimately outpacing the G7 by over 2-fold[8].

Figure 3 - The World by Income[9]



Source: World Bank

Developed markets like North America, Europe, the UK, Australia, South Korea, and Japan will continue to be significant contributors to global consumption in the coming years, however, in

[4] Wealth and Consumption - Reserve Bank of Australia

[5] GDP, PPP - The World Bank

[6] How Well-off is China's Middle Class - ChinaPower

[7] China's Expanding Middle Class is Starting to Look at Lot like the US - SCMP

[8] The World in 2050 - PWC

[9] The World by Income - World Bank

the long run (to 2050) the expectation is that this developed market growth will be well and truly surpassed by the emerging economies.

With specific reference to e-commerce, companies like Amazon (ex-India) and Shopify have continued to grow a significant market share in 'high-income' regions, whilst a lot of lower to middle-income regions (which generate lower GMV per user) are primarily seeing e-commerce market share dominated by regional leaders like Jumia (Africa), Mercado Libre (Latin America) and Shopee, Lazada and GoTo (Southeast Asia). We will discuss this competitive environment later in this report.

Internet Penetration

Internet penetration rates are another critical enabler of e-commerce globally.

Over the past decade, there has been a considerable acceleration in internet adoption globally, with developed nations like the USA, UK, Australia and Japan seeing internet penetration rates rise from the 75-85% range in 2010 to 90%+ across the board.

Despite a slow start, the infrastructure of many developing countries like China, Argentina, Brazil, Indonesia, and Vietnam are starting to catch the developed nations.

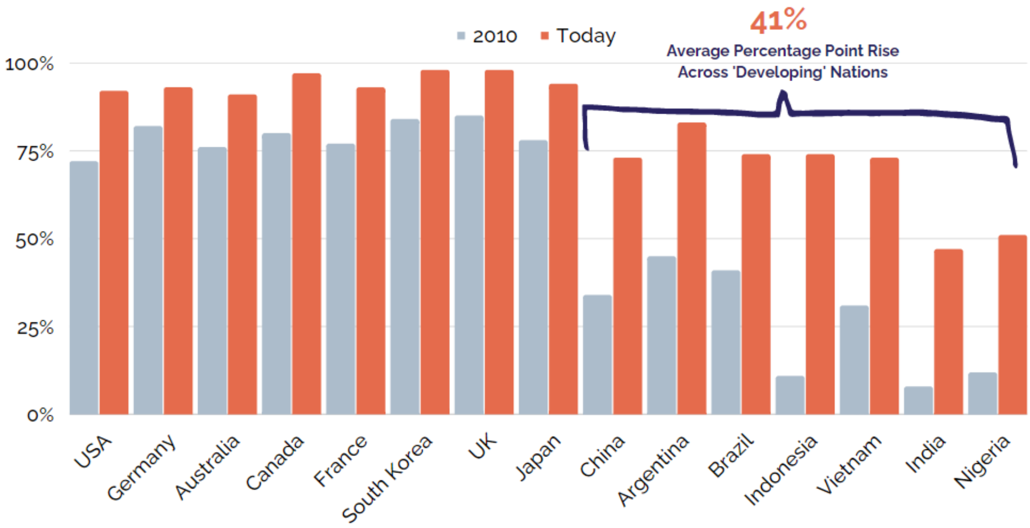
The adoption rates in the past decade for these countries have been astonishing.

Take Indonesia, for example, which has seen adoption rates rise from ~10% to over 70% over the period[10]. Similarly, India has come from almost zero to having a 50% internet penetration rate. Considering the population (274 million and 1.38 billion, respectively) and the land mass, this is a considerable achievement!

By the end of this decade, it's conceivable that many of these developing nations will be pushing (and in many cases surpassing) the 90% rates we're seeing in the west today.

[10] Indonesia Internet Users Hit 196m - The Jakarta Post

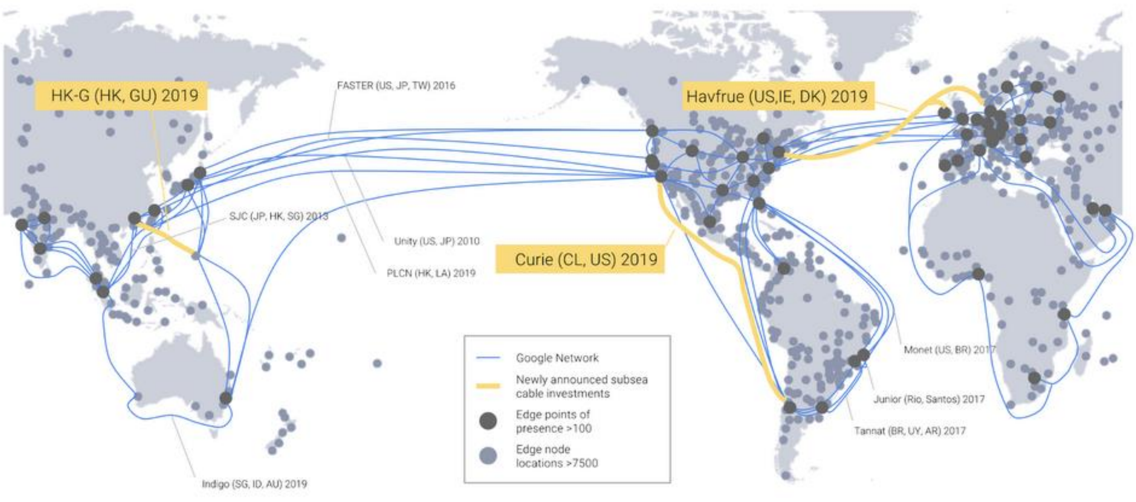
Figure 4 - Internet Penetration Rates around the World



Source: Granite Bay, World Bank, Our World in Data

This vast acceleration in internet penetration was enabled by substantial infrastructure investment by incumbent telecom infrastructure providers (i.e. China Telecom, Vodafone, Orange) and tech conglomerates (i.e. Meta, Google, Amazon, and Microsoft). The best examples of this are a 37,000 km undersea cable being developed by Meta around Africa and the ongoing investments in undersea cables by Google (below)[11]. This development is a win for consumers and those providing the critical infrastructure to enable this leap in internet adoption.

Figure 5 - Google's Cloud Network Infrastructure



Source: Google, Fibre Systems

[11] Google Capable of Connecting Chile and California - Fibre Systems

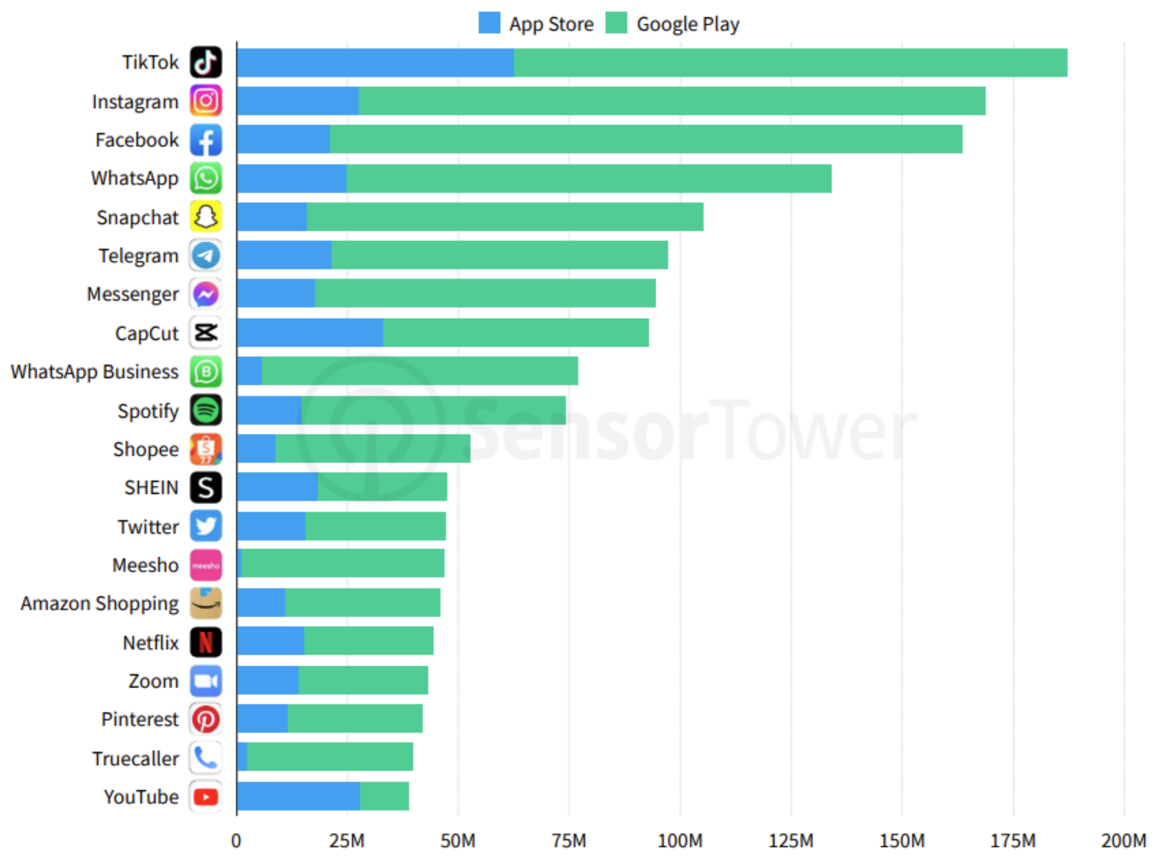
Mobile Phone Penetration

Smart phones are the most significant driver of e-commerce sales. So much so that in countries like China, over 90% of e-commerce sales are done through mobile devices, as opposed to ~43% in the United States[12].

Furthermore, underpinning much of mobile e-commerce is the strength of engagement on social media channels. According to Accenture, the social commerce opportunity (discussed later in this report) is expected to grow at a CAGR of 26% over the next few years, reaching $1.2 trillion by 2025[13]. This represents 15% of global e-commerce sales.

Unsurprisingly, much of this growth is driven by a few social media leaders led by Meta (Facebook, Instagram, WhatsApp, Messenger, WhatsApp Business). Others, such as Snapchat leverage lenses to create an immersive e-commerce experience whilst TikTok have quite ambitious goals for their own e-commerce business (including fulfilment).

Figure 6 - Top Apps by Worldwide Downloads



Source: SensorTower

[12] What is Driving China's E-Commerce Growth - Eurasia Review

[13] The Future of Shopping and Social Commerce - Accenture

Interestingly, Sea Limited's Shopee has recently been scaling back in Latin America[14] and Europe and is noticeably sliding down the charts as platforms like WhatsApp Business start to gather pace. In India, WhatsApp Business is making early inroads to power shopping for local brands (i.e. Reliance Industries' Jio Mart).

With Shopify being a core partner of Meta, I would expect the ongoing expansion of Meta apps (IG, GB, WhatsApp) to directly benefit Shopify, as well as other merchant platforms like BigCommerce, and Adobe/Magento - all of which plug into Meta's sales channels.

A final point here - 75% of these twenty apps are either stand-alone e-commerce marketplaces (Amazon, Shein, Shopee, Meesho) or allow their users to purchase products via the app (thanks to Shopify APIs which will be discussed further in this report). These companies include Spotify, YouTube, Pinterest, Twitter and Instagram.

Logistics

Finally, thanks to organisations like Amazon, Alibaba and JD.com – fast, free delivery is becoming the norm rather than the exception. Consumers expect, and will continue to expect, 1–2-day delivery on almost all goods, with the expectation of groceries and perishables being delivered within a matter of hours (or minutes).

Globally, Amazon operates more than 175 fulfilment centres with over 150 million sq ft of space[15]. They will continue to invest heavily in its logistics networks to satisfy its commitment to fast delivery (i.e. they have another 125 million sqft in the pipeline)[16].

However, despite Amazon's dominance in physical footprint, other e-commerce organisations are taking the lead in the "verticalization" of e-commerce (i.e. platform and fulfilment), with MercadoLibre (~8 distribution centres, 100 last-mile delivery centres), Lazada (400 facilities) and Flipkart (>20 million sqft feet of storage space) continuing to invest in space.

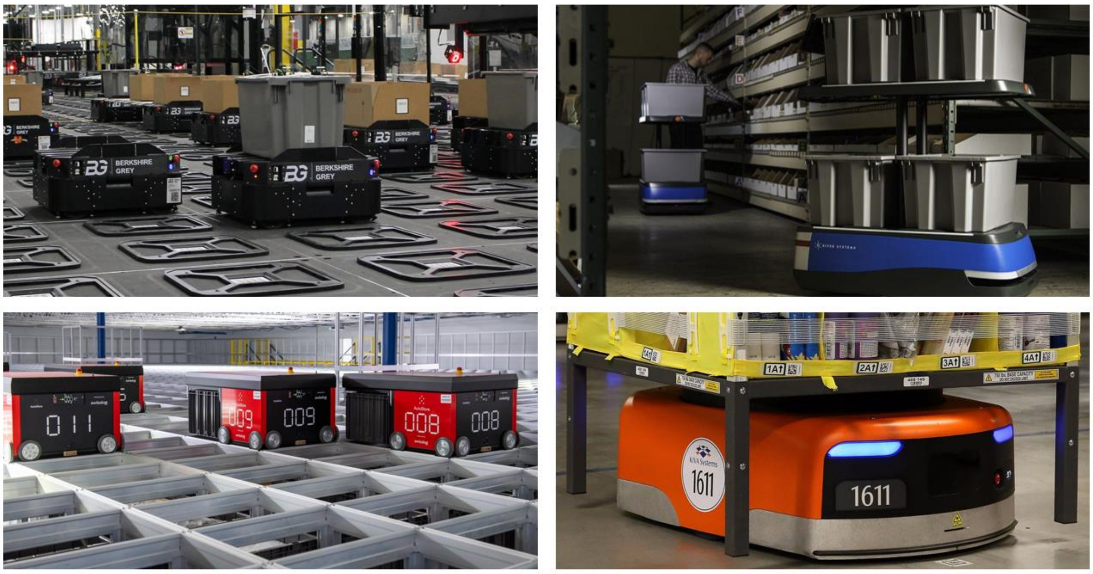
Finally, warehouse automation is becoming (and will continue to become) a heavily invested vertical within logistics. Amazon owns Kiva Systems, Shopify owns 6 River Systems and JD control JD Logistics. Standalone automation companies like Ocado, AutoStore and Berkshire Grey, and incumbents like Fanuc and Kuka could benefit from the ongoing demand for industrial automation solutions.

[14] Sea's Retail Arm Pulls Out of Argentina in Latin America Retreat - Bloomberg

[15] Amazon Stats: Growth, Sales and More - Amazon

[16] Amazon Plans to "Moderate" Industrial Real Estate Spending - Globest

Figure 7 - Warehouse Automation



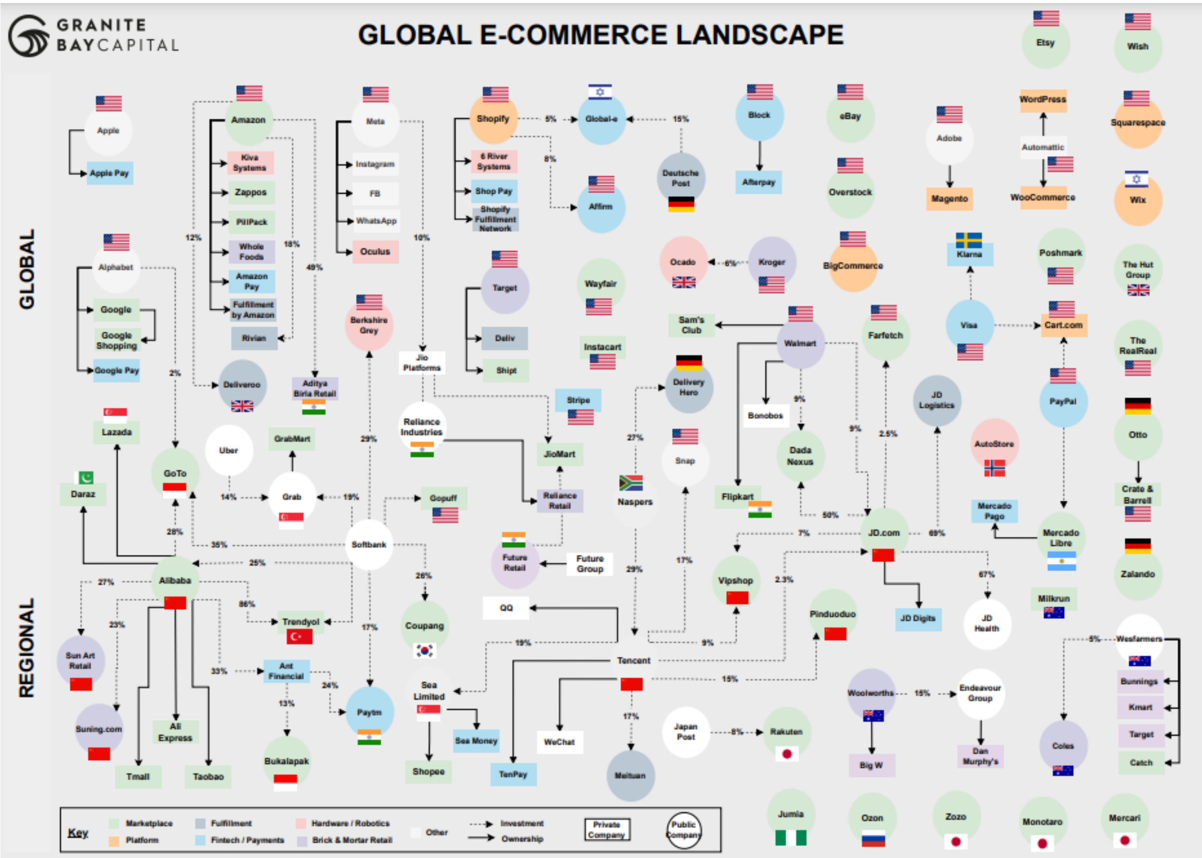
Source: Berkshire Grey, 6 River Systems, Kiva Systems, AutoStore (clockwise from top left)

E-Commerce Landscape

The global e-commerce industry is highly competitive and has been dominated for the past decade by first movers such as Amazon, Alibaba and JD.com.

Below is a 'top down' view of the global e-commerce landscape which identifies some of the leaders in e-commerce globally, regionally, and across specific sub-sectors such as platforms, marketplaces, payments and fulfilment.

Figure 8 - The Global E-Commerce Landscape



Source: Granite Bay, CapitalIQ, public company information

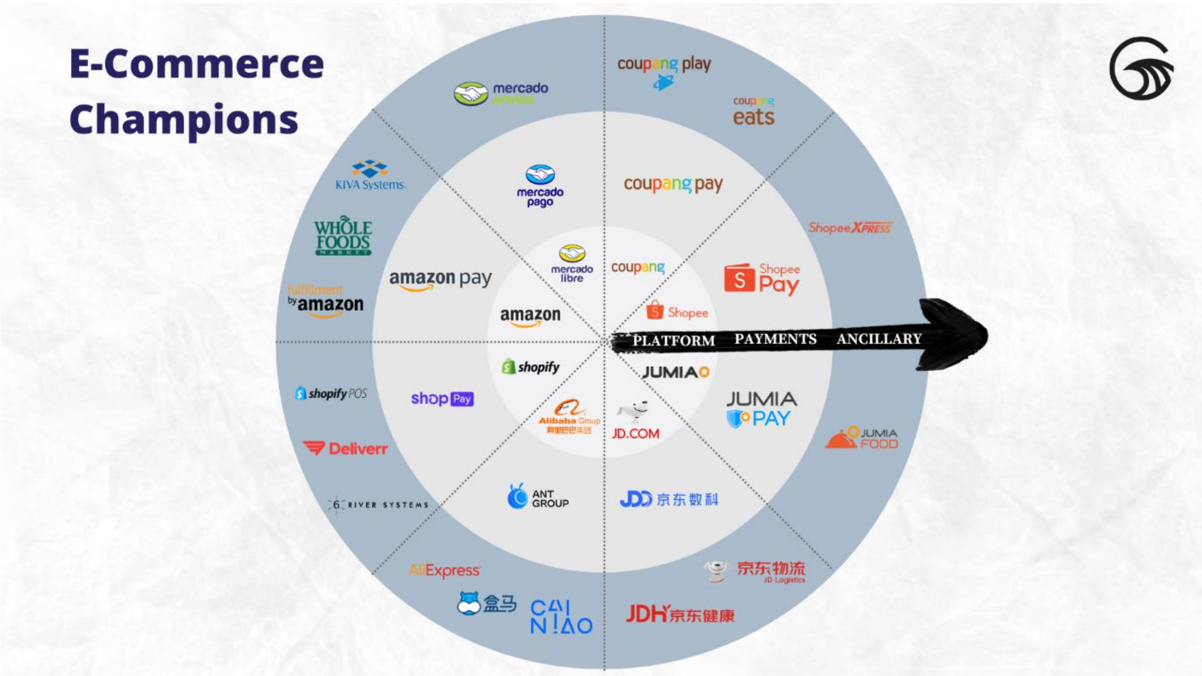
Notably, many global and regional organisations dominating their respective markets have also taken a more vertically integrated approach, encompassing payments and other ancillary services (fulfilment, grocery, financing) under one umbrella.

These companies can be referred to as global and regional 'champions' as they can achieve economies of scale and create a flywheel effect which attracts more merchants, improves consumer experience (i.e. efficient payments and delivery), amplifies average basket size and leads to greater customer and merchant loyalty.

At the other end of the spectrum are organisations like BigCommerce, Squarespace and Adobe / Magento. Such organisations offer a Software-as-a-Service (SaaS) platform from which merchants can build a highly customised storefront; however, all ancillary services, such as payments and fulfilment, are third-party. This has its benefits (i.e. lower R&D, higher margins, more of a laser-focused product road map); however, there are fewer touch points with the merchant, which means less data being captured and increased churn risk. For example, most Shopify merchants use Shopify Payments, unlocking other ancillary services such as Point-of-Sale (POS), financing, and fulfilment. The more services the merchant uses, the harder it is for that merchant to churn out to a competitor. Meanwhile, Shopify (and Amazon, Alibaba, and MercadoLibre) continue to gather precious data, allowing them to deliver more value-added services to enhance merchant lifetime value even further.

We have outlined eight global and regional champions' platforms, payments and ancillary services (below) to highlight this.

Figure 9 - Global and Regional E-Commerce Champions



Source: Granite Bay

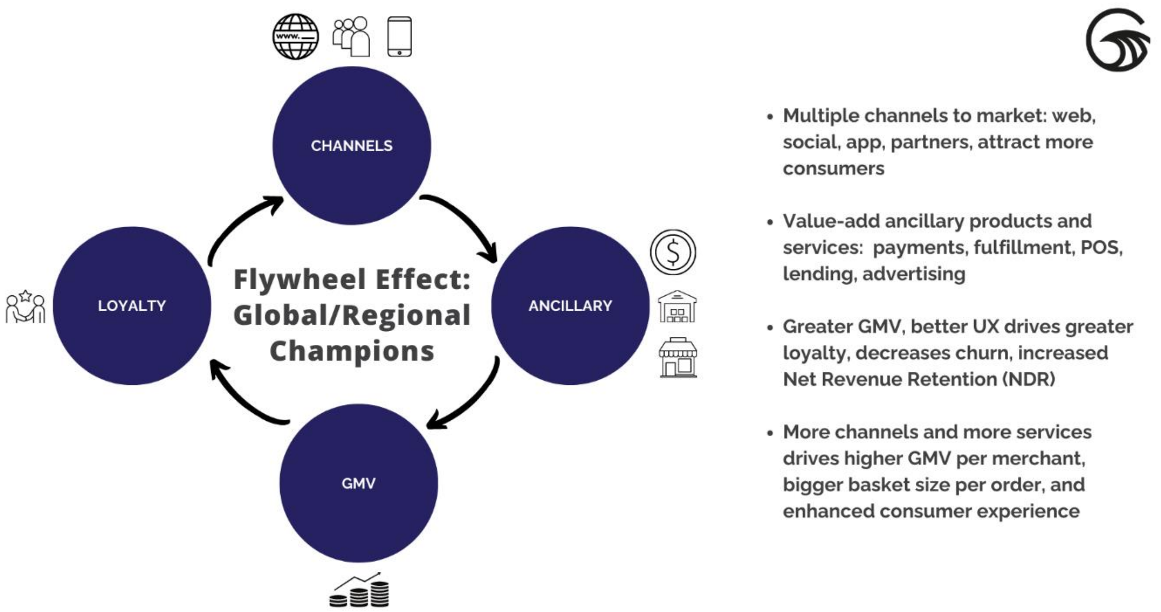
Global Champions

As with all other sectors, there are leaders within specific verticals, and then there are champions who, through investing in a range of synergistic products and services, can achieve enhanced economies of scale and drive strong brand loyalty and lifetime value.

Global champions are those with a proven track record of expanding into other aligned verticals. This value, which we identify through a flywheel effect (below), can be measured through Net Revenue Retention (NDR), earnings accretion, free cash flow generation, increased customer retention (and stickiness) and economies of scale; to name but a few factors. These terms will be expanded upon throughout this report.

Outside of e-commerce, other notable companies are creating these sorts of economies of scale on a global level. These companies include **Apple** (software, hardware, payments, streaming), **Microsoft** (software, hardware, cloud, gaming, social), **Google** (hardware, software, payments, advertising, cloud), Nvidia (software, hardware) and **Disney** (parks, streaming, consumer products).

Figure 10 - E-Commerce Flywheel



Source: Granite Bay

Within e-commerce, some of the best examples of this flywheel effect are within the business models of global champions like:

- **Amazon:** Amazon.com (B2C retail), Amazon Pay (payments), Fulfill by Amazon (Fulfillment), AWS (cloud), Alexa (voice), Twitch/Luna (gaming)
- **Alibaba:** Alibaba.com (B2B), Taobao, TMall, AliExpress, Lazada (B2C), Alipay/Ant (payments), Cainiao (fulfilment), Youku (media/streaming); and
- **Shopify:** Shopify.com (B2C platform), Shop (B2C app), Shop Pay (payments), Shopify Fulfilment Network (fulfilment), Shopify POS (B2C, payments)

Note - despite most of its consumer-facing business being in China, Alibaba is considered a global company due to its core B2B platform servicing millions of businesses worldwide. This is enhanced by its ownership and investment in regional e-commerce businesses like Daraz

(Pakistan), GoTo, Lazada (SE Asia) and Trendyol (Turkey). Further, Alibaba's logistics platform Cainao, like JD Logistics, has significant global ambitions.

Regional Champions

Regional champions mirror the success and model of global peers like Amazon, but on a local or regional level – notably in Asia, Africa and Latin America. Quite often, they are successful in limiting or completely halting the expansion of foreign competitors and building a resilient local network effect due to the:

1) **Culture:** Founders and team on the ground with a deep understanding of cultural intricacies such as language, customs, buyer behaviour and preferences.

2) **Partnerships:** Local organisations and founding teams also have entrenched relationships with the government and public and private sector organisations. Many have often established a trusted relationship with these partners and are well-positioned to gain the required approvals early on. This is very much the case regarding the financial technology ecosystem but lends itself heavily towards other sectors such as e-commerce.

3) **Regional Backing:** Regional champions often get early funding from local venture capital firms, sovereign funds and institutions, which can significantly accelerate the initial scalability of the product/service.

4) **Loyalty:** Long term, consumers prefer price, quality and consumer experience above all else when choosing various product/service providers. However, regional organisations often see incredible loyalty from regional consumers who – all else being equal – prefer local businesses over foreign peers.

Furthermore, regional factors such as disposable income, population, average basket size, technology and infrastructure (i.e. roads, rail, warehouses) have created further barriers towards foreign expansion into regional markets.

A number of these regional champions are highlighted in Figure 9 above – Mercado Libre, Jumia, Coupang and Shopee. This could be extended to include Indonesia's GoTo (the merger of Gojek and Tokopedia) and Japan's Rakuten (Rakuten Pay, Rakuten Super Logistics).

Payments

Payment technology has been critical to the growth of e-commerce, with Mastercard and Visa acting as the core layer between all major payment intermediaries.

However, what may appear as a straightforward process on the front end, is anything but that when considering the number of instructions sent between counterparties in the background.

Any single transaction can go through multiple parties, with each taking a clip, resulting in upwards of 4% transaction costs. Typically, this is split between:

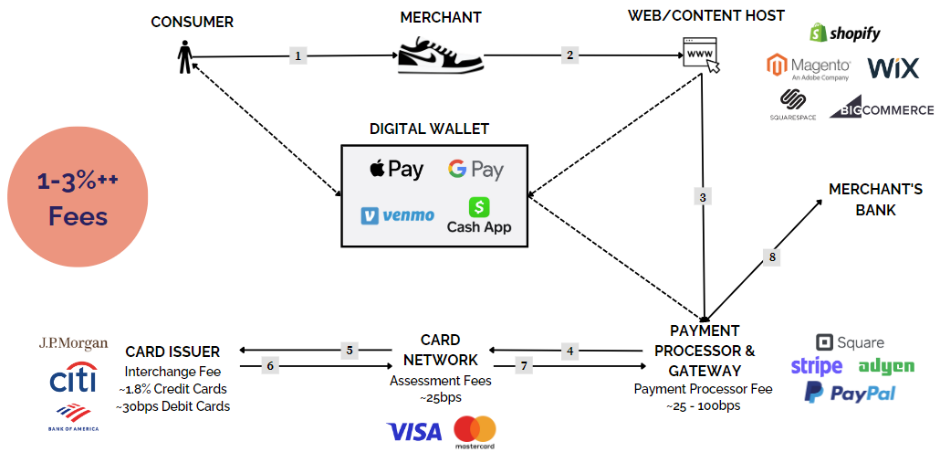
1) **Payment Processor and Gateway:** In an online transaction, the payment processor and gateway (often consolidated as a single service) "speaks" to all other payment intermediaries in the process on behalf of the merchant. The landscape is dominated by early-mover PayPal (and their subsidiary Braintree), with significant progress made by Block (Square) and Stripe.

2) **Card Network:** In the US, Visa and Mastercard control ~54% and ~23% of credit card payment volume, respectively, whilst China's UnionPay control the domestic card network (and continues to make expansive inroads elsewhere).

3) **Card Issuer:** The card issuer is the consumer's bank which issues the card and takes on most of the risk. The top four card issuers in the US are JPMorgan, Citigroup, Capital One and Bank of America.

4) **Digital Wallet:** A digital wallet, or e-wallet, is a consumer app storing payment information in a digital form, replacing the need to carry a physical wallet. The best examples are Apple, Google Pay, Venmo (PayPal) and Cash App (Block).

Figure 11 - Online Payment Network



Source: Granite Bay

Despite the process being fit for purpose today, it is evident that there is significant 'fat' which can be streamlined through ongoing innovation. In particular, innovation leveraging blockchain technology could enhance efficiency, security and pricing.

Fulfilment

As e-commerce has grown, so has the infrastructure to support (and enable) that growth.

Nothing highlights this more than the astronomical growth in Amazon's fulfilment centre footprint, now sitting on around 110 in the USA and 185 globally. At an average of 800,000 sq ft, the total footprint is ~148 million sq ft. That's ~2,000 soccer pitches.

However, as Amazon continues to grow, so too does its footprint. Below is an image of its recently opened Nashville site – spanning 3.6 million sqft over four levels. That's 47 soccer pitches on one site!

Figure 12 - Amazon's Nashville Warehouse (3.6m sqft)

Source: Amazon

As a consequence of this investment, Amazon have normalised 2-day delivery (and, in many cases, same-day delivery) for millions of consumers worldwide.

This has forced global peers (Shopify, Shopee, MercadoLibre and Lazada) to match the same experience. Unfortunately, this requires an incredible investment in industrial automation, software, AI, staff and physical footprint (all of which can be very costly).

Such an investment creates a substantial barrier to entry for emerging entrants and many incumbents which do not have the financial muscle or wherewithal to lay out the costly foundations underpinning a service that consumers have come to expect.

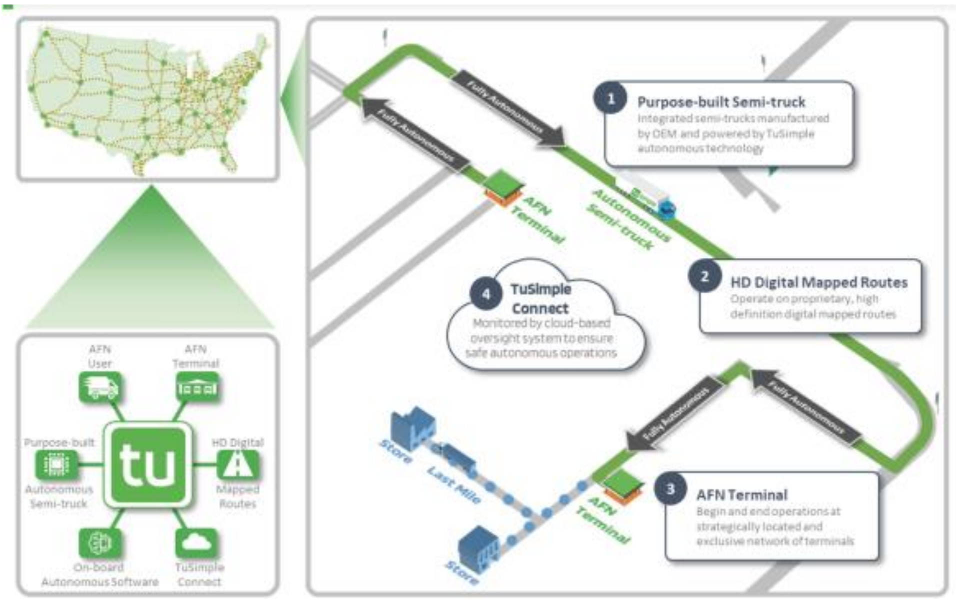
Another theme that will continue to play out in the coming decades is automation, not just warehouse automation (which is becoming synonymous with distribution centres), but in the first-mile, middle-mile and last-mile delivery[17].

For context, there are traditionally three 'miles' in the logistics network, from the manufacturer to the warehouse (first-mile), from the warehouse to the fulfilment centre (second-mile), and from the fulfilment centre to the consumer (last-mile).

[17] Three stages compose of manufacturer to sorting center (first mile), sorting center to suburban fulfilment center (middle mile) and fulfilment center to consumer (last mile)

In the 'middle-mile' category, organisations like TuSimple and Aurora (part-owned by Uber, Toyota and Amazon) are leading the way in embedding autonomous solutions in semi-trucks to improve efficiency, cost and safety between terminals and logistics hubs. This is highlighted below in the TuSimple use case.

Figure 13 – TuSimple Autonomous Freight Network



Source: TuSimple

From the penultimate stage (#3 in the map above), the aim is for the last mile of the delivery to be completed by an autonomous vehicle, like the Google, Kroger and Chipotle-backed startup Nuro (below), alongside the Daimler/Goodyear-backed Starship Technologies

Ultimately, organisations like Amazon, with interests in Aurora, Rivian and Zoox, are well positioned to vertically integrate delivery automation into their fulfilment network, further driving down costs and improving efficiencies.

Figure 14 - Autonomous Last Mile Delivery

Source: Nuro

Web 3.0

The advent of e-commerce was, along with social media, one of the core elements underpinning the growth of Web 2.0 – a shift from 'static' content to dynamic, interactive, interoperable, and user-generated content. For the first time, consumers could search, browse and shop for products with a reasonable amount of ease.

Companies at the forefront of this – namely Amazon, Google and Facebook – can leverage the considerable metadata they have on us (i.e. age, sex, location, product and service preferences) to deliver laser-focused recommendations.

Their ownership of our data, whilst ultimately giving us the desired outcome, comes at the cost of us transferring ownership of that data to a centralised organisation. This takes us to one of the core pillars of Web 3.0 – consumers reclaiming their data.

Data Ownership

One of the core components of Web 3.0 is self-ownership and control of data, meaning a person's data is stored in a decentralised manner (i.e. not within Facebook's cloud). This puts control of the data back into the hands of the consumer, who has ultimate control over how that data is shared, and for what purposes. For example, LiDAR technology, which is now becoming embedded in phones, can be used to develop a completely accurate three-dimensional model of our bodies whilst smartwatches and wearables gather data about our exercise, sleep and health.

For e-commerce, this may mean you decide to share some aspects of your personal information temporarily or permanently because it helps to deliver the desired product or service. The differentiator here is that the centralised organisation doesn't own the data, cannot share that data and cannot monetise that data without your consent. In a way, the vault containing your data (stored on a decentralised network) would act similarly to an API that can seamlessly plug into third-party providers, such as Shopify and Amazon, to enhance your shopping experience if you choose.

Ubiquity

Ubiquitous computing (or pervasive computing) refers to computing being embedded within and across all our day-to-day interactions.

We are seeing this today within smart cities (sensors, gateways, smart traffic lights), smart homes (smart TVs, fridges, washing machines), workplaces and retail outlets. However, what we see today is just the tip of the iceberg regarding how embedded computing will interact with our daily lives.

One of the best examples of this can be seen at a company called Wiliot, backed by Amazon and PepsiCo, who are embedding smart tags in products like fashion, groceries and pharmaceuticals to track temperature, location, authenticity and usage. For example, tags embedded within the packaging of dairy goods can send you a notification if it's out of date (or stored at the incorrect temperature). These same tags also can push information back to the manufacturer about consumption trends and region demographics (i.e. what wine are consumers in postcode 2000 (Sydney CBD) are drinking?).

Figure 15 - Wiliot Tags

Source: Wiliot

Beyond smart tags, smart fridges will tell us when we're out of milk – or provide actionable cooking recommendations based on what we have at home.

A smart toothbrush[18] in the future may be able to diagnose early stages of disease and auto-order appropriate pharmaceuticals. Already we are seeing technology embedded in toilets which can regularly check abnormalities (i.e. pH, sodium) in human waste.

The astonishing pace of innovation within the broader category of ubiquitous computing will drive considerable demand within the e-commerce sector, particularly when aligned with ongoing innovation in verticals like fulfilment and payments.

Metaverse

There are varying definitions of a metaverse which typically centres around an immersive interaction with various parties via Augmented Reality (AR) or Virtual Reality (VR).

The actual reality is that we are only at the embryotic stage of its development, so clearly defining what the end vision will look like can be highly subjective.

What we do know, however, is that advancements in ubiquitous computing (i.e. IoT, AR/VR, automation, edge computing etc.), decentralised frameworks, artificial intelligence and semiconductor technology are creating an environment where the ways in which we connect are being completely transformed.

With this in mind, a metaverse can be defined as a medium of engagement where one entity (individual/business) is 'present' with another entity(s) within an interoperable and standardised environment. In this sense, we can view presence, interoperability and standardisation as:

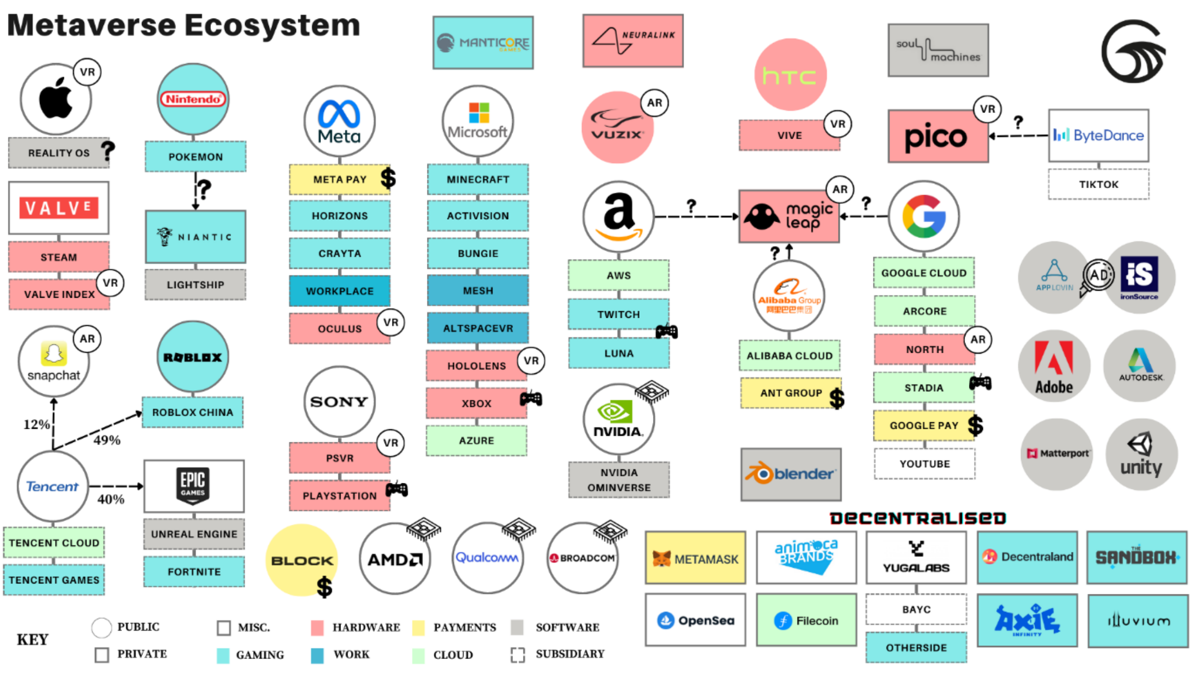
- **Presence:** The feeling of being engaged and present with a person or organisation
- **Interoperability:** Environments being able to 'speak' to each other (e.g. being able to move from one environment to another seamlessly)
- **Standardisation:** Bridging environments with a standard set of protocols and architectures

With the latter in mind, organisations like the Metaverse Standards Forum are being established to cooperate and foster the foundations and standards upon which the Metaverse(s) will be built. Founding members of this consortium include Meta, Adobe, Autodesk, Epic Games, Alibaba, Huawei, Microsoft, Nvidia, Qualcomm, Sony and Unity Software[19].

Figure 16 - The Metaverse Ecosystem

[18] Scientists Developing Smart Toothbrush to Diagnose Deadly Heart Problems Early - Independent

[19] Leading Standards Organizatoins and Companies Unite to Drive Open Metaverse Interoperability - Metaverse Standards Forum



Source: Granite Bay

As you can see in the graphic above, despite the technology's infancy, many of the world's largest technology companies are making steady progress in various aspects of the metaverse's development.

Interoperability is essential because having walled gardens around specific platforms means any assets a user has in that platform stays within that single platform's domain. For example, if I buy a pair of digital sneakers in Roblox, I cannot wear those same sneakers outside of the walled garden of Roblox. However, in an interoperable, standardised environment, I can wear those sneakers in Fortnite (Epic Games) or Meta, without losing any of that asset's contributions. Conversely, a consumer could (and can) purchase a pair of sneakers in the real world and wear a digital twin of those sneakers in a gaming environment. The same could be applied to cars, art and property etc.

Within an Augmented Reality (AR) environment, the metaverse could allow us to open an augmented Nike store in our living room (pick up, try and buy), all powered in the back end by metadata within platforms like Shopify[20]. We will be able to walk through virtual shopping malls specifically designed with brands, sizes, and styles specifically suited to us (the mall you enter will be completely different from the mall your friend enters!). Or imagine walking into a physical store with a pair of AR glasses (below) giving you directions to products, reviews, sizing and stock information.

[20] Create Immersive Shopping Experiences with Shopify - Shopify

In fact, Nike has built an immersive experience on Roblox (called "Nikeland"), with the company generating ~$185m from selling digital NFT sneakers, with ~$1bn in revenue generated in the secondary market.

The possibilities of this technology are endless and present incredible opportunities for incumbent and emerging leaders in e-commerce. At present, the AR retail market size is ~$2bn, but is expected to reach $61bn by 2031, implying a CAGR of 41.4%[21].

Figure 17 - Nikeland

Source: Sneaker Freaker

[21] Augmented Reality in Retail Market Research, 2031 - Allied Market Research

Shopify – Introduction

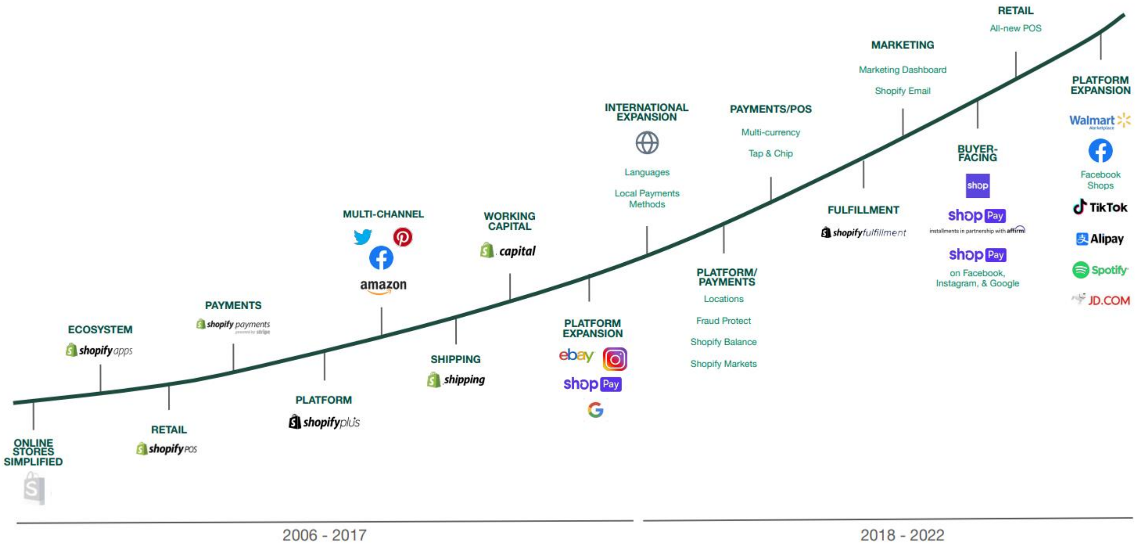
In 2006, after dissatisfaction with 'off-the-shelf' software, Tobias Lutke and Scott Lake built an e-commerce platform to power their online snowboarding store Snowdevil.

This would be the first platform to (seamlessly) integrate the end-to-end merchant and consumer journey (warehousing, logistics, payment, marketing, store design etc.).

From this early beginning, the company were quick to create an open ecosystem, which would plant the seed of what would become one of the most scalable software platforms in the world (not just in the e-commerce space).

Shopify's history (below) shows us some of the critical steps the organisation has taken to get to where they are today; and create a business model likely to become central and ubiquitous across global e-commerce for years and decades to come.

Figure 18 - Shopify's Evolution



Source: Shopify

In the Beginning (2004 – 2008)

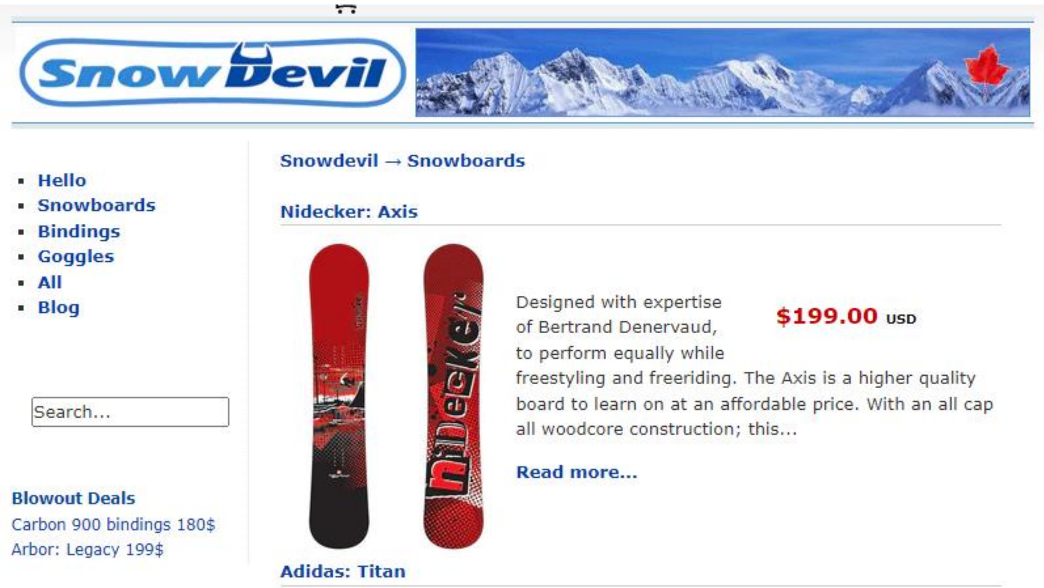
Despite a growing appetite for e-commerce in the early 2000s, the domain had considerable barriers to entry (i.e. website development, inventory management, fulfilment), keeping many of the smaller players (and incumbents) at bay.

Early movers such as Amazon (1994), eBay (1995) and Alibaba (1999) were able to capitalise early because the tools simply were not there for independent brands to build their own stores.

The tools that were there, such as Miva and Yahoo! Stores were sub-standard or, according to Lutke, "made my skin crawl because of how bad they were"[22].

This catalysed Lutke (a software engineer) and Lake to develop their own solution, called Shopify, which powered Snowdevil (below) – the very first Shopify merchant

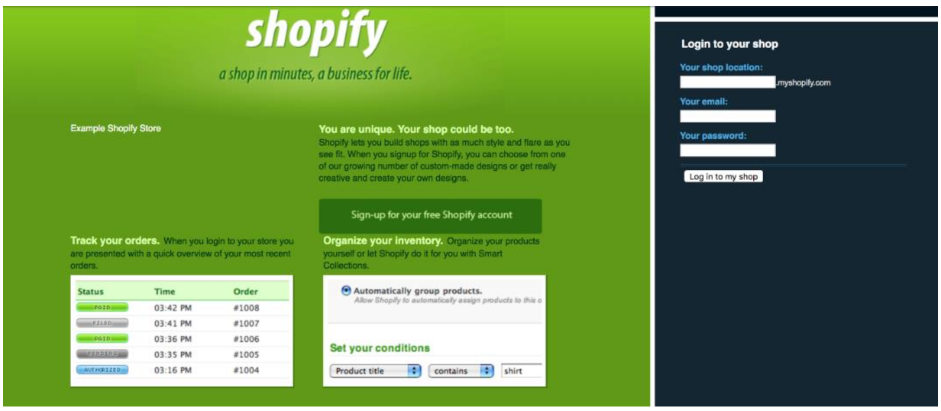
Figure 19 - Shopify 'MVP'



Source: Shopify

After sharing the platform with a small community, and receiving encouraging feedback, the pair ditched Snowdevil to focus on Shopify, which officially launched in 2006. The initial product (below) launched with various tools such as store templates, order tracking and inventory management.

Figure 20 - Shopify Phase 1



Source: The Strategy Story

[22] Q&A with Tobias Lutke of Shopify - Signal v Noise

Laying the Foundation (2009 – 2014)

In these critical years, Shopify shifted from simply being a utility to a platform – open to all developers to build and contribute to the Shopify ecosystem.

This was all enabled by the launch of their app store and API platform, allowing third-party developers to build relevant apps (i.e. fulfilment, drop shipping, marketing, design, loyalty etc.) and allow merchants to optimise their storefronts.

By 2011 Shopify had over 11k stores generating a combined $125m in sales, and the following year saw that merchant number surge to over 18k and $275m in sales.

In 2013, with over 50k merchants, Shopify launched the first major redesign of their platform, along with 60 new features. That same year also saw the release of **Shopify POS**[23] , which would help Shopify merchants sell in-store by syncing with their online systems – particularly advantageous for inventory management.

However, 2013 also saw the announcement of **Shopify Payments**[24], a partnership with Stripe, allowing merchants to accept and manage payments (Visa, Mastercard, Amex) without going through a third-party payment gateway. In Shopify's words, this would be the "game changer", helping to propel Shopify's merchant numbers and earnings.

Ringing the Bell (2015 – 2019)

In 2015, Shopify saw $3.7bn in GMV – a 2.3x increase from the prior year.

This traction was bolstered early in 2015 with the news that Amazon would shut down Amazon Webstore (its website-building tool for online retailers). However, not only did Amazon shut the business, but they handed Shopify a gift, announcing that Shopify would be the migration partner for the Webstore merchants (in exchange for Amazon Pay and fulfilment being offered to Shopify merchants).

With steady growth and a best-in-class platform, the opportunity was ripe for Shopify to go public.

They listed on the NYSE and Toronto Stock Exchange in May, valuing the company at $1.27bn[25]. Most sales (~75%) came from the North American market; however, substantial inroads were being made internationally, particularly in the UK and Australia.

[23] Shopify Press Release – Aug 2013

[24] Shopify Press Release – Aug 2013

[25] Shopify Prospectus - SEC

Regarding revenue, two-thirds were coming in via subscription solutions, with a very healthy 83% Gross Profit margin, whilst the balance was derived from merchant solutions (i.e. Payments) with a 30% Gross Profit margin.

With this backdrop, Shopify rapidly scaled its partnership network, signing deals with Pinterest, Twitter, and, more significantly, Facebook. Around the same time, the company launched **Shopify Shipping**, a shipping label service for merchants.

It wasn't until 2019, four years after the launch of Shopify Shipping, that the Shopify Fulfilment Network was launched, underpinned by the acquisition of robotics group 6 River Systems for $450m later that year. Like Amazon's Kiva Systems, this solution would be rolled out through a few Shopify (and 3PL) fulfilment centres to enable seamless e-commerce fulfilment for Shopify's growing merchant base.

Furthermore, growth in partnerships (i.e. Instagram, Google Pay, Amazon) and the development of other merchant solutions, such as Shopify Capital, concluded a period of substantial growth, with revenues rising almost 8x to US$1.6bn and merchant numbers rising 6x to over 1 million.

The Invisible Selling Machine (2020 - present)

Fortune Magazine's description of Shopify as "The Invisible Selling Machine"[26] is the best way to describe what the organisation had become in such a short period.

Just as Mastercard and Visa had created the 'payment rails', Shopify had now created the infrastructure of an 'e-commerce rails' – an open, agnostic platform to maximise its merchants' reach (and profitability). An invisible business (ex-'Shop' app) to the consumer but powering the fulfilment of billions of dollars' worth of goods for major brands like Tesla, LVMH (Sephora), Nestle, PepsiCo, Heinz, Lindt, Nescafe, Redbull, Hasbro and Anheuser-Busch; as well as it's "sweet spot" of scaling and emerging brands such as AllBirds, Gymshark, Kylie Cosmetics, Oatly and Bailey Nelson.

On the product side, Shopify was as busy as ever. In early 2020, they launched their consumer-facing app "Shop" with an initial functionality focussed mainly on order tracking. However, a broader ambition existed to unify the millions of Shopify merchants under one banner. This would be similar to Amazon's consumer app; however, it would link directly with the brand's underlying inventory (i.e. the product SKUs and pricing you see on the AllBird's website would be reflected in the Shop App). If done well, this ''DTC'' app could be a significant growth driver.

Shortly after this product rollout (and at the onset of the Covid pandemic), Shopify launched Shopify Balance (a "neobank" for Shopify merchants) as well as Shop Pay Instalments (to reach product parity with the growing number of Buy-Now-Pay-Later offerings in the market). During the first couple of years of the pandemic (which catalysed a further surge in merchant

[26] The Invisible Selling Machine - Fortune

numbers), the product roadmap momentarily paused; only to be reset in 2022 with the release of Shopify Audiences – the company's first foray into an, as yet, largely untapped revenue opportunity – advertising. In a nutshell, Shopify Audiences allows for better targeting of future shoppers by aggregating hashed data from brands with a similar audience.

On the partnerships side, we saw Shopify double down on existing partnerships such as Google, Twitter and Facebook whilst launching new partnerships with the likes of Walmart, TikTok, AliPay, Spotify, JD.com and iPhone ('tap to pay').

Rounding out a highly successful era for Shopify, they also closed the acquisition of Deliverr – a startup helping merchants optimise the location and size of their inventory across an extensive network of warehouses, thus optimising delivery times to consumers.

This acquisition, along with 6 Rivers Systems, is a significant step for Shopify in fulfilling its ambitions for the Shopify Fulfilment Network (SFN), which, they hope, will reach parity with Amazon in satisfying consumer demand for 1–2-day delivery in the US market.

Figure 21 - Shopify Timeline

Foundational Years

2006 - 2008

Type	Date	Event
Launch	Jun-06	Founded
Funding	Jan-07	$250k Seed Round

2009 - 2014

Type	Date	Event
Product	Jun-09	Launches API and App Store
Product	Apr-10	Theme Store launches
Funding	Dec-10	$7m Series A
Funding	Oct-11	$15m Series B
M&A	Feb-12	Acquires Select Start Studios
M&A	Aug-13	Acquires Jet Cooper
Product	**Aug-13**	**Shopify Payments**
Product	Aug-13	PoS
Funding	Dec-13	$100m Series C
Product	**Feb-14**	**Shopify Plus**

High Growth Phase

2014 - 2019

Type	Date	Event
Funding	Apr-15	Files for IPO
Funding	May-15	Lists on NYSE and TSE
Partnership	Jun-15	Pinterest Buyable Pins
Partnership	Sep-15	Shop Section on Facebook Pages
Product	**Sep-15**	**Shopify Shipping**
Partnership	Sep-15	Selling on Twitter
Partnership	Apr-16	Facebook Messenger Integration
M&A	Apr-16	Acquires Kit CRM
Product	**Apr-16**	**Shopify Capital**
Partnership	Jan-17	Amazon Marketplace enabled
Partnership	Mar-18	Google Pay enabled
Partnership	Apr-18	Shopping on Instagram
Product	**Jun-19**	**Shopify Fulfilment Network**
M&A	**Sep-19**	**Acquires 6 River Systems**

Covid (and beyond)

2020 - today

Type	Date	Event
Product	**Apr-20**	**Shop App**
Product	May-20	Shopify Balance
Product	May-20	Shop Pay Installments
Partnership	May-20	Expands Pinterest Partnership
Partnership	May-20	Branded Facebook Shops
Partnership	Jun-20	Merchant Channel via Walmart
Partnership	Oct-20	Partnership with TikTok
Partnership	Nov-20	Partnership with AliPay
Partnership	Feb-21	Shop Pay on Facebook and IG
Partnership	May-21	Expands Google partnership
Partnership	Aug-21	New In-App Shopping in TikTok
Partnership	Oct-21	Partnership with Spotify
Partnership	Jan-22	Partnership with JD.com
Product	Mar-22	Link in Bio launched
M&A	**May-22**	**Acquires Deliverr**
Product	**May-22**	**Shopify Audiences**
Partnership	Jun-22	Launches Twitter shopping
Product	**Jun-22**	**B2B on Shopify**
Partnership	Jun-22	Tap to Pay on iPhone

Source: Shopify, Granite Bay

Leadership

Co-founder Tobi Lutke and President Harley Finkelstein are the primary decision makers at Shopify, having oversight regarding all critical functions of the business – in particular, product and strategy. In addition, they are supported by a core team of highly experienced professionals across a wide range of fields.

In terms of voting power, shareholders recently approved the protection of founder/CEO Tobias in maintaining a 40% voting interest in the company by virtue of Class B shares which carry 10x the voting power of Class A shares (the ordinary shares available to the public).

Here is a very brief breakdown of the leadership team:

Tobias Lutke (Founder, CEO, Chair): Was the technical co-founder of Shopify, building and rolling out the initial platform framework built on Ruby on Rails. He also serves as Chief Product Officer and currently serves on the board of Coinbase.

Harley Finkelstein (President): Has been with Shopify since 2010, overseeing commercial teams, growth & external affairs. Previously COO of Shopify.

Jeff Hoffmesiter (CFO): Jeff replaces Amy Shapero in 2H22, joining from Morgan Stanley, where he spent two decades in its Technology Investment Banking group. Jeff's experience will be invaluable to Shopify as it integrates recent acquisitions like Deliverr and looks to create value accretion from the Shopify Fulfilment Network (SFN) and other core areas, particularly within the merchant solutions category.

Allan Leinwand (CTO): Joined in 2021. Previously SVP of Engineering at Slack and CTO of ServiceNow. Also, formerly an adjunct professor at the University of California, Berkeley, teaching computer management and networks. Co-authored “Cisco Router Configuration” and “Network Management: A Practical Perspective” and holds a patent in the field of data routing.

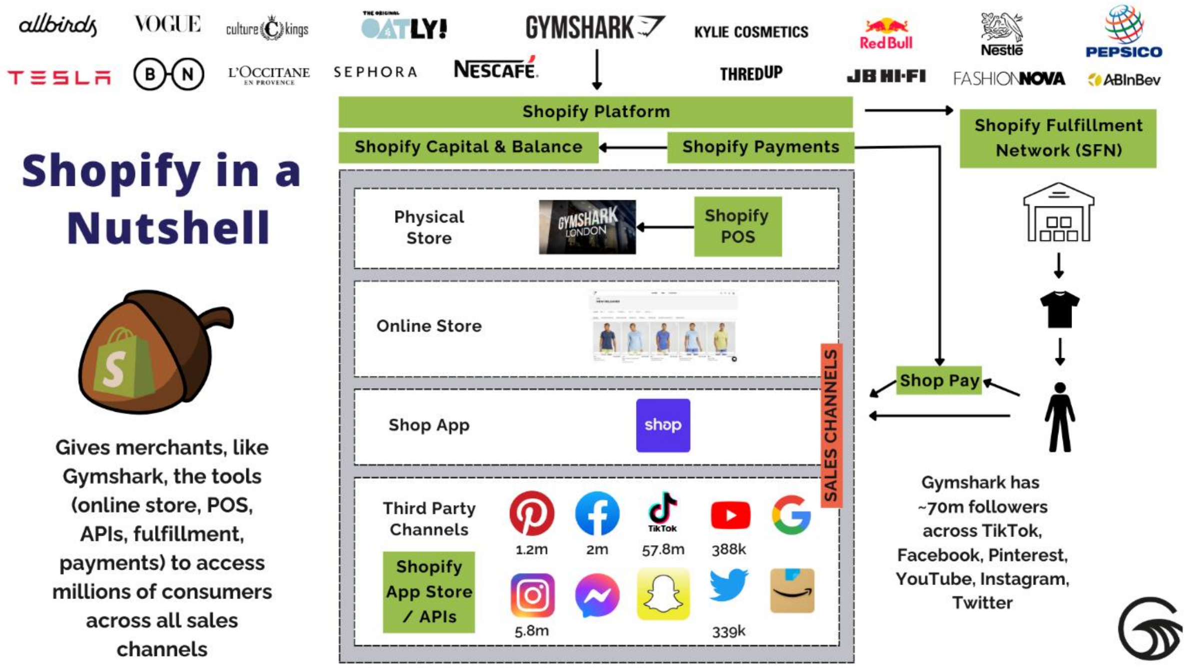
Kaz Nejatian (COO): Kaz is another recent addition to the Shopify executive team, recently promoted from VP of Merchant Services. He also takes on the role of VP of Product, reporting to Tobias Lutke. Prior to his time at Shopify, Kaz was a lead product manager at Facebook (specifically building payments products). The appointment of Kaz at this time, with such rapid growth of Shopify Payments and related products, is logical and should help underpin ongoing product improvements within the merchant solutions category more specifically.

Shopify Business Model

Shopify is a platform which enables merchants to sell everywhere.

With one account, a merchant can create an online store, manage inventory, unify payments, bank, borrow, ship, fulfil and more.

Figure 22 - Shopify in a Nutshell



Source: Granite Bay

Summary of Core Products & Services:

1) **Subscription Solutions:** Core subscription unlocking the online store, POS, payments and everything a merchant needs to get started. It starts at US$29 per month for the basic package through to $299 per month for the advanced package. Finally, there is a $2,000 per month package called Shopify Plus. All other products and services are dependent on a core subscription.

2) **Shopify Payments:** Automatically sets a merchant up to accept online (and in-store) payments without setting up a third-party payment gateway (each Shopify payments account is a white-labelled Stripe account (in which Shopify has invested $350m). For cross-border payments, Shopify uses Global-e (in which Shopify have a 9.3% stake). On average, Shopify charges 2.8% of GMV (depending on which core subscription you have); from this, a clip is paid away to intermediaries like Stripe, credit-card companies and issuer banks. Shop Pay, Capital and Balance is dependent on Shopify Payments (n.b.

dependencies on other products accelerate Net Dollar Retention, or the recurring revenue Shopify receives year-to-year from merchants).

3) **Shop Pay:** Shop Pay is an accelerated consumer checkout, much like Apple Pay. It stores consumers' payment and address information to create a more efficient checkout experience and significantly decrease the probability of cart abandonment. Shop Pay also has its own Buy-Now-Pay-Later (BNPL) feature Shop Pay Instalments, powered by Affirm (in which Shopify has a stake)

4) **Shopify Capital:** A business financing tool for merchants offering cash advances and short-term loans. For a $5k loan, Shopify may charge is $650 in interest, with the loan and interest deducted from sales over the loan term. Depending on the amount borrowed, Shopify will typically deduct 10-17% of daily sales until the loan is paid off. With the metadata (transaction data) Shopify collects on transactions, they can dynamically determine loan sizes and requirements (i.e. Shopify's AI will pre-emptively offer a loan to merchants based on data points they are continually acquiring via Shopify and Shopify Payments).

5) **Shopify Balance:** Shopify's digital bank for retailers. Balance is a unified money management account that allows merchants to get paid faster and with fewer fees than a traditional bank.

6) **Shopify POS:** Point-of-Sale hardware and software for brick-and-mortar retail. POS Lite (free) and POS Pro (US$89 per month per location). Competitive advantage by tapping into data from Shopify core subscription for live inventory management and pricing (omnichannel integration). Synergy with Shopify Payments, Balance and Capital.

7) **Shop App**: Shopify's consumer-facing e-commerce marketplace. Currently, the app is in its infancy, with only a tiny fraction of merchants set up. However, Shopify plans to ultimately see millions of brands and products (and their live catalogue) available to consumers worldwide. Critical to the success of this platform is the satisfaction (starting in the US) of 1-2 day delivery….a benchmark set by Amazon and one that has become the new normal for consumers globally.

8) **Shopify App Store:** There are over 6,000 Shopify apps available on the app store, allowing merchants to seamlessly connect with multiple third-party service providers across various verticals such as fulfilment, marketing, social, finance and design. Shopify monetises this by charging a 15% commission on sales of marketplace apps (and subscriptions) after the first $1 million.

9) **Other:** A bulk of Shopify's 'other' revenue comes from services such as shipping and fulfilment and new features like Shopify Audiences. Shipping was one of the earlier features, connecting merchants to carriers (for label printing and checkout rates), whilst the other two services are relatively new. Shopify Fulfilment Network (SFN) initially aims to achieve 1–2-day delivery to 90% of US consumers through third-party fulfilment

centres (thanks to the recently acquired Deliverr) and Shopify-owned fulfilment centres. Thirdly, new products like Shopify Audiences allow merchants to share data and better target potential consumers. The data, which is all private, can then be exported to platforms like Instagram for more laser focussed audience targeting.

Core Product & Service Segments

Initially, the lion's share of Shopify revenue came via subscriptions, where (much like website building platforms Wix and Squarespace), merchants can create their online store and connect with shoppers.

This was a high-growth, high-margin business; however, as the company expanded, it sought to add more value to merchants, increasing stickiness and lifetime value whilst boosting Net Dollar Retention (i.e. the revenue per merchant grows each year as more services are added).

However, whilst adding solutions increase revenue per customer (and retention), the downside is that many of these solutions have poorer margins. For example, the cost to deliver services such as payments and fulfilment is considerably higher than the cost to provide a software subscription. Although moving into lower margin businesses is often frowned upon, the aim of Shopify is to ultimately add products which help the merchant grow their sales volume and improve their shopper engagement. All of this leads to a greater lifetime value of the customer which is good for the long-term financials of Shopify.

Below, is a breakdown Shopify's core product and service segments, with further considerations relating to margins, profitability, scalability and other relevant issues.

Subscription Solutions

Revenue from subscription solutions comes mainly from:

1) Shopify Platform,
2) POS Pro subscription; and
3) Other (themes, apps, domain names)

Shopify Platform

The Shopify platform is the entry point for a merchant into the Shopify ecosystem. It is a prerequisite for any merchant to have an online store before they can start selling to consumers and unlocking the various other products and services within the Shopify ecosystem.

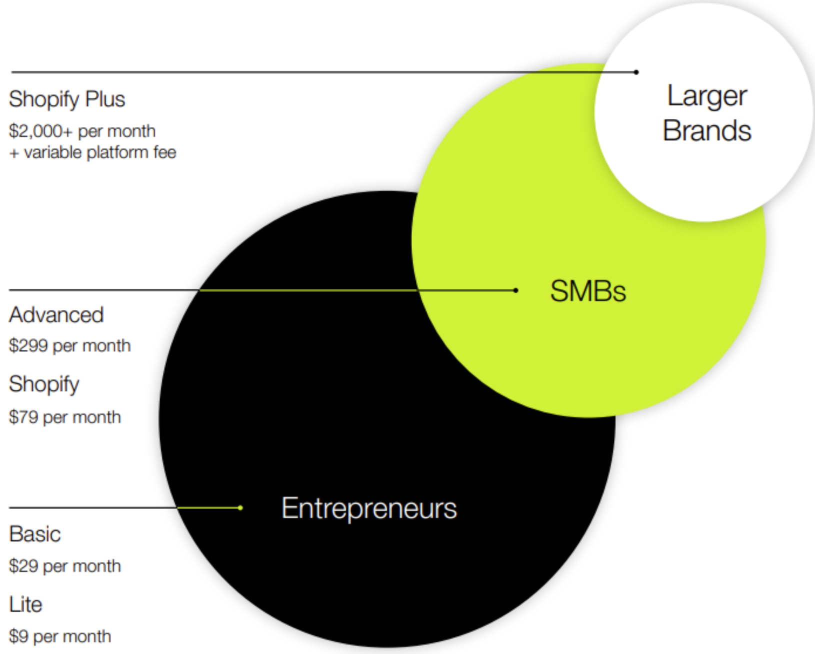
Merchants come to Shopify organically, via a partner (consultants/marketing agencies) or are approached by Shopify directly. Once in the door, merchants can sign up to one of five tiers, depending on the size of the business. Although most merchants are on the lower tiers, a bulk of the revenue is driven from the higher tiers (the big brands like Gymshark, Allbirds, Patagonia, JB Hi-Fi and Molson Coors).

Traditionally, Shopify has focussed on the bottom of the funnel, capturing SMEs and small businesses at the start of their e-commerce journey; however, they are investing considerably more resources into acquiring (and migrating) established global brands onto the Shopify Plus platform.

With this strategy, customers of Adobe Commerce (Magento), BigCommerce and Salesforce Commerce Cloud become key targets.

Here's a quick snapshot of the various subscription tiers available (n.b. specific tiers vary across geographies):

Figure 23 - Shopify Market Positioning



Source: Shopify Investor Overview 2Q22

Many of the offerings within each bundle will be explored throughout this report, however, as a starting point, the core inclusions of each tier are:

1) **Starter ($5/m):** Optimised for selling basic products and inventory over mobile (i.e. social media, e-mail, SMS, WhatsApp). For example, a musician selling branded t-shirts via Spotify.

2) **Lite ($9/m):** Overview dashboard, financial reports, customer profiles, order/product management, mobile POS, e-mail carts, and in-store inventory. Buy buttons (integrates with third-party platforms like WordPress)

3) **Basic ($29/m):** E-commerce website, 4x inventory locations, 2x staff accounts, shipping labelling, Shopify Payments (1.7% to 2.9% + 30c/transaction, 2% third-party fee), POS Lite

4) **Shopify ($79/m):** As above plus 5x inventory location, 5x staff accounts, Shopify Payments (1.6% to 2.8% + 30c, 1% third-party fee).

5) **Advanced ($299/m):** As above plus 8x inventory locations, 15x staff accounts, Shopify Payments (1.4% to 2.7% + 30c, 0.5% third-party fee).

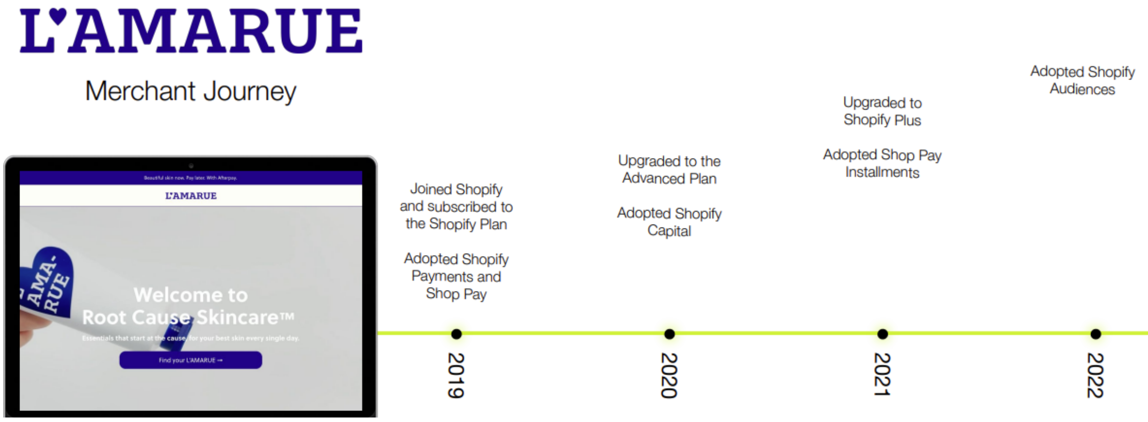
6) **Shopify Plus (from $2,000/m):** All the above but built specifically for large enterprises. Customisable, AR shopping, automation (loyalty, merchandising), unlimited staff accounts, up to 20 inventory locations and Shopify Audiences. In addition, Shopify POS Pro comes free (instead of $89/m) whilst there is optimisation for wholesale and B2B sales along with global selling (support for 20 languages vs 5 for Shopify Advanced).

Notably, the tier provides full support to ensure streamlined migration and ongoing 24/7 service. For Shopify Plus members who opt for a third-party processor (instead of Shopify Payments), there will be a 0.15% fee instead of 0.5% for Advanced.

Ultimately, Shopify seeks to provide services for merchants across their entire lifespan, allowing merchants to upgrade through the tiers as the merchant scales.

This is best represented in the below example of merchant L'Amarue who joined in 2019 on the 'Shopify Plan' and, within a couple of years, upgraded to 'Shopify Plus', along with several Shopify services, including Shopify Capital and Shopify Audiences.

Figure 24 - Shopify Merchant Journey



Source: Shopify Investor Overview 2Q22

POS Pro

Shopify introduced Point-of-Sale (POS) 'Lite' in 2013, with POS Pro launched in 2Q20 and subscription revenue from POS Pro coming in from 4Q20.

Shopify POS Lite, outlined in more detail in merchant solutions below, is POS software and hardware enabling Shopify merchants to sell in-person via a brick-and-mortar location(s), be it a pop-up shop, market stall or permanent retail locations.

Whilst Shopify POS Lite is included in all plans, with mobile POS, order and product management, the more advanced POS Pro comes at an additional $89/month/location with the additional benefits including:

- Unlimited store staff
- Smart inventory management
- Omnichannel selling (various channels); and
- In-store analytics

For example, a merchant on an advanced plan (at $299/month) with two physical locations, would be paying $477/month ($299 + $89 + $89). POS Pro is free for merchants on the Shopify Plus subscription (from $2,000/month).

A core advantage for a merchant having Shopify POS is that it is integrated within the core Shopify subscription, meaning more seamless inventory management, stocktake, ordering, data/analytics, customer insights, rewards etc.

The ease of managing a unified back office online and in-store is a considerable advantage as opposed to integrating a third-party POS provider such as Square (Block) or Lightspeed.

Furthermore, Shopify (and their partner Stripe) are early partners of Apple as the tech conglomerate expands its 'Tap to Pay' technology. This solution allows consumers to tap their Apple device (watch, phone) on a corresponding merchant device (phone, tablet) without the need for independent hardware (i.e. a physical square device). Such technology shifts the balance of power back to POS providers with value-add infrastructure and UX beyond the physical device.

Themes, Apps & Domain Names

Shopify has generated additional revenue from selling themes, apps and domain names from the very early days of its launch. This allows merchants to create an online presence efficiently, without needing to code or customise what should be (and is) a replicable user experience.

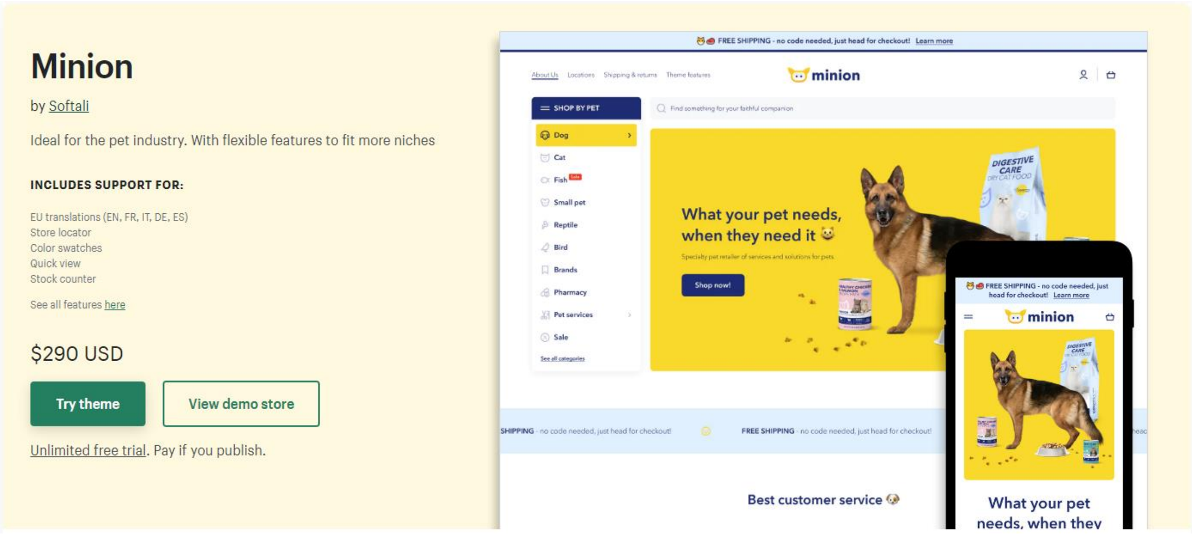
Here is a brief overview of what Shopify offers for each of these services:

Themes

Shopify has hundreds of themes for merchants, allowing them to 'copy' the style and format of an existing online shopfront and customise it accordingly. They range from basic free themes to more advanced (priced from $180 to $350). Themes are either developed internally by Shopify or by third-party developers who, once approved, pay Shopify a 15% fee on every theme sold (beyond the first $1m in sales).

Assuming half of all new Shopify merchants in 2021 (~ 157k) purchased a theme for $250 ($39.25m), and one-third of those sales were over the $1m 'chargeable' threshold, then total theme revenue trickling through to Shopify would equate to ~$2m. This is an insignificant number in the grand scheme of things.

Figure 25 - Shopify Themes



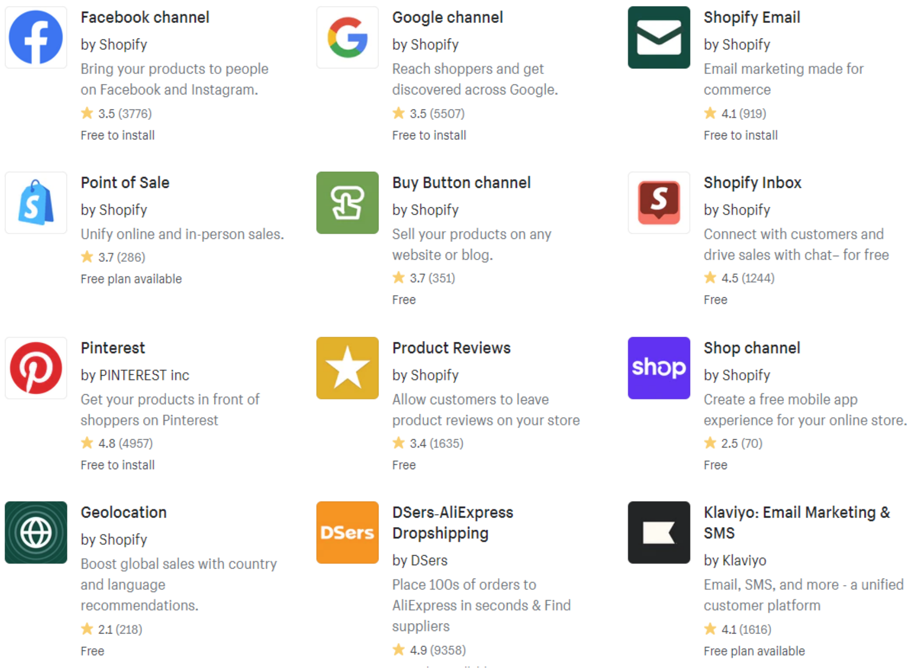
Source: Shopify

Apps

Shopify has over 8k apps extending across a myriad of product capabilities, including design, marketing, product discovery, finance, and fulfilment.

As with themes, Shopify apps are built in-house or by third-party developers. As you can see in the figure below, some of the most popular apps on the platform are those developed internally, connecting merchants to consumers on Facebook and Google and enabling certain functionality (i.e. CRM via Shopify Inbox and DTC via Shop channel). In fact, ~56% of the top 50 apps are developed by Shopify, with third-party developers controlling ~90% of the app market outside of the top 50 (based on In fact, ~56% of the top 50 apps are developed by Shopify, with third-party developers controlling ~90% of the app market outside of the top 50 (based on our review of publicly available app data at Shopify).

Figure 26 - Shopify App Store



Source: Shopify

From a revenue perspective, Shopify used to take a 20% clip of third-party app revenue; however, they have now waived this fee for the first $1m of earnings p/a per developer. Instead, like themes, Shopify will take a 15% clip of any developer revenue over $1m p/a. This move is in line with peers like Apple, Amazon and Google who have come under increased scrutiny from regulators.

It is estimated that merchants use ~6 apps to run their business[27]. Applying this to the ~314k new merchants in 2021 means there were approximately 2m app downloads. Taking this a step further, if half of these apps were third-party, charging an estimated $10/month (based on the average subscription of a sample group), then the total revenue generated by third-party developers would be ~$120m. If we assume one-third of that revenue is in the tranche above $1m in annual sales, then Shopify's cut would be closer to $6m. Again, not overly material.

Shopify's goal here is to incentivise app developers to create tools which make the merchant's day-to-day business more seamless and profitable. Ultimately, this increases merchant lifetime value.

[27] "Shopify Drops it's App Store Commissions" (Source: TechCrunch)

Domain Names

Domains, at the cost of ~$14 p/a per domain, will never be a significant money maker for Shopify. It simply streamlines the onboarding experience for new merchants and keeps the domain management unified within the same account (rather than being disjointed).

If we generously assume that 25% of new merchants create a domain with Shopify, then the additional revenue from the domain name alone would be over $1m.

Financial Considerations

In 2012, 81% of Shopify's revenue was derived from subscription solutions which, back then, comprised all the above segments except for POS (released in August 2013).

Gross Margins have remained steady, at 78-80% since then, which is mainly in line with comparable pure play "platforms" such as BigCommerce (75-78%), Wix (68-74%) and Squarespace (83-84%).

From an operating expense perspective, there is no breakdown between the various segments, however, sales and marketing remain the predominant cost centre, particularly as Shopify expands globally (with a greater need to amplify brand recognition) and focuses more energy on acquiring 'higher value' Shopify Plus customers. For example, acquiring a customer like Lenovo (Shopify Plus tier) comes at a significantly greater cost than an emerging brand (Basic tier). A high-value acquisition requires a very targeted outbound approach, with significant hurdles in data migration, upskilling etc. All of this increases acquisition costs due to dedicated sales teams. At the other end of the scale, the acquisition cost of a small merchant (i.e. a solo entrepreneur selling t-shirts) will be significantly lower as that merchant will likely create a Shopify account organically.

A final consideration relating to acquisition costs is the ongoing need to retain, educate and upsell new and existing customers regarding new products and services. However, this is less relevant for the subscription solutions segment and more relevant for merchant solutions (payments, fulfilment). The same can be said for R&D, which is very much focused on innovating in the merchant solutions category.

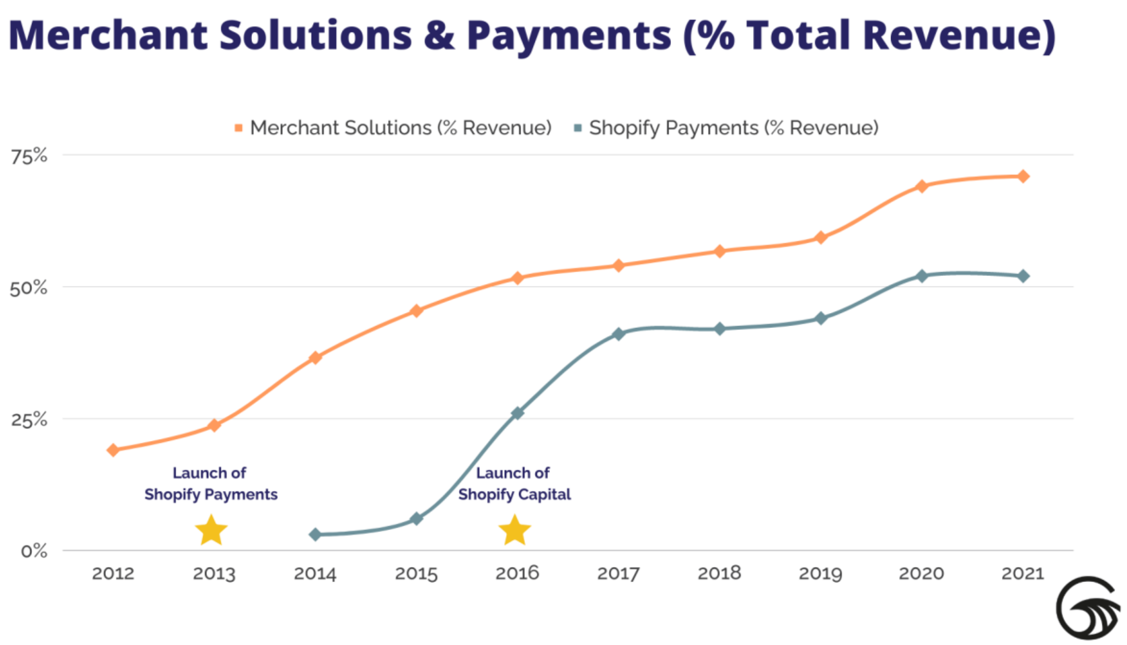
Merchant Solutions

When Shopify first launched, most of its revenues came from subscription solutions, with the only merchant solutions revenue derived from transaction and referral fees (nothing particularly 'value add' to the merchant).

However, the launch of Shopify Payments in 2013 would be the significant catalyst for a shift in segmental revenue towards 'value add' merchant solutions.

In fact, within five years of Shopify Payments launching, it saw close to 50% of total platform GMV transacted through its payment's infrastructure, of which Shopify was taking a ~2.8% clip. Such significant momentum, along with growth in aligned solutions like Shopify Capital, would see Merchant Solutions revenue grow to ~75% of total revenue (from ~25% in 2012); and Shopify Payments (part of merchant solutions) contributing towards 50% of total revenue.

Figure 27 - Shopify's Merchant Solutions & Payments (% Revenue)



Source: Granite Bay, Shopify financial statements

Going forward, Merchant Solutions' contribution will likely grow as Shopify adds new products and services to enhance the merchant's (and consumer's) experience across four key pillars – money, fulfilment, retail and marketing. As you can see below, there has been a rapid rate of product development across these four verticals in recent years.

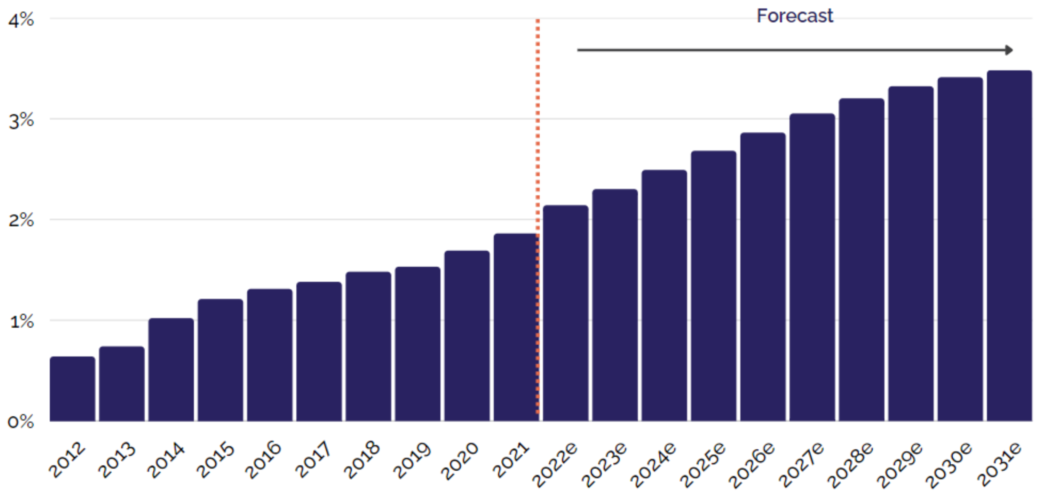
Figure 28 - Shopify's Merchant Solutions Offering

Launch	Money	Fulfillment	Retail	Marketing
2009 - 2014	Shopify Payments		Shopify POS	
2015 - 2016	Shopify Capital	Shopify Shipping		
2017 - 2018	Shop Pay			Marketing Dashboard
	Fraud Protect			
2019 - 2020	Multi-Currency	Shopify Fulfillment Network	Tap & Chip Reader	Shopify Email
2021 - 2022	Shopify Balance	Deliverr	Tap to Pay (iPhone)	Shop
	Shop Pay Installments	Shop Promise		Shopify Markets
	Shopify Protect			Shopify Inbox
				Shopify Audiences

Source: Shopify, Granite Bay

This growth is evident in the expansion of merchant solutions revenue as a proportion of GMV, highlighting the flywheel effect of Shopify and the uplift the company can achieve in Net Dollar Retention (NDR) terms. This means, a more significant percentage of merchants' GMV is paid to Shopify as the add more merchant solutions to the mix. This is represented below as merchant solutions 'take rate' as a proportion of total GMV (i.e. revenue as a proportion of GMV).

Figure 29 - Merchant Solutions Take Rate (Revenue / GMV)



Source: Shopify (actuals), Granite Bay (forecasts)

The initial boost in take rate occurred after the introduction of Shopify Payments in 2013. The roll-out of other products and services like Shopify Fulfilment Network (SFN), Shopify Capital and advertising will see this take rate continue to climb in coming years.

In terms of the future roadmap, marketing should offer quite a compelling opportunity. In particular, there is significant potential for Shopify to expand the functionality of the consumer-facing Shop App to onboard many of their millions of merchants whilst utilising their vast repository of data for a compelling, targeted advertising business.

Merchant Solutions & The Shopify Flywheel

Before diving into the specific merchant solutions, of which there are plenty, it's important to understand how these solutions fit into the overarching strategy of Shopify.

This strategy feeds into their flywheel, which has always been articulated as 'more channels, partners & capabilities' drive 'more GMV', which drives 'more merchants'.

Shopify Flywheel 2.0 (below) builds on this to highlight some key points. Just as the sales channels (IG, FB, TikTok, Google) are available to merchants to drive more sales, each additional solution also drives incremental sales (be it Payments, Capital, SFN or Shopify Email). As merchants grow, a solution exists to help them optimise and drive that growth. This all boosts GMV (and Shopify's take rate), increasing that merchant's Lifetime Value (LTV); whilst boosting the value proposition for new merchants. That is the flywheel.

Figure 30 - Shopify Flywheel 2.0

Source: Granite Bay, Shopify

Now let's dive into one of the critical value drivers in that flywheel - Shopify Payments.

Shopify Payments

Shopify Payments was launched in 2013, which they described, at the time, as an "easy to use credit card processing system"[28] allowing merchants to accept and manage payments via Visa, Mastercard and American Express directly through Shopify rather than going through a third-party payments gateway.

[28] Shopify Launches Shopify Payments - Shopify

However, the gateway is not a Shopify-built platform. Instead, it is a white-labelled Stripe gateway (in which Shopify have a ~$350m equity interest).

It is fair to say that the launch of this product was a resounding success, with over 40% of all Shopify transactions (GMV) taking place on the Shopify Payments Gateway by 2018. By mid-2022, the 'penetration rate' of Shopify Payments was 53%. In terms of contribution, Shopify Payments accounts for almost 40% of total Shopify revenue; and 75% of merchant solutions revenue.

These are compelling numbers which we expect will only accelerate over the coming years as more and more merchants adopt the payment gateway.

What Drives Shopify Payments Adoption?

Shopify Payments is available to merchants in most major markets, including the US, UK, Canada, Australia, Japan, and most major EU markets.

In essence, there are three primary drivers for merchants adopting the Shopify Payments gateway - cost, merchant ecosystem and shopper experience.

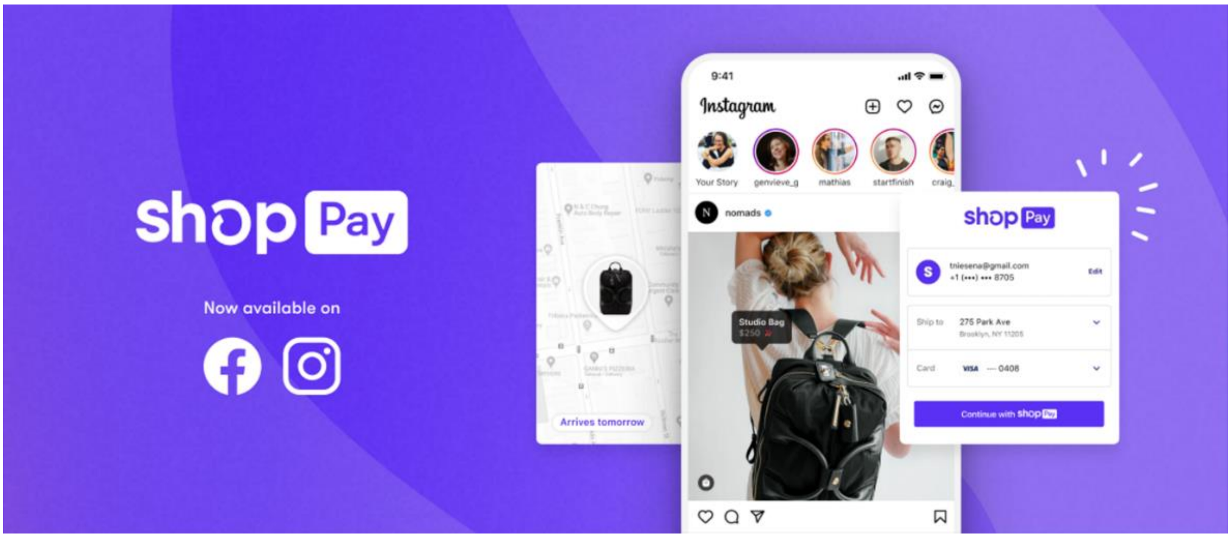
Firstly, even though Shopify allows merchants to use third-party payment gateways, they incur additional fees for doing so. These fees range from 2% for those on the Basic Shopify tier and drop to 0.15% for those on Shopify Plus. This fee is on top of what merchants need to pay to intermediaries (i.e. Visa, banks, payment gateways) for processing the payment. These additional fees, which erode the merchant's margins, act as a clear catalyst to setup with the Shopify Payments gateway.

Secondly, there's the merchant ecosystem. If a merchant does not have Shopify Payments, they will not be able to use Shopify Capital, Shopify Balance, Shopify Markets, Shopify Audiences, and other functionality within the Shopify ecosystem.

Lastly, Shopify Payments unlocks Shop Pay (below) which saves consumer details (delivery address, payment information) to ensure a more seamless checkout experience. Shop Pay, with over 100 million users at the time of writing[29], also encompasses Shop Pay Instalments, Shopify's buy-now-pay-later (BNPL) function, enabled by Affirm. Ultimately Shop Pay reduces 'cart abandonment', leading to higher sales.

[29] https://www.shopify.com/au/shop/shop-pay

Figure 31 - Shop Pay



Source: Shopify

Finally, Shopify Payments adoption rates will accelerate as they continue to unlock the platform in other regions. At present, there is a notable absence in high-growth regions such as Southeast Asia and Latin America, which are seeing intense competition from global and regional payment gateways.

Financial Considerations

Shopify has been able to maintain a steady take rate for Shopify Payments at ~2.8%, from which they pay an undisclosed margin to the following primary intermediaries:

- Payment Gateway: Traditionally, payment gateways take a clip of between 0.25% - 1%.
- Card Network: This is the more predictable line item, with Mastercard and Visa traditionally taking a flat 0.25% fee on transactions.
- Card Issuer: The card issuer is the bank which issues the credit or debit card to the consumer. As the issuer absorbs much of the risk, their fees tend to range from 0.30% to 1.8% (for debit and credit cards, respectively)

Other costs associated with the Shopify Payments (i.e. staff, infrastructure, R&D) are likely to be substantially lower than peers, given that a lot of this is absorbed by partner Stripe.

Shopify Capital

Shopify Capital was launched in April 2016 as a merchant cash advance and loan product to help drive growth for merchants in the USA.

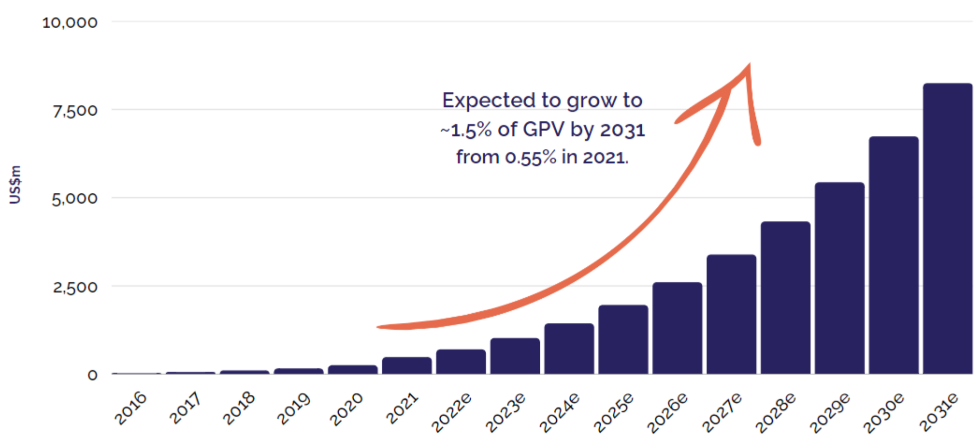
In those early days, merchant cash advances and loans were minimal; however, they grew substantially over the years as the service expanded into new markets.

Shopify Capital pre-qualifies merchants based on their sales run-rate and risk profile. If a merchant is approved, they can apply for an advance or loan, which is deposited into the merchant account within days. The merchant will then see a percentage of sales automatically deducted each day until the loan amount (plus a margin) is repaid.

For example, if "Global Travel Accessories" was seeing consistent sales of $50k per month ($600k p/a) then Shopify may pre-qualify that merchant for a $90k loan (15% of their sales run rate). Shopify would then apply a 'factor rate' to this loan, which is the margin they charge on top of the loan (like an interest rate). For example, if the factor rate is 1.1x, the merchant will see a percentage of their daily sales diverted to Shopify Capital up until $99k is paid off (being 1.1x the $90k loan amount).

Over the coming decade, the quantum of loans provided has the potential scale rapidly (equivalent to 1.5% of GPV) in line with greater merchant adoption (and visibility), development of smarter onboarding tools (i.e. actionable insights driven from Shopify Payments data) and scaling of the product into more markets.

Figure 32 - Shopify Capital: Merchant Cash Advances & Loans



Source: Shopify financial reports, Granite Bay

SME Lending Landscape

The SME loan business is lucrative but highly competitive, with several organisations vying for the attention of Shopify's merchants such as the merchant's bank (see Shopify Balance below), a myriad of lending start-ups, as well as payment gateway providers like PayPal and Square. The latter two offer almost identical products in PayPal Working Capital and Square Loans, respectively.

For Shopify, Square and PayPal, more specifically, because they provide the payment infrastructure, they acquire a considerable amount of day-to-day sales data on the merchant.

With this data, they can create dynamic rules to automatically pre-qualify their customers for a certain loan (typically less than 20% of annual sales) without the red tape and time required from an incumbent bank.

Given the sheer amount of data and insights (as well as synergy) Shopify Capital has, we expect it to become the default loan platform for Shopify Merchants and, conservatively, expect that total loan value to grow to ~1.5% of GPV.

Furthermore, synergy from products such as Shopify Balance (below) will continue to enhance the value proposition of Shopify's loan product over peers.

For comparison, PayPal and Square's 2021 merchant loan balances were $3.6bn and $518m, respectively, representing ~0.30% of GPV for both firms. This compares to $471m for Shopify Capital (at 0.55% of GPV). However, in the case of PayPal and Square the GPV component does encompass non-retail turnover, so it is not entirely 'like for like'.

Shopify Balance

Shopify Balance was launched just at the onset of the global pandemic in May 2020.

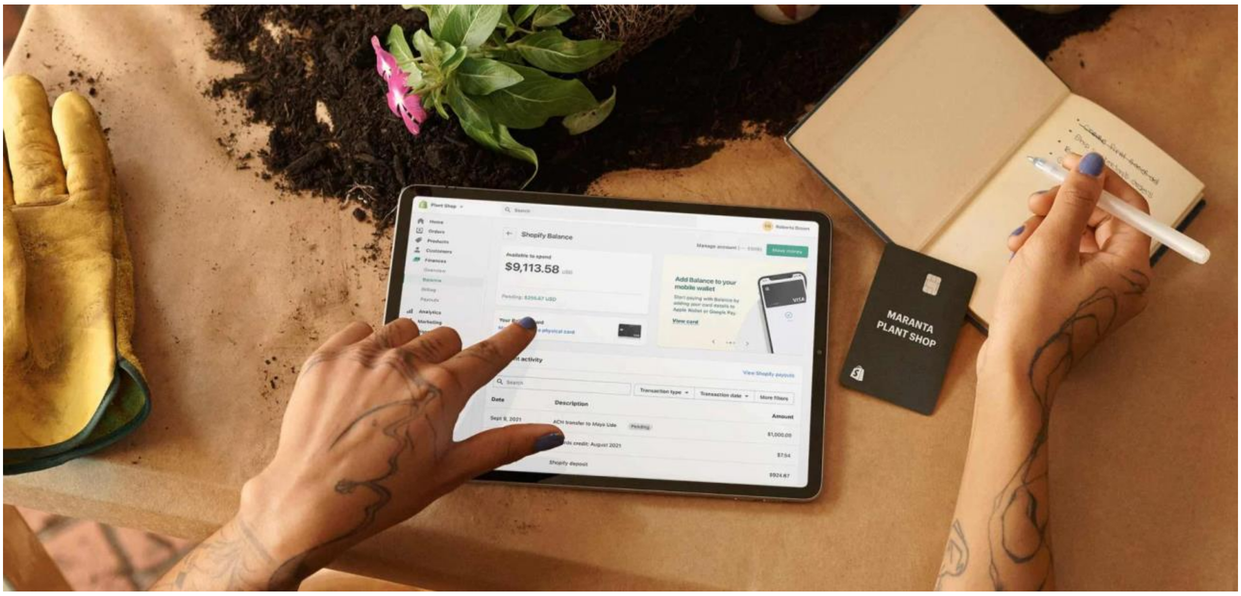
This product is Shopify's equivalent to Revolut, N26 and Nubank and is a no-fee digital bank purely designed for Shopify merchants. Its services include:

- Shopify Balance Account: Merchants can get a unified view of cash flow, pay bills and track expenses
- Shopify Balance Card: Physical and virtual cards so merchants can access their money and make purchases
- Rewards: Cashback and discounts on spending within the Shopify ecosystem (i.e. shipping, premium themes, custom domains, apps, e-mail and marketing)

Due to the insights Shopify gathers on its merchants, we believe Shopify Balance could evolve to provide actionable insights, cash flow forecasting, tax, bookkeeping, and many other 'value add' services alongside more seamless integration with Shopify Capital.

This all centralises merchant financial services under Shopify's umbrella, opening myriad opportunities for further monetisation.

Figure 33 - Shopify Balance



Source: Shopify

Furthermore, Shopify can establish a flywheel effect through the vertical integration of such ancillary services, which we believe gives it a distinct advantage over peers like BigCommerce, Adobe/Magento, commerce tools, Salesforce and others.

Shopify Fulfilment Network (SFN) - Introduction

Aside from Shopify Payments, there is no more important product within the Shopify Ecosystem than the Shopify Fulfilment Network (SFN) - a platform which aims to connect product inbounding (from the manufacturer) to distribution centres and, ultimately, to the end consumer.

The importance of this comes about, ultimately, due to consumer expectations, driven mainly by Amazon's exceptional benchmark. This benchmark has completely shifted consumer expectations, with 90% of US online shoppers expecting 2–3-day shipping.[30] Those same consumers are also unwilling to pay 'above the odds' for this expedited delivery - likely catalysed by Amazon Prime, which, in many cases, offers consumers free delivery in less than two days.

According to a recent McKinsey survey, 75% of apparel, hard goods and speciality retailers intend to build out network capabilities that offer two-day or faster delivery, and 42% are aiming for one-day click-to-customer lead times by 2022.[31]

For merchants and e-commerce 'enablers', this creates an environment where they balance high consumer expectations with increasingly pressured margins. Add to this the sheer

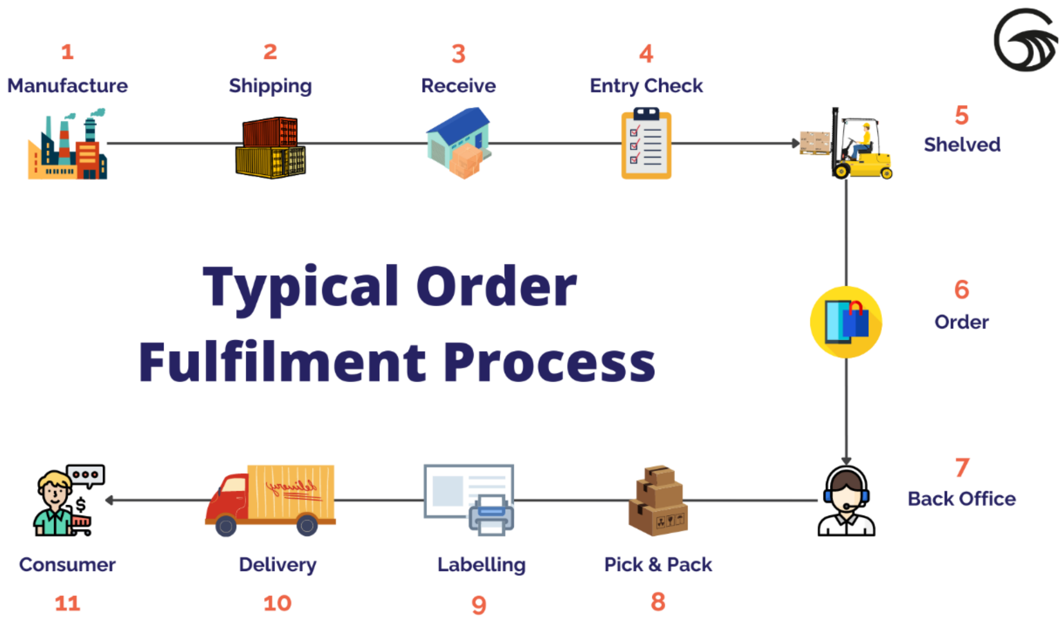
[30] Retails Need for Speed Unlocking Value in Omnichannel Delivery - McKinsey (2021)

[31] Retails Need for Speed Unlocking Value in Omnichannel Delivery - McKinsey (2021)

complexity of managing the end-to-end supply chain, and you have the recipe for what is an exceptionally resource-heavy (time and money) service.

Such complexity can be broken down into several steps outlined below.

Figure 34 - Shopify's Fulfilment Process



Source: Granite Bay

Today, the way platforms like Shopify (and their competitors) solve fulfilment is via an app marketplace, allowing third-party (and internal) developers to create solutions linking all the above processes together. Some third-party apps for Shopify include AfterShip, Parcel Panel, Simplio, CJDropshipping, Pirate Ship, ShippingEasy, Easyship, Matrixify, ShipStation, Shippo and ShipBob.

This is a tiny sample of the thousands of apps that are currently available to merchants.

If you consider a smaller merchant with one or two products or SKUs (Stock Keeping Units), the complexity of navigating this ecosystem, stitching it together and managing the entire process can be extremely daunting, time-consuming, and costly. This is amplified for merchants with multiple SKUs, manufacturing facilities and markets.

Furthermore, multiple intermediaries and processes make it increasingly difficult for merchants to provide assurances over expedited delivery, which is no longer a 'nice to have' but a 'must have' for many consumers.

The solution to this is building the end-to-end solution in-house, unifying first-mile and last-mile delivery with metadata, automation, and software tools.

Of course, the barriers to entry and sheer cost of building this infrastructure are prohibitive, with quite a decent lag time; however, the longer-term benefits are potentially significant.

However, Shopify are one of those few businesses which has the potential to challenge the likes of Amazon in achieving 2-day delivery (or what Shopify calls the "Shop Promise").

We also see SFN working closely with partners, such as Meta and Google, to enhance their respective value proposition (i.e. guaranteed free 2-day delivery via Instagram and Google Shopping will increase engagement on those platforms and, by virtue, aligned revenue streams like advertising).

In essence, this could make SFN the fulfilment partner of choice for these companies who are essentially building an 'Anti-Amazon Alliance'[32]. For example, the converse to Amazon's integrated model is a disintegrated model working cohesively - Instagram, Google (shoppers), Walmart, eBay, Etsy (marketplace), Stripe, PayPal (Payments), SFN, UPS, GXO (Fulfilment).

Shopify Fulfilment Network - Overview

Shopify's Fulfilment Network launched for early access in mid-2019 to 'qualifying' US merchants, with the service having expanded to Canada since then.

This early iteration allowed Shopify merchants to store their inventory at a dedicated network of fulfilment centres across the country to ensure more timely deliveries (with lower shipping costs). This was powered by 'smart inventory allocation' technology to route products to fulfilment centres located the closest to the buyer.

To enable this, Shopify relies on internal and external investments.

Internally, the company are committing considerable resources ($1 billion) over the next few years to build out the infrastructure (fulfilment centres), which will act as the backbone of the SFN solution[33]. This includes leasing facilities like the 560,000 sq ft fulfilment centre below in Atlanta.

[32] The Anti-Amazon Alliance - Stratechery

[33] Shopify Makes $1B Bet on Warehouses, 2-Day Delivery as eComm Growth Slows - PYMNTS

Figure 35 - Shopify's Atlanta 'Hub'

Source: CoStar

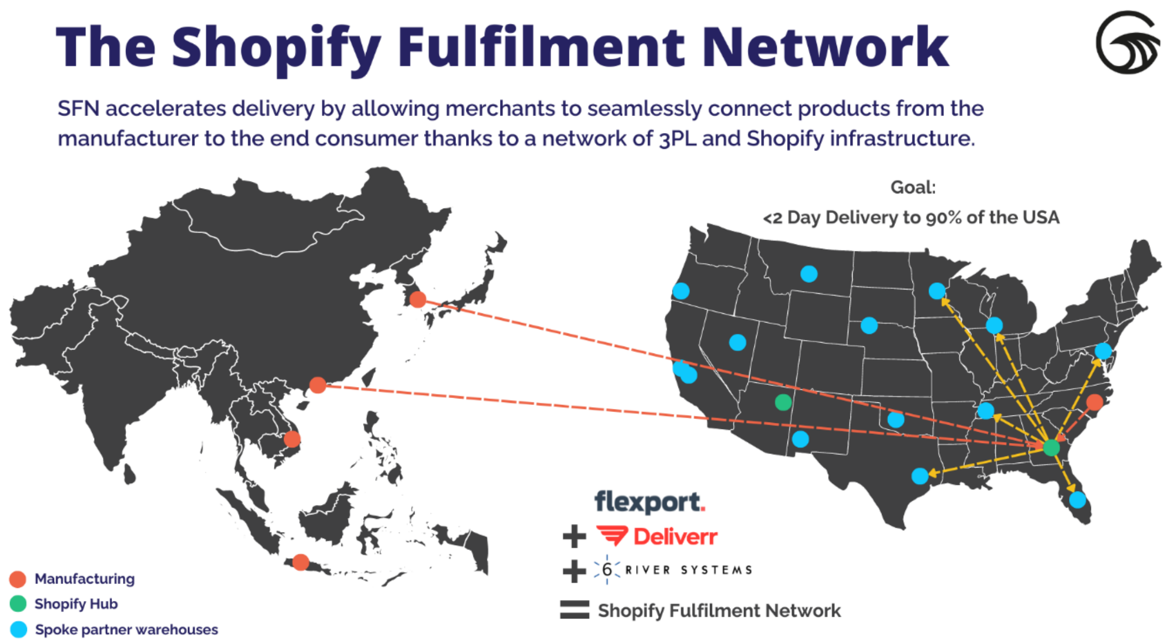
To complement that investment, they have made strategic acquisitions and investments, predominantly in Flexport, 6 River Systems and Deliverr. These solve unique problems and help build an end-to-end solution for merchants and consumers.

Ultimately, Shopify's goal is to ensure the entire end-to-end process (freight, distribution, and fulfilment) is passive, "lowering the barrier to entrepreneurship" and giving merchants more time to focus on areas like product development.

At the other end of the spectrum, Shopify aims to satisfy consumer demand for fast delivery, thus maximising merchant sales.

This whole ecosystem is presented below, where products are inbounded from global manufacturing facilities to a centralised hub. This hub then forwards inventory to "spoke partner warehouses" closest to the ultimate buyer (by analysing a deep pool of internal metadata on shopper behaviour).

Figure 36 - Shopify Fulfilment Network



Source: Granite Bay

Now, let's quickly look at some of those critical investments helping Shopify achieve its vision for the Shopify Fulfilment Network.

Flexport

Through a 2022 investment and subsequent pilot runs, Shopify hopes its relationship with Flexport can solve the first part of the logistics puzzle - inbounding (steps 1-5 in figure 34 above). Flexport's software seamlessly manages the inbounding of products from manufacturing facilities to a network of fulfilment centres worldwide.

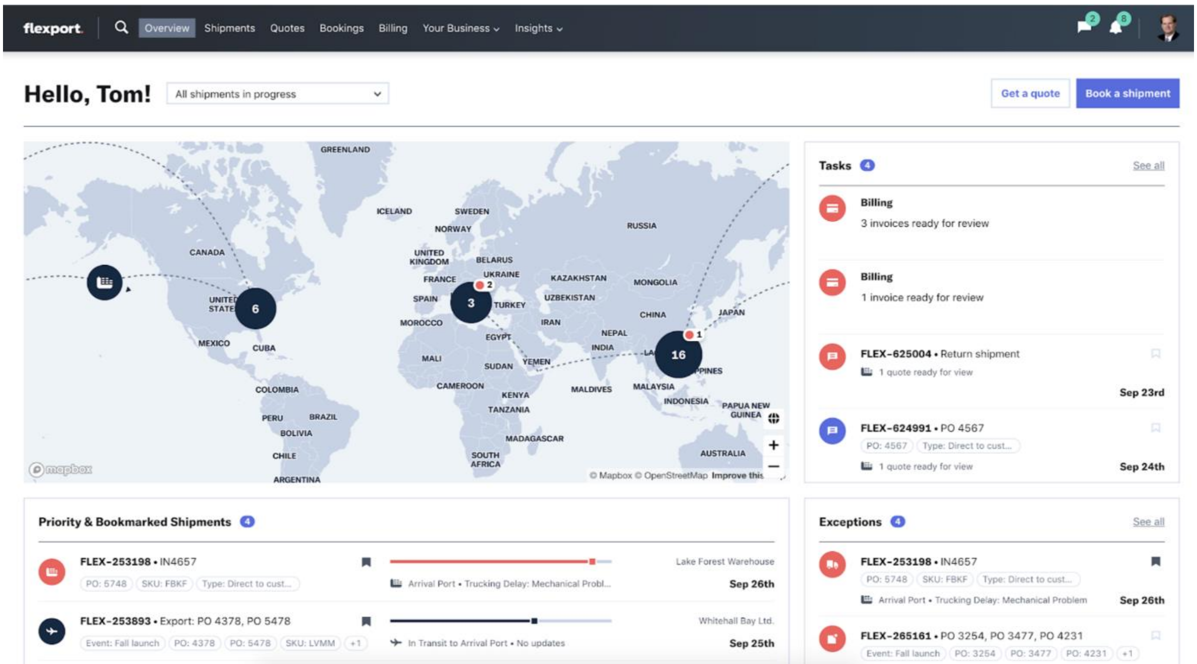
The software (below) manages all key aspects of this process, including ship tracking, order management, customs, and climate management. Getting this piece of the equation right is critical as most merchants who manufacture abroad must work with upwards of 10 vendors to receive inventory from suppliers, ship across the ocean and receive it at the ports[34].

In early pilot runs, SFN merchants have seen service from origin ports up to 50% faster, with cost per pallet much less expensive than average[35]. Just as Stripe is the white-label solution for Shopify Payments, Shopify are betting that Flexport solves the 'first mile' part of the logistics equation under the SFN banner.

[34] Shopify 2Q22 earnings call

[35] Shopify 2Q22 earnings call

Figure 37 - Flexport Dashboard



Source: Flexport

6 River Systems

In mid-late 2019 Shopify acquired 6 River Systems (6RS) for $450m - a leading warehouse automation solution which is used by Shopify and "70% of the top third-party logistics (3PL) providers"[36] , including the "world's largest pure-play contract logistics provider" - GXO Logistics (with ~900 warehouses in 28 countries).

The cornerstone of the solution is an Autonomous Mobile Robot (AMR) called 'Chuck', which aids in storage, pick and pack within warehouses. The robots can run 24/7 and navigate autonomously between product locations, significantly boosting productivity. For 3PLs and other third-party customers, Chuck can also be rented under the Robots-as-a-Service (RaaS) model or bought for $200k p/a (min. eight robots) vs ~$400k to acquire the same number[37], with the eight robots able to support four to five 'pickers' doing ~5,000 units per shift.

For example, footwear brand Crocs deployed 51 Chuck robots in 2020 during off-peak periods, plus 32 more in the holiday season under the RaaS option. This saw a 182% improvement in pick rate improvement[38]. In this one example, and using the above maths of $200k/8 robots, the expected revenue for Shopify would be ~$1.3m annualised.

Figure 38 - 6 River Systems 'Chuck' robot

[36] Six River Systems

[37] Shopify's 6 River Systems CEOs talk Chuck robots, automation - Venture Beat

[38] Robotics 24/7 - "6 River Systems Provides Chuck Robots to Enable Crocs"

Source: 6 River Systems

For a larger client like GXO, if we assume Chuck's RaaS model is implemented firm-wide across its 900 warehouses (222k sqft/warehouse[39]), you're looking at an implementation potential of ~45k robots at $16.5k/robot (after a 33% discount). This equates to a revenue opportunity of $742m (~10% of GXO's 2021 revenue). Even a partial implementation would have a material bottom-line impact.

Finally, according to the latest earnings release, SFN's partner warehouses are "all equipped with 6RS technologies", ensuring more seamless fulfilment to the end consumer. Naturally, we expect organisations like GXO (with facilities across the US, UK, EU, Asia and elsewhere) to be the most likely candidates to help lead SFN's international expansion.

Deliverr

Shopify bought Deliverr for $2.1 billion in mid-2022 to reduce fulfilment complexity and accelerate SFN's goal of achieving 2-day delivery to 90% of US consumers (and ultimately hitting a similar mark across other core markets). The platform already fulfills more than 1 million monthly orders across its asset-light, technology-driven service.

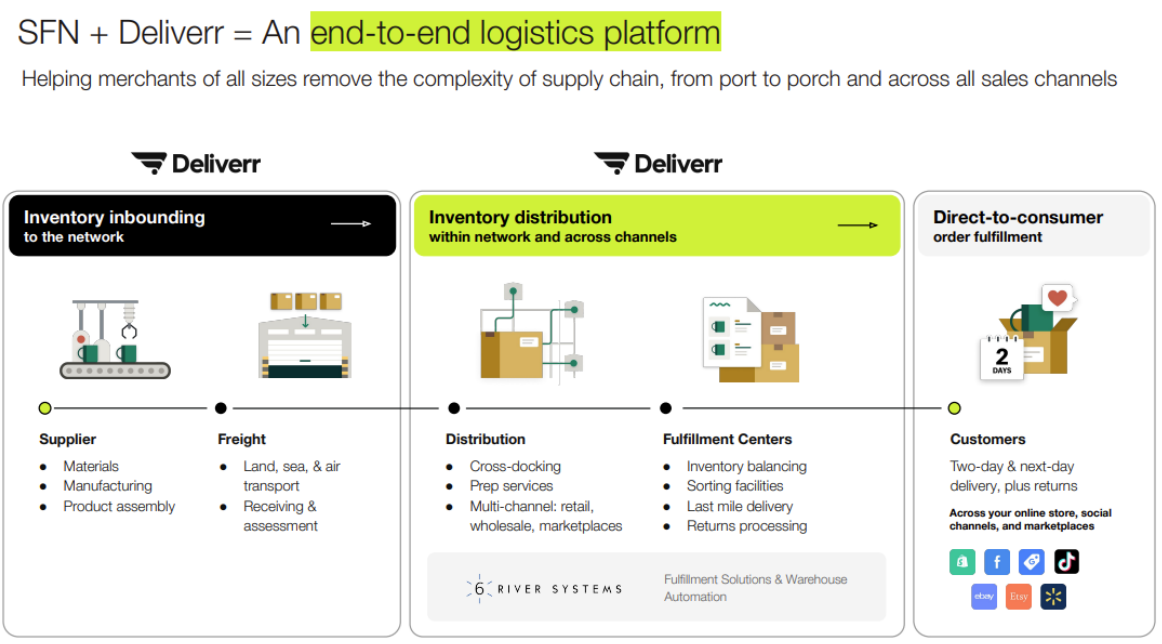
In summary, when a merchant (i.e. Allbirds) signs up to Deliverr, they can plug in all of their sales channels (i.e. Instagram, Shopify, Google) and then promote 2-day delivery to end consumers. It does this by automatically routing inventory to third-party warehouses closest to the expected buyer.

[39] GXO Corporate Website

In one of Shopify's most recent presentations (below), they've presented this solution as one which solves several complexities in end-to-end logistics, from inventory inbounding to distribution and fulfilment (note - Flexport's solution is encompassed within the inventory inbounding vertical below).

Although the acquisition of Deliverr closed in July 2022, Shopify has been quickly integrating it with the overarching SFN software. The Atlanta Hub (pictured earlier in this section) will be the first to utilise Deliverr's capabilities by unpacking, scanning, and inspecting all the inventory and comparing against Shopify metadata to forward inventory to SFN's DTC fulfilment centres based on expected buyer demand[40]. All of this with minimal inventory commitments for merchants (i.e. the guesswork on where the buyers are and the number of units to store is, theoretically, substantially minimised).

Figure 39 - SFN + Deliverr



Source: Shopify

[40] Shopify 2Q22 earnings call

Financial Considerations

There are significant direct and indirect financial implications for Shopify via SFN.

Indirectly, merchants are likely to have more time, more sales (an increase to average conversion rates by 30%[41]), increased retention, and acquisition; whilst on the consumer side, there should be increased satisfaction, loyalty and, ultimately, greater lifetime value. This all ties into the flywheel effect of Shopify's overarching business model.

Additionally, if Shopify gets this right, the success of aligned products will be amplified. For example, if 90% of merchants on the Shop app offer 2-day delivery, then the value proposition of that app for merchants and consumers alike is evident.

Directly, SFN will amplify merchant solutions revenue, with Shopify charging merchants a variable rate depending on the size, weight and quantity of items delivered. For example, 2-day delivery for a duvet (below) costs the merchant $15.92, or $11.73 with a second item. This rate includes inventory management, storage (if sold within six months), handling, postage, packaging, and delivery.

Figure 40 - Shopify Fulfilment Pricing

Product:	Bicycle helmet	Duvet	Purse
Size:	9 x 10.3 x 7.2 in	7.4 x 13.6 x 17.5 in	10.3 x 6.5 x 1 in
Weight:	0.4 lbs	6.1 lbs	1.8 lbs
Domestic two-day delivery per item:	$7.76	$15.92	$11.52
With a second item:	$5.65	$11.73	$8.43

Source: Shopify

To determine the potential opportunity, if we assume an average delivery weight of 0.35kgs[42] and an average item count of 1, then the domestic two-day delivery charge would equate to ~$8.50 (not accounting for dimensions). Assuming an average order value (AOV) of $144[43], the gross take rate is ~6%. This assumes 'all else being equal'.

[41] Shopify 2Q22 earnings call

[42] Average weight of packages in cross-border deliveries worldwide 2021 (Statista)

[43] Global online shopping order values by device (Statista)

In 2021, it's estimated that Shopify's US GMV was ~$90bn, therefore, the theoretical take rate (on the above maths) is close to $5.4bn in that market. Even though the opportunity is significant, the ramp-up will most likely be very gradual over the coming decade, with significant costs, third-party (i.e. 3PL) payments and competitive pressures from Amazon and others (DHL, FedEx, GXO etc.) likely to weigh on margins. High level estimates could see SFN build towards a take rate of closer to 3% (in line with Shopify Payments).

Therefore, assuming 20% of GPV leverages SFN by 2031, with Shopify achieving a 3% take rate, the forecast SFN revenue is in the vicinity of $5bn.

POS Hardware

As part of this offering, which allows Shopify merchants to seamlessly connect their physical retail outlets to their Shopify store (including inventory and other data), Shopify started offering several hardware components.

Traditionally this hardware included card readers, barcode scanners and iPad stands (plus ancillary products like printers and cash drawers) costing upwards of $500 for all of the core equipment (excluding an additional $500 for the iPad).

However, Shopify intends to make the in-store experience as seamless as possible each year. This was made evident in 2H22 with the introduction of Shopify POS Go - effectively a Shopify smartphone, preloaded with the POS software, integrating a barcode scanner and card reader (and swiper). This piece of hardware can effectively do away with most of the 'incumbent' hardware, allowing salespeople to roam, and convert sales anywhere on the floor (or at markets/popups). It can also replace (or complement) a physical checkout point (powered Shopify on iPad).

Figure 41 - Shopify POS Hardware

Source: Granite Bay, Shopify

A final consideration here is that Shopify and Stripe were two of the first organisations to trial and adopt Apple's new 'Tap to Pay' feature, allowing buyers to tap their iPhones/Apple Watches on a compatible merchant device (without the need for an intermediary card reader). This trial has since expanded to include more merchants and geographic regions.

Ultimately, this technology should be ubiquitous across IOS and Android systems, creating pressure on hardware providers to offer a unique value proposition for their POS offering (encompassing both the hardware and software).

To this end, we believe the value proposition of Shopify POS, particularly a software stack synchronising with in-store/online inventory/buyer data/pricing etc., is certainly compelling enough to remain the first-choice platform for Shopify merchants.

For example, JB HiFi, Australia's largest electronics retailer, is a Shopify Plus merchant with ~13,000 employees and ~200 stores country wide. By utilising Shopify, they could seamlessly keep stock of live inventory across all physical locations, with click-and-collect times down from upward of 14 hours to less than 1 hour (for 95% of orders). In addition, with inventory syncing seamlessly across Shopify POS, salespeople in store are fed accurate and live data (on inventory and pricing), which ultimately helps them provide a more seamless service to in-store shoppers, leading to increased sales.

Furthermore, it's easy to see how Shopify can upsell JB Hi-Fi by rolling out a product like Shopify POS Go across its network. In terms of direct revenue opportunities, if you assume 6x POS Go terminals per store (with a 25% discount), you're looking at ~$385.000 in revenue (and an additional $26,000 if you include the POS Go case). Extrapolate this across Shopify's other major brick-and-mortar customers, and you have a sizeable opportunity (i.e. Shopify merchants L'Occitane, Staples and Crate&Barrel have ~3,000, 1,000 and 90 physical locations, respectively). Assuming 1.5x Shopify POS Go terminals per store, there's an additional $2.6m in revenue from just those merchants alone.

Finally, having an end-to-end solution encompassing a slick and unified POS system greatly enhances Shopify's ability to onboard new merchants and poach/migrate others. For example, if you have 50 stores using NCR POS, with e-commerce powered by WooCommerce (and fulfilment handled by GXO) the value proposition of Shopify's solution would be evident (and play into the hands of Shopify's face-to-face sales).

Other Merchant Solutions

Shopify's mission is to make their suite of products and services not just 'nice to haves' but 'must haves'. For example, Shopify Payments has quickly become a must-have for merchants due to optimised rates, efficiency, access to Shop Pay and Instalments, Shop App, Capital, POS integration etc.

Similarly, we expect solutions like SFN, Shopify E-Mail, Shopify Audiences and Shopify Capital to become 'must-have' products as merchants grow (in terms of sales, geography, physical locations, staff, and inventory).

Currently, these 'other' merchant solutions (ex-SFN, Capital, Payments) account for ~30% of total Merchant Solutions revenue. We expect this to be maintained over the next decade; however, there is potential for outperformance in this 'other' category via platforms like Shop App in driving material advertising revenue.

Below, is an outline of some of these key solutions.

Transaction Services & Referral Fees

The lion's share of Merchant Solutions revenue ex-Shopify Payments is derived from transaction services and referral fees.

At present, ~45% of GMV goes through an alternative payment gateway other than Shopify Payments. This is due to Shopify Payments being unavailable in the merchant's country or a merchant being content with their existing payment gateway.

In any case, merchants using third-party gateways are charged an additional 2% - 0.5% (depending on their subscription tier). At the lower end of the scale (0.75%), Shopify would have generated ~$672m in revenue for 2021. Merchant Solutions revenue in 2021 ex-Shopify Payments was ~$867m; therefore, this third-party fee alone accounts for 78% of all ex-Shopify Payments Merchant Revenue.

Shipping

Shopify's shipping solution was rolled out in 2015 to allow merchants to buy and print discounted shipping labels directly within the Shopify platform. Initially, USPS was brought on board as the first key partner in this initiative (in the US market), with merchants receiving preferred USPS postal rates (at ~60% off retail rates). In addition, merchants were offered parcel pickup (from home/office) or frictionless drop-off at a USPS office.

Since then, the service has expanded to allow package tracking (within the Shopify platform), broader partnerships (with UPS) and more seamless international shipping, thanks to DHL. In international markets, Shopify Shipping also partners with Sendle (Australia), DPD and Evri (UK) and Canada Post (Canada).

This is currently the main fulfilment solution for Shopify merchants (in addition to many partner APIs such as Pirate Ship). However, we expect Shipping's revenue contribution, as an overall percent, to decline as more merchants are onboarded to the full suite of solutions offered under the more comprehensive Shopify Fulfilment Network (SFN).

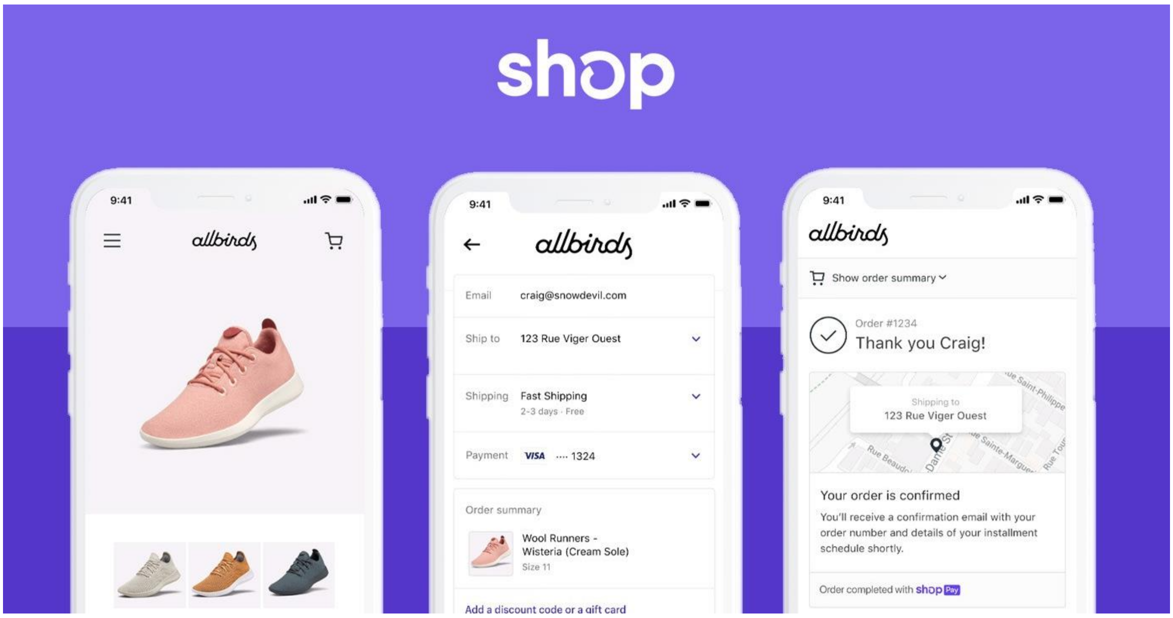
Shop App & Advertising

The Shop App was launched in 2020 as a rebrand of the parcel tracking app Arrive.

The app is primarily just that - a parcel tracking app that tracks deliveries from Shopify merchants and countless others, including Amazon and eBay.

Further, it also acts as a recommendation engine, utilising data generated from purchases to highlight the most relevant brands, such as Allbirds (below), which has its own Shop App store with 586 products shoppable with one-click thanks to the Shop Pay integration.

Figure 42 - Allbirds on Shop App



Source: Shopify

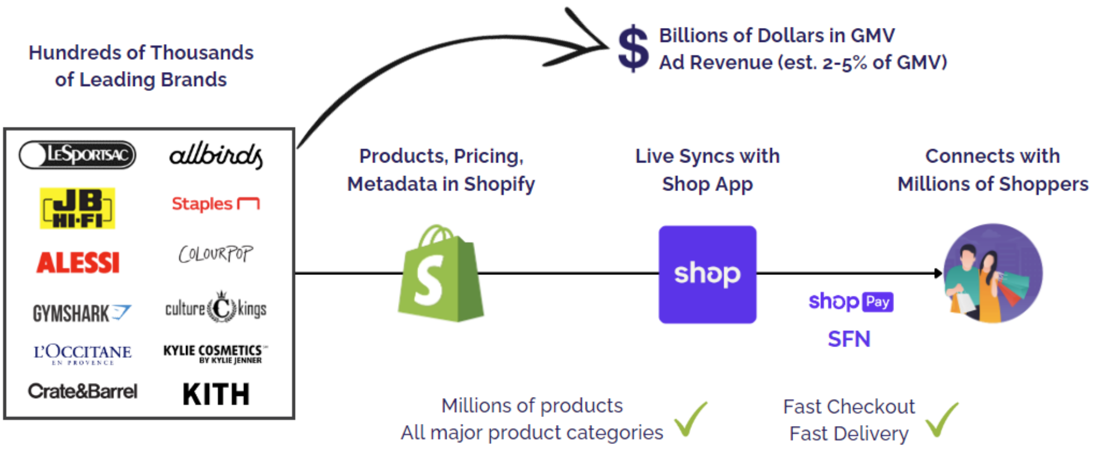
The app today is perfectly functional and popular (given an average 4.8 rating across both Apple and Google app stores); however, it is miles away from its true potential (below), which we believe is unlikely to be achieved until Shopify Payments and the Shopify Fulfilment Network reaches a critical mass.

Why? Well, for a merchant to be shoppable on the Shop App they need to be enabled for Shop Pay (which is contingent on the merchant enabling Shopify Payments). At this stage, Shopify Payments penetration rate (as a proportion of total GMV) is a touch above 50%. This is good and likely to accelerate over the coming years (with international expansion and a greater understanding of the Shopify Payments value proposition).

Overcoming this first barrier, Shopify Payments adoption, will onboard more merchants to the Shop App, giving shoppers more choice and helping to make Shop App's recommendation engine more targeted.

Second, there's the fulfilment problem. At present, Shopify merchant fulfilment is highly fragmented. Yes, many are utilising Shopify Shipping; however, they are largely 'off the grid', using a multitude of 3PLs, intermediaries and delivery partners. This creates several problems for Shopify, particularly their lack of control over fulfilment times. With no control over fulfilment times, they can't guarantee less than 2-day delivery which, as mentioned earlier in this piece, is the current expectation for most (US) consumers.

Figure 43 - Tomorrow's Shop App



Source: Granite Bay

So, theoretically, Shopify could onboard tens of thousands of merchants onto the Shop App; however, if fulfilment is inconsistent, the end consumer will have a poor experience and churn out. That's not a good outcome, so Shopify needs to focus on scaling these two contingencies (Payments and SFN) before really ramping up the Shop App.

If they do this, the upside could be significant. Firstly, it will drive growth in Shopify Payments GMV (of which Shopify take a 2.8% clip). Second, it will drive more growth for SFN. Third, it will attract more merchants to the Shopify platform (and boost migration from competitors).

Fourth, it will open a brand new (and potentially lucrative) channel for advertising revenue which, at present, is predominantly generated via the App Store.

Ultimately, this will result in an e-commerce app which is highly differentiated from its competitors - allowing shoppers to browse the live inventory of major global brands with seamless checkout and fulfilment. It could also make the Shop App the preferred channel for shopping for the latest products, launching it into the same tier as third-party platforms like Google, Instagram and Amazon.

To understand the opportunity, eBay generated advertising revenue of $1.1 billion in 2021 from clicks and impressions delivered to advertisers, representing GMV penetration of 1.3-1.5% over the previous four quarters. At the upper end of the scale, Amazon is sitting at ~5.5% GMV penetration for its ad business (based on ~$34bn in trailing 12m ad revenue[44]).

Over the next few years it's foreseeable for Shopify's GMV to reach $500bn, with a fraction of that (perhaps 2%) transacted via the Shop App. That's $10bn of Shop App GMV by the middle of this decade.

In terms of GMV penetration, Shopify's value proposition sits mid-way between eBay and Amazon at ~3.5% (potentially higher due to the quality of Shopify's metadata, which will enhance targeting). As such, it's probable that Shopify could generate over $200 million p/a in additional revenue in the medium term, which could grow to $2bn by the end of the decade as SFN hits a degree of scale.

Shopify Audiences

Shopify Audiences is a recent addition to the merchant solutions suite.

Merchants who use Shopify Audiences opt-in to share anonymised data on shopper behaviour (i.e. e-mail data) which effectively goes into a product cohort data pool.

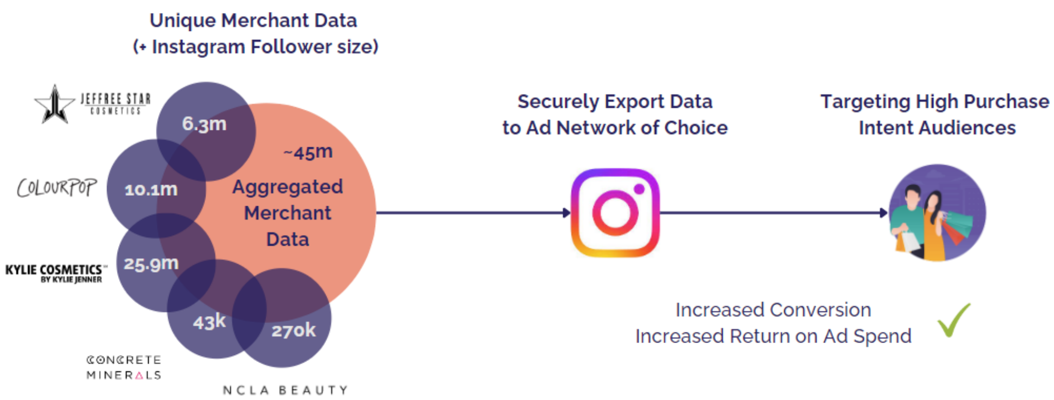
Let's take cosmetics as an example. If Shopify merchants Kylie Cosmetics, ColourPop, Jeffree Star, Concrete Minerals, and NCLA Beauty all join Shopify Audiences, they will opt-in to release data on their brand's shopper behaviour (basket size, products, purchase frequency, age, sex, location, annual spend etc.). Collectively that could be millions of shoppers around the world. Some of that shopper data will be known to merchants, but most will be unknown - creating a pool of highly targeted shoppers.

Using Instagram followers as a proxy for shopper data, you see (below) that independent data pools vary wildly. However, collectively, there is data on 45 million active shoppers between these five merchants (broaden that out further, and there are potentially billions of data points).

For a brand like NCLA Beauty, they can access this data pool, share it with Instagram and then better target potential shoppers for a new SKU via that app. Early results have shown that the tool boosts conversion and return on ad spend (ROAS).

[44] Amazon

Figure 44 - Shopify Audiences



Source: Granite Bay

In this example, Kylie Cosmetics has considerably more data (and potentially less upside) by sharing that data; however, if the scope is widened across thousands of merchants globally, then the value proposition to a brand like Kylie Cosmetics is clearer. For example, if they wished to expand into Southeast Asia, they could utilise local shopper data from a regional Shopify Audiences data pool to enhance their conversion rates.

Currently, the solution is only available to Shopify Plus stores and only extends to Instagram and Facebook; however, Shopify intends to roll it out across TikTok, Snap, Pinterest, Microsoft, Criteo and others in the not-too-distant future.

Shopify Email

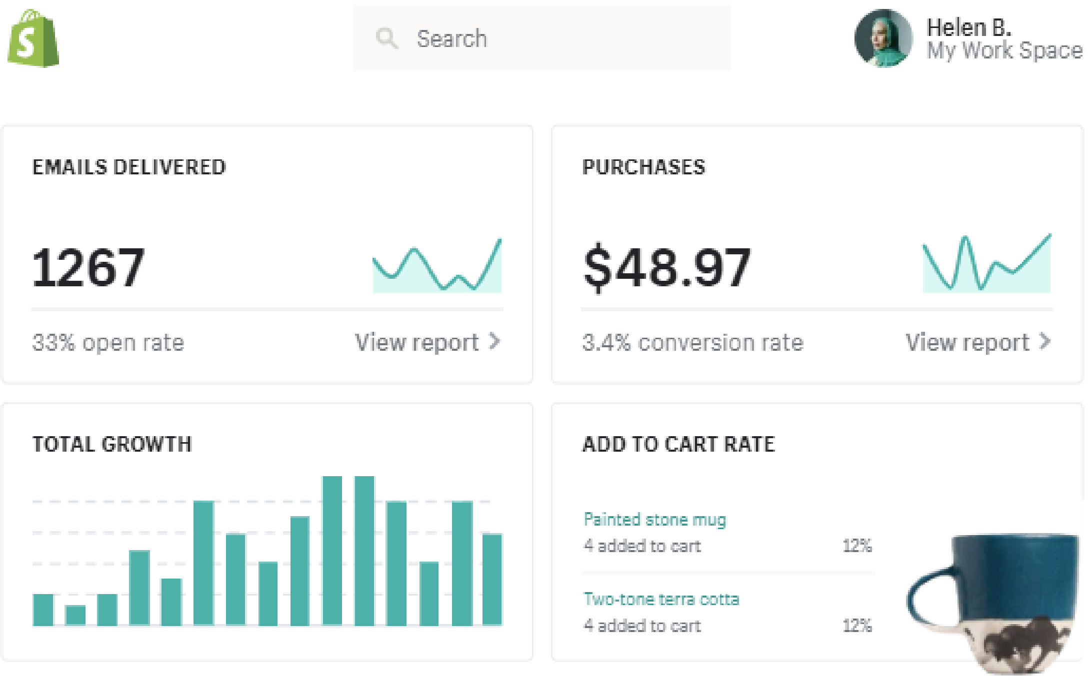
According to Shopify, there are currently over 500,000 merchants using the Shopify Email tool, which launched in late 2019.

The product was launched to allow merchants to create, track and run e-mail marketing campaigns natively inside Shopify Marketing[45], an integrated marketing tool to manage all merchant marketing activity (email, search, social).

It uses customisable e-mail templates (with merchant branding) whilst integrating campaign analytics (below) that allows merchants to track email openings and click-through rates from targeted mail campaigns.

45 Introducing Shopify Email - Shopify

Figure 45 - Shopify Email



Source: Shopify

In pricing terms, merchants can send up to 10,000 emails each month free of charge. After that, charges are $1 per 1,000 emails.

Shopify Inbox

Shopify Inbox, previously Ping and Shopify Chat, was introduced in mid-2021 and connects chat functions from the merchant's online store and other messaging platforms like Messenger, Instagram, Apple Business Chat and Shop Chat (Shop App).

The consolidation of Shopify chat under one umbrella creates considerable efficiency, with Shopify claiming that store owners engaging with customers via chat are 70% more likely to convert to sales[46].

Inbound chats can also be auto-categorised (sales enquiry, returns, complaints) and provided with instant answers for common queries.

[46] Shopify Inbox - Shopify

Figure 46 - Shopify Inbox

Source: Shopify

Given the surge in messaging app engagement, we believe this tool will increase in relevance and popularity. This is evident in India, where WhatsApp Business is actively growing to allow merchants to sell directly via the chat platform[47].

Shopify Markets

There are several barriers facing merchants when it comes to selling in international markets which include language, domains, SEO, duties/taxes, payments, and currency.

Shopify Markets allows merchants (175,000 today[48]) to localise their existing Shopify store by creating a more tailored experience to the target consumer. This is enabled by seamlessly adapting for:

- Local Currency: With Shopify Payments, prices are auto-converted to 130+ international currencies, providing a consistent multi-currency solution
- Translation: Shopify data shows a 13% increase in conversion rates when shoppers are shown content in their local language compared to the default. Shopify Markets leverages third-party translation apps (like Transcy) that support manual and machine

[47] How India Runs on WhatsApp - The Verge

[48] Shopify Markets Pro announcement - Shopify

translation[49]. Further to this, Shopify's own 'Translate & Adapt' auto-translates with one click (including dialects)

- Domains and Search Engine Optimisation (SEO): International domains increase the visibility of stores on local search engines, so a big part of Shopify Markets is localising a merchant's store domain to get the most out of SEO (e.g. kyliecosmetics.com/en-eu). Merchants can also choose a sub-domain (eu.kyliecosmetics.com) or a country domain (kyliecosmetics.eu). Whatever the merchant chooses, Shopify automatically sets up up the correct SEO tags.

- Payment Methods: Online payment methods vary wildly around the world, and Shopify optimises for this to ensure higher conversion at the checkout. For example, Shopify recently launched a partnership in India to allow shoppers to checkout with PayTM (one of the leading payment methods in India).

- Duties / Import Taxes: Shopify Markets collects duties and import taxes at checkout, giving customers cost clarity on purchases.

At present, the average Shopify Markets merchant sells into 14 other countries[50].

Further, Shopify Markets allows for the customisation of localised pricing strategies, with further customisations in the pipeline, including storefront content and market-specific inventory and fulfilment controls.

Figure 47 - Shopify Markets

Source: Shopify

[49] Shopify Markets - Shopify

[50] Shopify Markets Pro announcement - Shopify

Lastly, Shopify recently launched Shopify Markets Pro in collaboration with Global-e, which becomes the 'merchant of record', the legal entity responsible for selling products to customers and adhering to local laws and regulations[51]. If merchants act as their own 'merchant of record', they are responsible for registering for and remitting taxes, arranging to accept local payment methods, and organising shipping and fulfilment. In addition to Shopify Markets 'base' offering, Pro allows merchants to offer more local payment methods, access discounted shipping and provide duty and tax guarantees.

The cost to offer this is 6.5% per transaction fee (including payment processing) and a 2.5% currency conversion fee that is paid by the shopper.

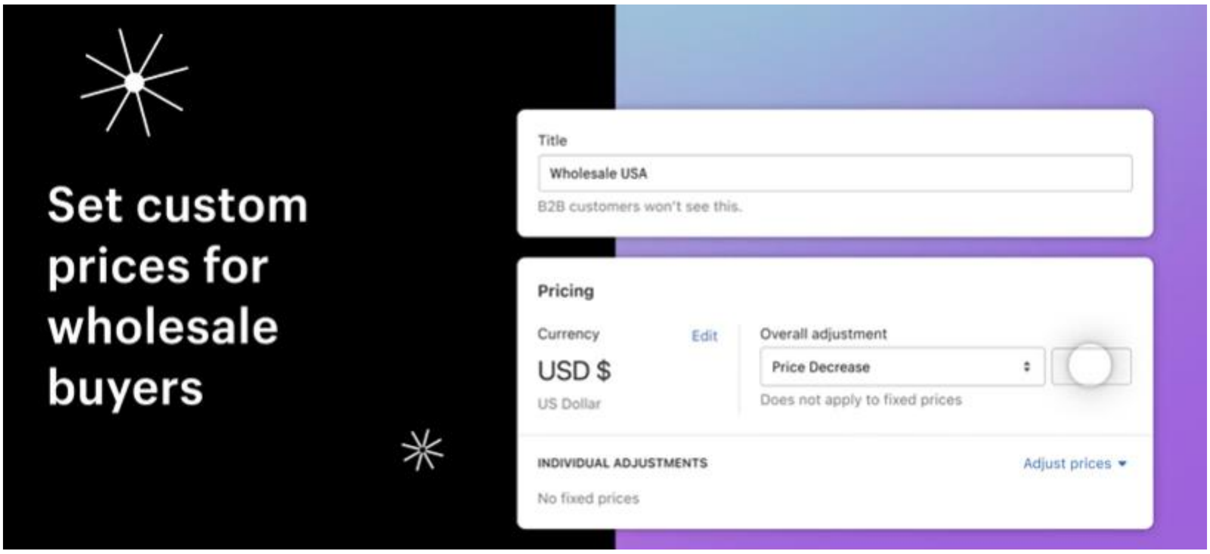
For example, a shirt costs €120, duties cost €5, taxes and vat cost €10, international shipping costs €15, and Markets Pro charges a processing fee of €5.4. The customer, in this instance, pays €150, which goes to Global-e, who, in turn, pays tax/VAT to the Government, duties to customs and shipping costs to DHL.

Wholesale / B2B

Wholesale selling, available on Shopify Plus from mid-2022, allows merchants to sell to wholesale and Direct-to-Consumer (DTC) from one store; or via independent stores.

Buyers can be set up with unique payment terms, price lists, contacts and tax exemptions. Furthermore, custom wholesale pricing can be fixed or set at a percentage-off, with currency integrations enabling seamless international wholesale selling.

Figure 48 - Shopify B2B / Wholesale



Source: Shopify

[51] Shopify Markets Pro - Shopify

Finally, merchants can set specific payment terms and manage outstanding payments through the Shopify dashboard.

Although still in its infancy, the B2B market considerably broadens Shopify's Total Addressable Market (TAM). In fact, a report from Astute Analytica estimates the size of the B2B retail market at $8.5bn today, and the expectation is that this TAM will grow to $18.7bn by 2027[52] - over 2x our expected retail e-commerce GMV for the same period.

This feature also puts them at product parity with competitors like BigCommerce, who derive a very material portion of their revenue via the B2B sales channels offered to their merchants.

[52] Global B2B E-Commerce Market is Expected to Reach $18bn - Astute Analytica

Key Partnerships

From day one, Shopify have been intent on building an open omni-channel commerce platform – one which would empower merchants to sell, procure and ship, in whichever way suits their business. This ties back into an earlier analogue of Shopify being the invisible selling machine, where they act as an agnostic architecture linking the merchant to the consumer through the most efficient and effective means.

The enablement of this ambition hinges on several very core partnerships.

Social Media

According to Hootsuite[53], we spend 2.5 hours on social media daily, which is approximately 35% of our total time on the internet.

This trend has seen a surge in advertising dollars shift into the sector along with a rise in actionable (or shoppable) advertising.

It makes sense then that Shopify would partner with social media leaders to power their growth, putting merchants in front of more (targeted) consumers.

Furthermore, as you may recall from the introduction to this piece, three-quarters of the top 20 apps downloaded worldwide are either e-commerce marketplaces or offer very direct e-commerce channels to their users (i.e. TikTok, IG, Facebook).

Meta Platforms

One-quarter (~44,000) of Shopify merchants had a Facebook Store in 2015 – the year the two companies formed a partnership. This partnership, which initially enabled an integration with the new Shop section in Facebook pages, expanded in subsequent years, with Shopify effectively keeping in lockstep with Meta's e-commerce roadmap.

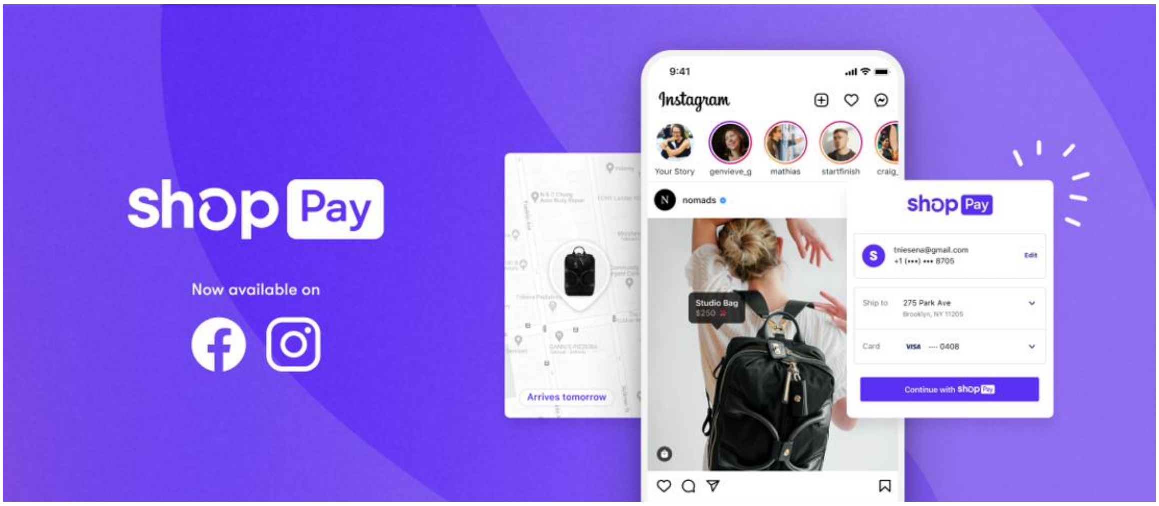
Consequently, we saw a Messenger integration in 2016, "Shopping on Instagram" in 2018, branded Facebook (and Instagram) Shops in 2020 and Shop Pay integration in 2021 (highlighted below).

Further, the graphic above of the most downloaded apps in the world has a "new" Meta entrant in "WhatsApp Business" to allow merchants to engage and sell directly to consumers through the messaging app.

[53] Hootsuite – 114 Social Media Demographics that Matter

With 2.88 billion Daily Active People (DAP)[54] engaged with one of its platforms, Meta has become the place for business to engage with consumers. Furthermore, with ~44% of Instagram users shopping on the platform weekly, it's clear that Meta integration should be (and is) a key priority for Shopify's product team.

Figure 49 - Shop Pay and Instagram



Source: Shopify

TikTok

With over 1 billion Monthly Active Users (MAUs), TikTok has significantly closed the gap with Meta's Instagram and is becoming the social media platform of choice amongst younger audiences (~65% of TikTok users are under 25 vs 39% for Instagram[55]).

Big Shopify brands have a sizeable following on TikTok, including Kylie Cosmetics (3.3m followers), Gymshark (3.8m), ColourPop (1.1m), Culture Kings (617,000), Sephora (401,000) and Pepsi (391,000).

As with Instagram, Shopify has partnered with TikTok to bring a shopping tab to businesses' profiles, syncing their Shopify catalogue live via an API. Further, TokTok Shop allows for more engaging content, with shoppable live feeds, creator collaborations and promotional campaigns.

This is a significant opportunity for Shopify; however, there are risks to the relationship with TikTok actively building a fulfilment business around their TikTok Shops. TikTok has already hired for fulfilment positions in the UK and is actively growing roles in the US. So, there is

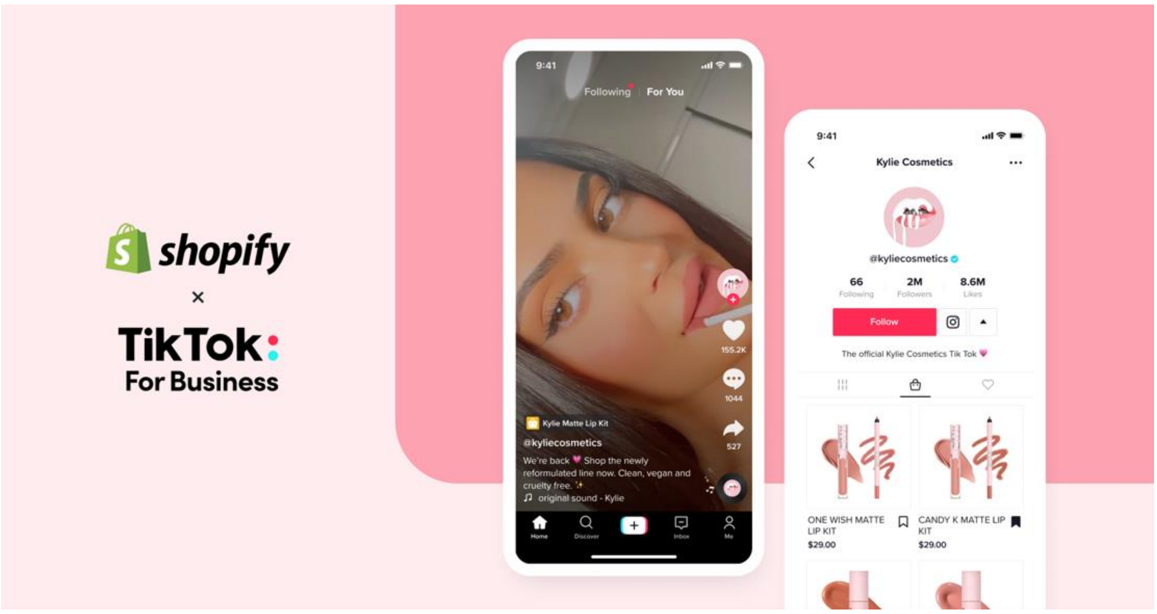
[54] Meta – 22Q2 earnings presentation

[55] TikTok Age Demographics - Oberlo

certainly a risk that companies like Gymshark fulfil their TikTok orders with TikTok (and potentially have non-TikTok orders fulfilled via TikTok).

Given the emergence of 'Buy with Prime' (outlined later in this report), this does throw another challenge in Shopify's way; however, we believe that ultimately, the synergy offered via a vertically integrated SFN model will win out in the long run.

Figure 50 - Shopify powering Kylie Cosmetics on TikTok



Source: Shopify

Others

Outside of the two major social media platforms, Shopify has partnerships with Pinterest, Snap, Spotify and Twitter. These platforms have 1.4 billion monthly (or daily) active users who can buy products with their favourite merchants directly through the apps.

In all examples, the collaboration works the same way as Meta and TikTok, where merchants can create shoppable content (synced with their Shopify inventory) directly within their social channels.

Through all of these social commerce partnerships, Shopify merchants can access billions of consumers worldwide.

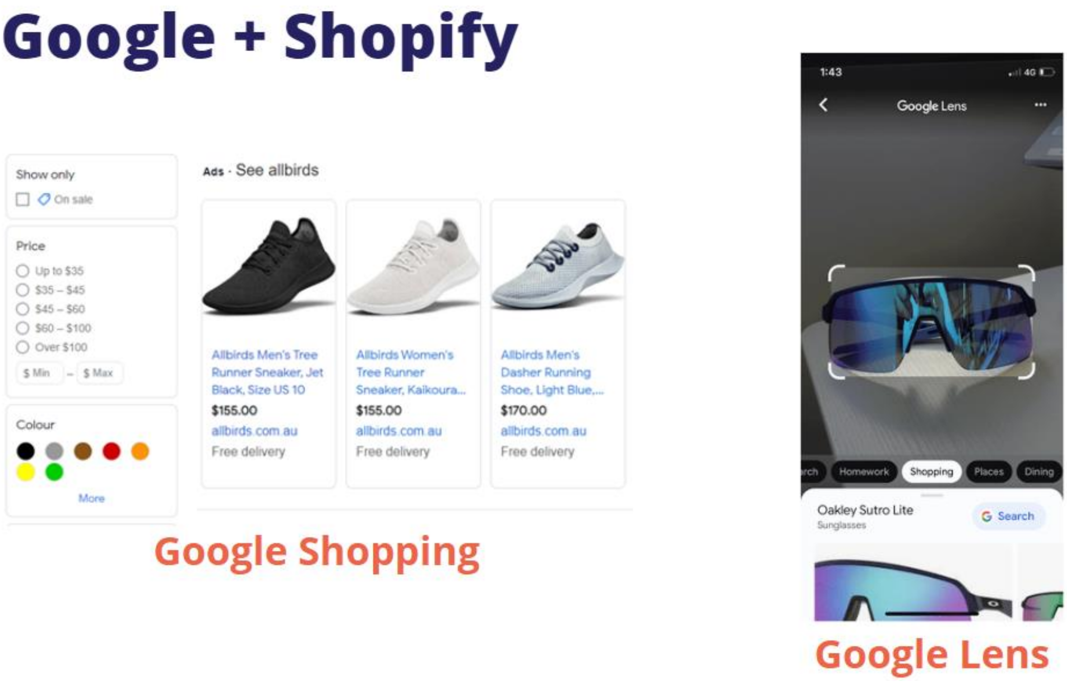
Conglomerates

Google

Google partners with Shopify on several fronts.

Firstly, Shopify merchants can seamlessly have their products appear across various Google "shopping journeys" across search, maps, images, and lens. For search in particular, Shopify integrates with "Google Shopping" (below left) to ensure merchants (like AllBirds) can integrate and sync their product catalogue with Google's Shopping search engine. For Google Lens (below right), a consumer can take a photo of a product (i.e. sunglasses) and then be pointed to that product's shoppable link. Both of these features seamlessly integrate with Shopify's system.

Figure 51 - Shopify Powering Google Shopping



Source: Granite Bay, Google

Further, one of the most recent announcement partnerships will see Shopify enhancing the shopping capabilities of YouTube so merchants and streamers can pin shoppable products within videos. This is particularly beneficial for live-streamed events (music, fashion, beauty), which can be live synced with the company's inventory in the back end of their Shopify account.

Inevitably, partnerships like Google and Shopify will enable immersive shopping experiences in live streaming, movies and TV. For example, the technology behind Google Lens, when paired with a merchant's Shopify inventory, will allow the consumer to instantly purchase the pair of sunglasses worn in the current James Bond film (or the shoes worn by Beyonce in a Coachella live steam).

Apple

For now, the partnerships with Apple are focussed on two core areas – payments and Augmented Reality (AR).

On the payments front, Shopify were one of the first to partner with Apple on their in-store payments, doing away with card readers so consumers can simply tap their iPhone/Apple Watch/physical card on a merchant's iPad/iPhone directly. This feature, launched in 2022, has onboarded Stripe and Shopify as its initial partners in the US.

Figure 52 - Apple 'Tap to Pay' and Shopify Payments

Source: Apple

Such innovation and collaborations are hugely beneficial for Shopify as it vastly improves the user experience (i.e., more seamless) whilst mounting pressure on stand-alone POS operators and hardware providers. Inevitably, we expect this to add to Shopify's value-proposition for physical retail and help drive further merchant acquisition of Shopify's POS solutions (the exception being dining, hospitality and tourism – sectors which are not wholly aligned to Shopify's current goals).

Another area in which Apple and Shopify could collaborate is with Augmented Reality (AR). Utilising Apple's ARKit, RoomPlan API and in-built LiDAR sensors, Shopify can offer merchants a solution which clears the contents of a room (digitally) so consumers have a blank canvas on which to place potential purchases (i.e. furniture, art). Further, if the rumours are true, 2023 will likely see the release of Apple's mixed reality headset which could give us a clearer view of the future of mixed reality retail!

Amazon

The partnership with Amazon was catalysed by Amazon shutting down its Webstore business in 2015, with Amazon making Shopify the preferred partner to absorb those 'homeless' Webstore merchants.

In exchange for this 'preferred' status, Amazon Pay would be offered to Shopify merchants, who would also be able to seamlessly list their products for sale on Amazon's marketplace. At the time this was a good quid-pro-quo, however, retrospectively this appears as somewhat of a rare own-goal from Amazon, who left Shopify in a position build quite an unchallenged dominant position in the e-commerce platforms business. Note, competitors like Magento (now part of Adobe) and BigCommerce were still in their infancy when this deal was announced.

Today, Shopify have multiple avenues (and apps) to help their merchants sell on Amazon. Although we don't expect this to change (Shopify's modus operandi is to get merchants in front of the most buyers), we expect several challenges to come up.

One of the biggest challenges is Amazon's 'Buy with Prime', which allows Shopify merchants to circumvent the Shopify Fulfilment Network (SFN) by installing a 'Buy with Prime' button at their online checkout so that Amazon can handle all the fulfilment (instead of Shopify). This highlights the importance of Shopify prioritising the rapid scaling of SFN in the US and core markets (UK, EU, Canada, Australia) over the coming years (i.e., to mitigate the risk of fulfilment churn to Amazon).

JD.com

In early 2022, Shopify announced a partnership with JD.com – one of China's leading e-commerce marketplaces with over 580 million annual active customer accounts and ~220,000 delivery personnel servicing the entire country.

The agreement allows Shopify merchants to sell in China via JD Marketplace, with expedited onboarding (3-4 weeks, instead of 6-12 months), fulfilment from JD warehouses in the US to China, smart price conversion and intelligent translation.

Like all partnerships, Shopify merchants need to install the JD Marketplace app in their Shopify account and follow a few simple steps to upload product information to JD.com.

This is part of a broader collaboration between the two companies which aims to solve issues relating to product sourcing, selling and logistics for merchants in the US and China.

Figure 53 - Shopify x JD.com

Source: Shopify

Others

Stripe

Over 50 per cent of Shopify's Gross Merchandise Volume (GMV) is transacted through Shopify Payments, Shopify's payments gateway 'powered by' Stripe. The fee for using Shopify Payments equates to ~2.8% of GMV, from which a margin is paid to Stripe, card providers (Mastercard/Visa), issuing banks and other intermediaries.

Shopify Payments is also the prerequisite for many value-add ancillary services under the Shopify banner, including Shopify Capital, Shopify Balance and Shopify POS.

In 2021 it was reported that Shopify had acquired a stake in Stripe worth at least US$350m.

Global-e

Just as Stripe manages all of the backend architecture of Shopify Payments, Global-e (in which Shopify is also a large investor) powers a considerable part of Shopify's cross-border e-commerce.

These solutions mean Shopify merchants can sell in hundreds of foreign markets, with Global-e taking care of fraud, currency fluctuations, VAT, regulatory compliance, restrictions and import processes etc.

One of Shopify's latest merchant solutions – Shopify Markets – combines all these functions under one umbrella, allowing merchants to localise their existing store for international buyers.

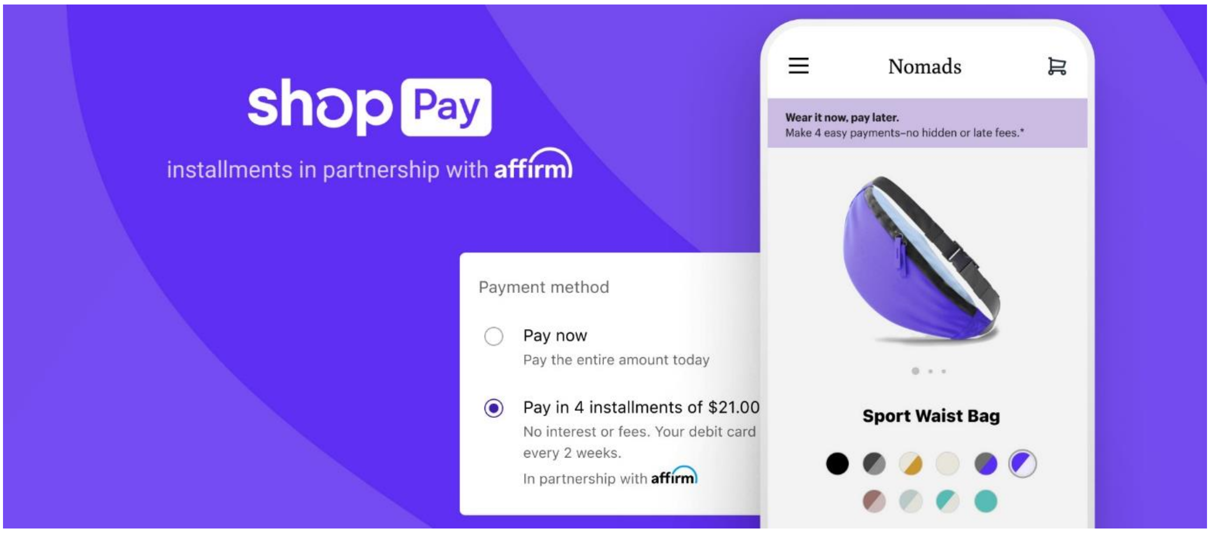
Affirm

In mid-2022, at the peak of the buy-now-pay-later boom, Affirm signed a deal with Shopify to power the company's Shop Pay Instalments. As with Stripe and Global-e, Shopify opted to utilise an existing third-party platform and its APIs instead of building the solution from the ground up.

The function allows customers using Shop Pay to pay in four instalments (payable every two weeks).

Shopify have ~7% Affirm's outstanding shares.

Figure 54 - Shop Pay Instalments



Source: Shopify

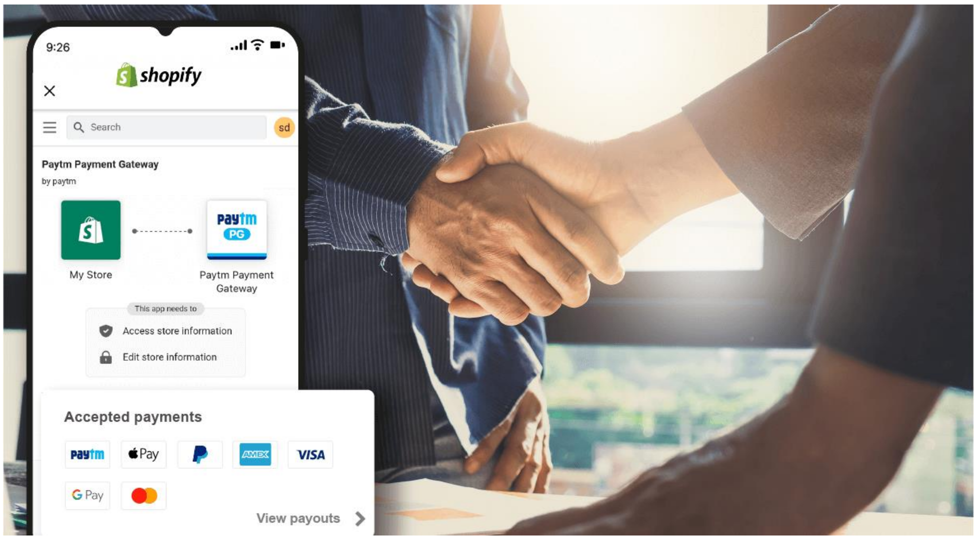
Paytm

Paytm is India's leading payments app, with more than 20 million merchants and 300 million citizens using it to pay bills, send money and make bookings (i.e. movies, travel).

The deal will allow Shopify merchants in India to accept payments using Paytm Wallet, Paytm UPI, Paytm Postpaid (BNPL), netbanking, debit or credit cards and more.

Similarly, Shopify allows merchants to use many other payment gateways (i.e. Coinbase Commerce). However, the reason for calling out PayTM is the sheer breadth of the PayTM ecosystem, which opens millions of doors for Shopify in an important market.

Figure 55 - PayTM



Source: Paytm

Investments & Acquisitions

For an insight into how Shopify (or any company) are evolving, a glance at their investment portfolio can provide some very important, and not so subtle, hints.

For Shopify, this investment and acquisition spree sees them doubling down on their promise to achieve 1–2-day delivery across the United States –notably with their Deliverr and 6 River Systems deals.

Other thematics that stand out is Shopify's focus on optimising the merchant experience, with tools to better target potential consumers. Similarly, there is a clear intent to continue amplifying the consumer experience beyond Shop Pay and fulfilment. The elephant in the room here is the consumer-facing app 'Shop' which has the potential to connect millions of consumers with hundreds of thousands of Shopify merchants. This is likely dependent on Shopify achieving critical mass with SFN.

Finance

Today, over 50% of Shopify's merchants use Shopify Payments, with more and more merchants using affiliated services such as cross-border payments, business banking and buy-now-pay-later.

However, like many of the products on Shopify, much of the company's success within the space comes down to its success in investing in and partnering with, leading companies rather than building solutions internally.

The most important investment to date has been in **Stripe** - the default payment gateway for all merchants when they sign up for a Shopify Payments account. Shopify has a ~$350m stake in the payment processor (as of mid-2021), which, as of March 2021, was valued at $95 billion. Since then, the valuation is estimated to have fallen by ~28%, in line with a wider devaluation of tech companies in 1H22.

Similarly, when Shopify decided to roll out a buy-now-pay-later solution for the consumer-facing Shop Pay they turned to the leading US BNPL start-up **Affirm** who, like Stripe, white labelled their solution as Shop Pay Instalments. The agreement landed Shopify with Affirm warrants, equivalent to 20.29m shares (7% of shares outstanding). This stake is worth ~$610m today (down from $3.4bn at the end of 2021).

Rounding out the major investments within the space, Shopify is also a big backer of Israeli cross-border payments company Global-e, which streamlines cross-border e-commerce payments and all the complexities such as customs, duties, foreign exchange, regulatory compliance and foreign language. Global-e is the exclusive provider of such services to

Shopify, who, in return, picked up 7.75m shares in the company plus 11.85m warrants. Shopify Markets Pro is the clearest example of this collaboration in action.

In addition, Shopify has smaller stakes in Bench, an online bookkeeping service for SMEs, and Pipe, which converts expected revenue streams into instant cash.

Fulfilment

Fulfilment is one of the more difficult capabilities to develop organically as it requires a significant investment in infrastructure (warehouses), software and hardware (robotics).

However, to achieve the goal of 1–2-day delivery for a significant part of the North American market (and ultimately global markets), it became evident that many pieces of the fulfilment puzzle had to be found outside the four walls of Shopify.

The first major acquisition under this umbrella was 6 River Systems, which developed autonomous mobile robots to help fulfil millions of orders weekly. These robots are used by 70% of the top third-party logistics (3PL) providers, such as GXO, which has 900 fulfilment facilities in 28 countries.

The second major piece of the puzzle came with the acquisition of Deliverr, a software platform which has enabled the delivery of millions of packages within 1-2 days. It does this by learning about consumer buying behaviour and stocking merchant products across a network of third-party warehouses in North America. The company makes money by charging a fulfilment cost (~$4-$7 for a phone case) plus storage costs (as little as 1-2 cents/month for a phone case, up to 63c/month for a coffee machine).

Pairing the 6 River Systems and Deliverr platforms gives Shopify a compelling proposition to 3PL providers without having to lay out the considerable capex on building an organic physical warehouse footprint. This third-party system will run in parallel to Shopify's own warehouses.

Additional strategic investments like Flexport help round out the end-to-end fulfilment process, which is the cornerstone of the Shopify Fulfilment Network (SFN).

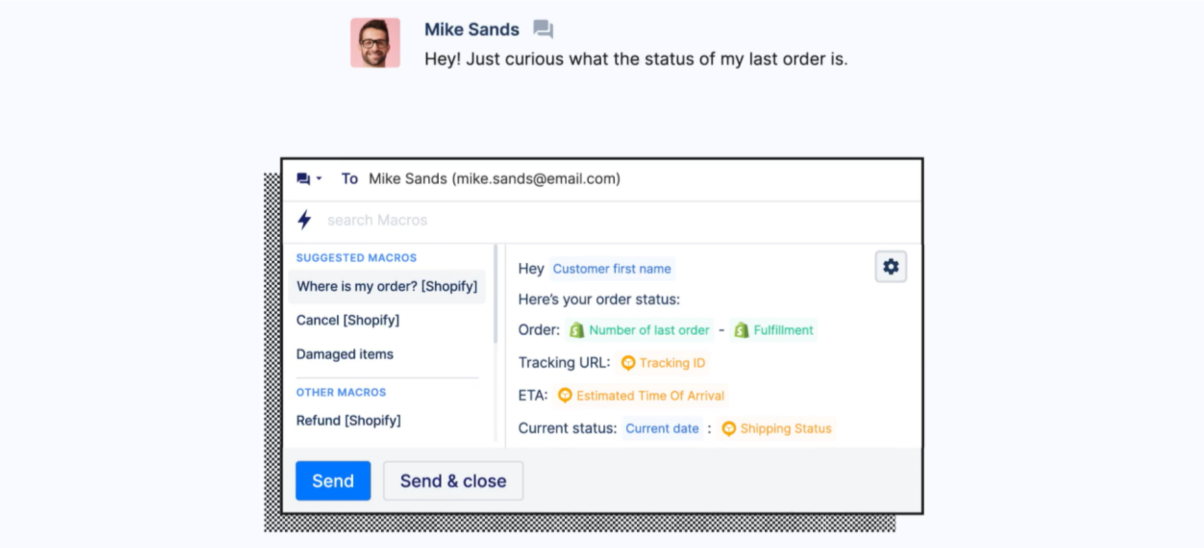
User Experience (UX) and Marketing

Shopify has made more than a dozen investments into startups that broadly fall under the UX or marketing umbrella.

Two of these investments, Gorgias and Klaviyo, took place in August 2022 and perhaps give us the best insight into how certain product features at Shopify will evolve over the coming years.

Firstly, Gorgias, is highly relevant to Shopify today as it aggregates all inbound customer enquiries (WhatsApp, Instagram, TikTok, e-mail, SMS etc.) into one funnel. Merchants can create rules and organise tickets seamlessly (much like Shopify Inbox). According to Gorgias, the platform is used by ~10k Shopify merchants today, and it is probable, given the growth of platforms like WhatsApp Business, that Gorgias scales considerably with Shopify and Shopify Inbox in the years to come. Below is an example workflow of a shopper enquiry (perhaps from Messenger or Instagram) and the Gorgias workflow created to reply to that enquiry. Like Shopify Inbox, many inbound ticket platforms can also be set for automated responses.

Figure 56 - Gorgias Functionality



Source: Gorgias

The other recent investment, **Klaviyo**, is also in the messaging space, but this time, on outbound communications and analytics. The platform unifies customer data, analyses that data, and provides personalised outbound messages to those customers to increase customer lifetime value. For example, a customer may purchase dog food, with the platform automatically sending an e-mail reminder when that order is due to be depleted.

Shopify invested $100m in this platform, and it's quite easy to see, considering Shopify Audiences, Shopify Inbox and Shopify Email, how such features could evolve with the sheer amount of data Shopify capture on merchants and consumers alike.

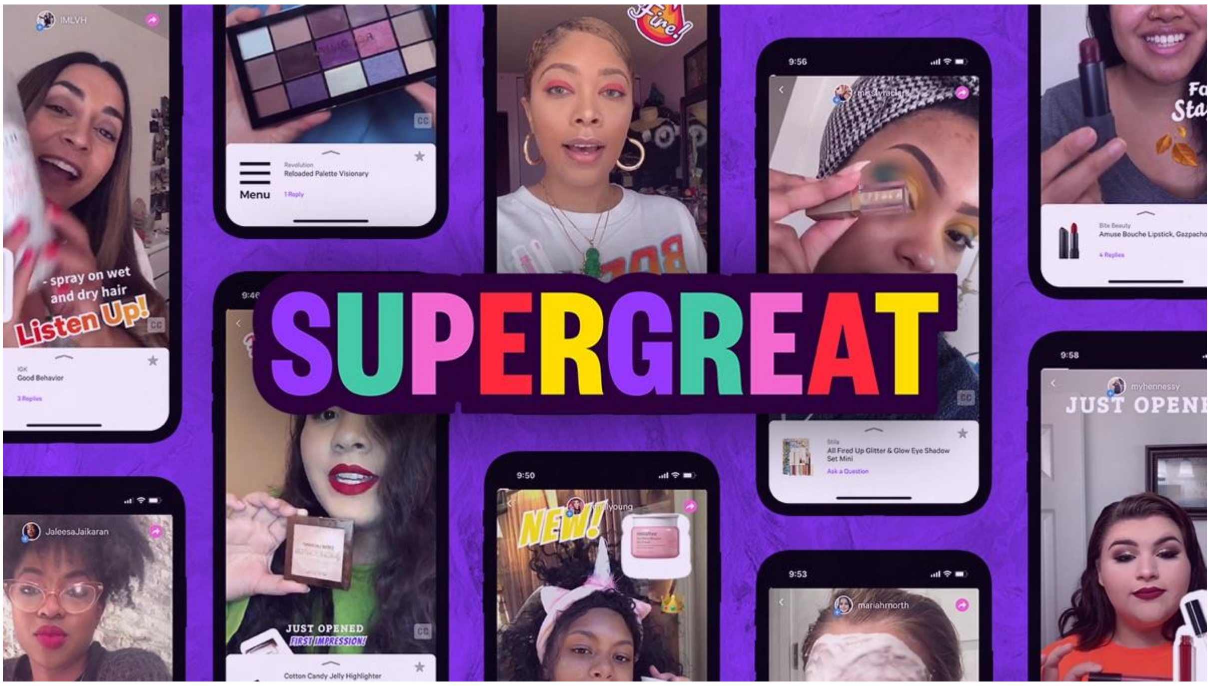
Marketplace

The final core segment that Shopify is actively investing in is DTC marketplaces. These investments help deliver value to existing merchants and show how Shopify may develop Shop App.

Of all of the investments, **Disco** is the one that jumps out. The company, which Shopify invested in during their seed and Series A, is an e-commerce marketplace with 55 million shoppers, 1,000 brands and 70,000 products. The key differentiator of this business is that brands partner with each other, share consumer data and, as a result, deliver more value through shared insights (i.e. lower CAC, higher LTV). It's easy to see some of the synergies between this platform, the Shop app and Shopify Audiences which, like Disco, aggregates brand data to offer merchants optimised outcomes for audience targeting.

Supergreat and **Handshake** are two other examples of marketplaces where Shopify can not only deliver value to their merchants but provide the parent company with invaluable insights into the beauty market and B2B e-commerce, respectively. Supergreat, below, has over 1m reviews of over 250k products generated by the consumer in a unique UX that blends social media and e-commerce.

Figure 57 - Supergreat



Source: Supergreat

Here is a detailed look at Shopify's investments (I) and acquisitions (A) this past decade:

Table 1 - Shopify Acquisitions and Investments (US$m)

Date	Company	Type	Sector	About	Funding	Stake
Aug-22	Gorgias	I	UX	Multichannel helpdesk	$30m	
Aug-22	Klaviyo	I	Marketing	Marketing automation	$100m	$100m
Jul-22	Single Music	I	UX	Artist and label tools	-	
Jun-22	Sanity	I	UX	Content platform	-	
Jun-22	Codat	I	UX	SME API platform	$100m	
May-22	Deliverr	A	Fulfilment	3PL platform		100%
Apr-22	Dovetail	A	Marketing	Customer acquisition		100%
Apr-22	Crossing Minds	I	UX	AI recommendations	-	
Mar-22	Disco	I	Marketplace	SME Marketplace	$20m	
Feb-22	Flexport	I	Fulfilment	Freight forwarding	$935m	
Dec-21	Supergreat	I	Marketplace	Beauty Marketplace	$20m	
Sep-21	Yotpo	I	Marketing	Customer Acquisition	$30m	
Jul-21	Loop Returns	I	Fulfilment	Automated Returns	$65m	
Jun-21	Primer	A	UX	AR home improvement		100%
Jun-21	Tapcart	I	UX	Mobile e-commerce	$50m	
Jun-21	Stripe	I	Finance	Payment rails	$2.3b	>$350m[56]
Jun-21	Bench	I	Finance	Online bookkeeping	$55m	
Apr-21	Swyft	I	Fulfilment	Logistics marketplace	$17m	
Mar-21	Pipe	I	Finance	AI financing	$50m	
Jan-21	Global-e	I	Finance	International Payments	n/a	$431m
Jul-20	Affirm	I	Finance	Buy now pay later		$367m
Sep-19	6 River Systems	A	Fulfilment	Warehouse automation	$450m	100%
May-19	Handshake	A	Marketplace	Wholesale marketplace		100%
Jan-19	Helpful	A	HR	Video content for teams		100%
Nov-18	Tictail	A	Marketplace	SME Marketplace		100%
Jun-18	Return Magic	A	Marketing	Consumer loyalty		100%
May-17	Oberlo	A	Fulfilment	Drop shipping		100%
Dec-16	Tiny Hearts	A	UX	App studio		100%
Oct-16	Boltmade	A	UX	UX research		100%
Apr-16	Kit	A	Marketing	Virtual employee		100%
Au-13	Jet Cooper	A	UX	UX agency		100%
Feb-12	Select Start	A	UX	Mobile app studio		100%

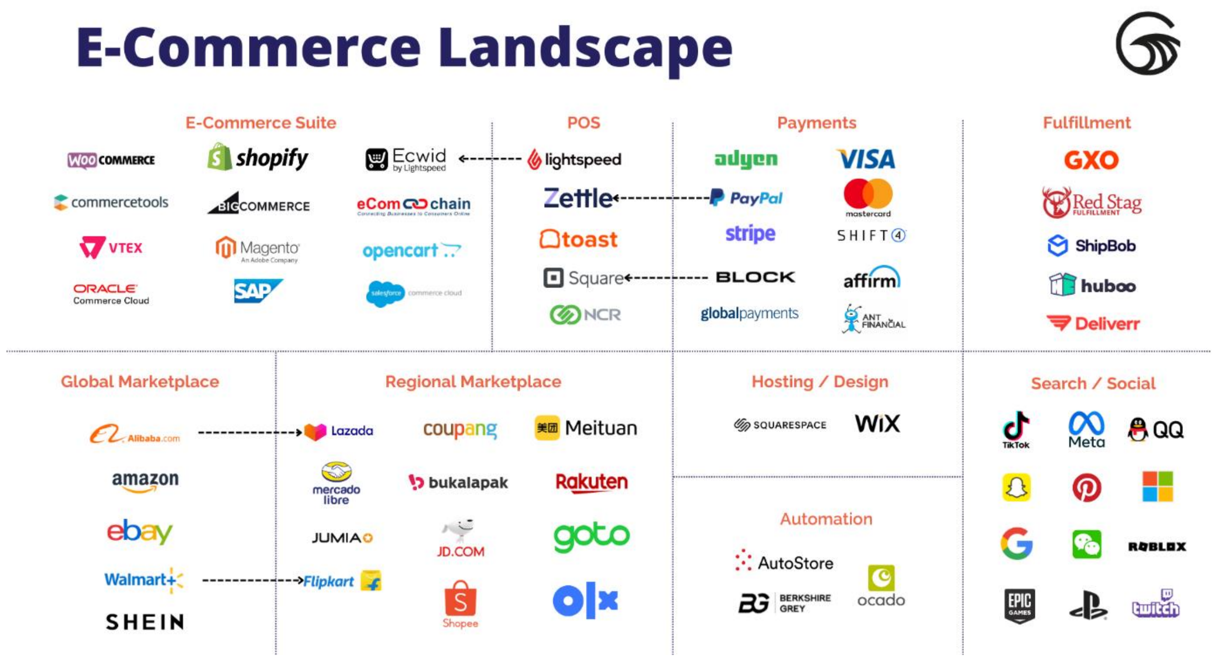
Source: Crunchbase, CapIQ, Global-e Annual Report, Affirm Annual Report (Nb. Shopify invested in Disco in a prior round)

[56] "Shopify has US$350m stake in payment processing giant Stripe" - Ottawa Business Journal

Competitive Landscape

The e-commerce landscape, taken as a whole, is vast, with several intermediaries across the value chain outlined below.

Figure 58 - E-Commerce Landscape



Source: Granite Bay

This value chain flows from the manufacturer to the sales channel and ultimately through to the shopper with many payment channels, marketplaces, logistics networks and social / search platforms.

Although Shopify sit in the top left quadrant of this landscape above, they have a sizeable presence across most of the categories, including POS (Shopify POS), Payments (Shopify Payments), Fulfilment (Shopify Fulfilment Network), Marketplace (Shopify Markets), Hosting (Shopify Domains), Automation (6 River Systems) and Social/Search (Shop App).

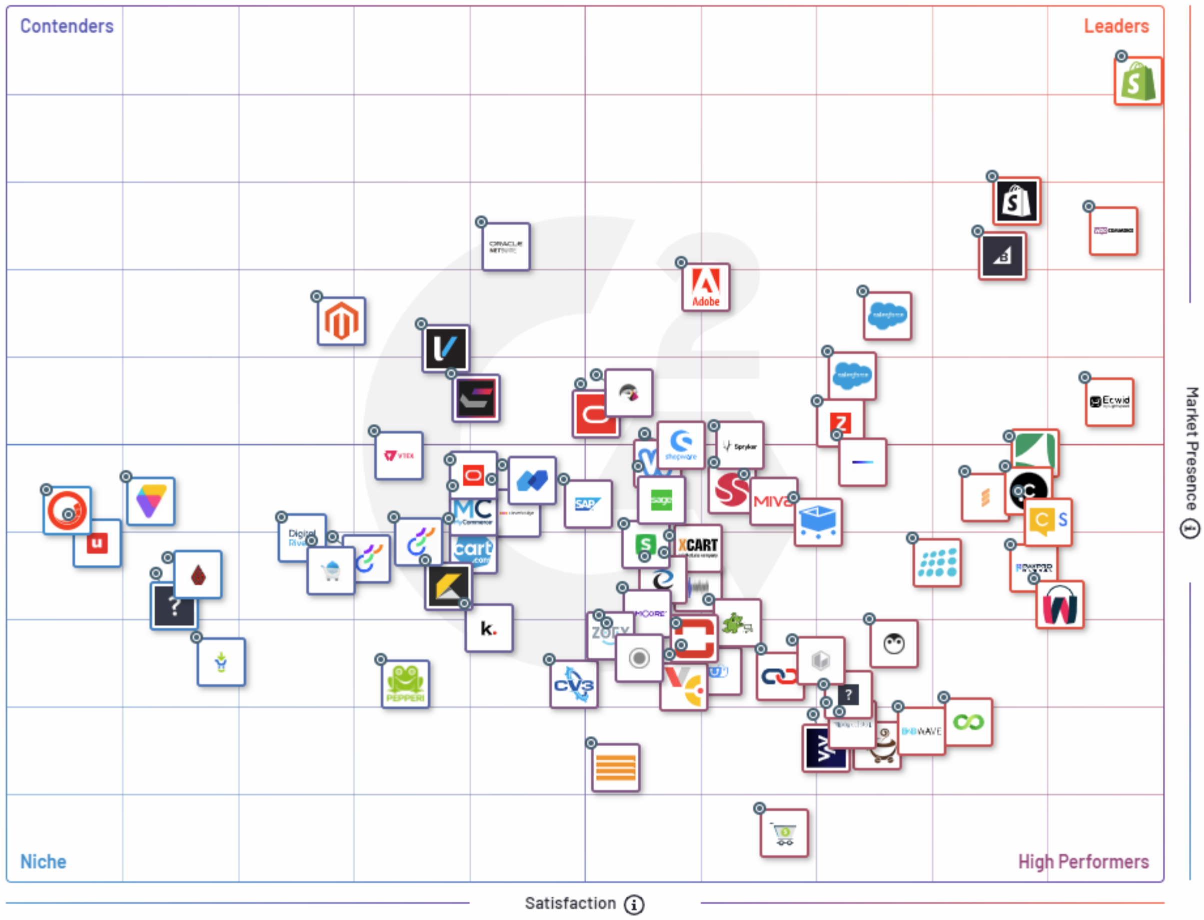
With the exception of Amazon, and Alibaba in China, Shopify is uniquely placed with the sheer quantum of merchants on its platform and the breadth of products and services offered. As mentioned in this report, each additional product/service provided to merchants feeds the flywheel, which boosts merchant GMV and acquisitions, ultimately increasing Shopify's bottom line.

Shopify's Direct Competitors

Let's look at Shopify's 'direct competitors' in the e-commerce platforms segment. We can see (below) that they maintain a clear lead over their closest peers regarding market presence and customer satisfaction.

Shopify's premium product, Shopify Plus, comes in a close second, followed by BigCommerce, WooCommerce, Ecwid (owned by POS leader Lightspeed), Salesforce and Adobe (Magento). A quick cross-check with PC Mag puts Shopify at 4.5/5 vs BigCommerce (4/5) and Ecwid (3.5/5).

Figure 59 - Best E-Commerce Platforms (G2)

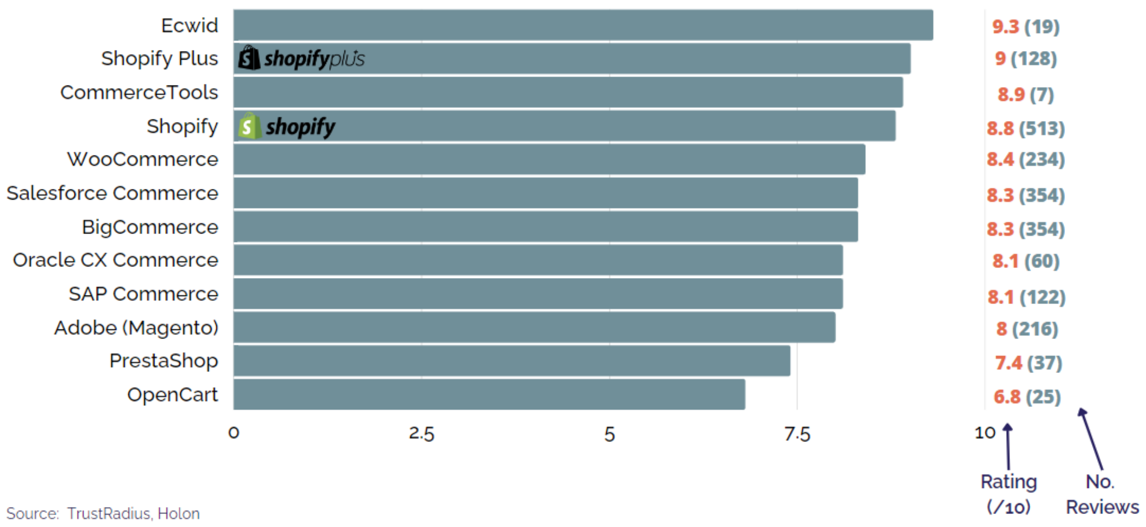


Source: G2 - Best E-Commerce Platforms

Second, let's look at Trust Radius, a global research and review platform, for a side-by-side comparison of the e-commerce platforms market.

It's evident in the figure below that Shopify enjoys a healthy lead over its competitors, of which we rank Adobe (Magento), BigCommerce and WooCommerce as the closest peers.

Figure 60 - E-Commerce Platforms: Trust Radius Reviews



Source: TrustRadius, Granite Bay

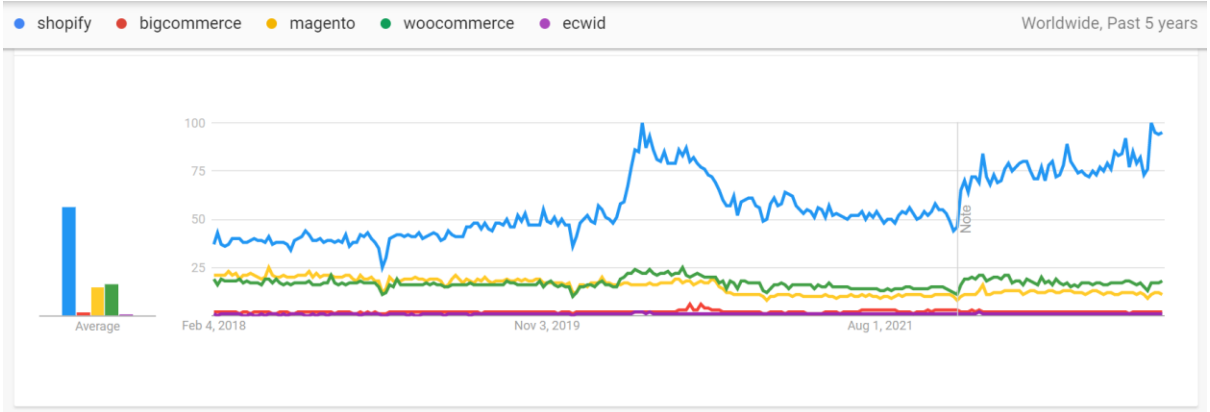
Note that Oracle, SAP and Salesforce's solutions aren't strictly comparable, as they are more or less ancillary products to the organisation's much broader offering.

For example, according to Salesforce Commerce, Coca-Cola and Unilever are customers and, most likely, have an entrenched relationship with Salesforce across multiple products (i.e. CRM). Such customers are highly incentivised to remain with Salesforce (due to the sheer size and complexity of solutions required); however, as Shopify scales payments, fulfilment and B2B solutions (and others), it's likely that Salesforce, SAP, and Oracle will face a challenge in retaining certain cohorts of customers who see value in Shopify's end-to-end offering. The 'poaching' of customers from these types of competitors will be a big acquisition channel for Shopify in the future.

In a final sense check, a comparison of a few peers (BigCommerce, Adobe/Magento, WooCommerce and Ecwid) in Google Trends also shows a clear advantage favouring Shopify, with the platform trending exceptionally high in its home country Canada (88% share of searches), as well as Japan (83%), Ireland (80%), New-Zealand (80%), Singapore (78%), USA (77%) and Australia (75%). It also remains popular in high-growth regions within Asia (Malaysia, Thailand, Indonesia, South Korea, and India) and Latin America (Brazil, Peru, Chile and Colombia). It's worth noting that most of these numbers (Shopify's share within Google Trends) have risen materially in a very short period of time.

Whilst these markets could drive material GMV growth for Shopify, the lion's share of GMV in future will likely continue to come from core markets such as North America, Europe and the UK, where there remains considerably higher wealth and overall consumption.

Figure 61 - Google Search Trends



Source: Google Trends (past 5 years)

In terms of comparing the peers financially, it's impossible to break out the commerce segment from the larger peers (SAP, Salesforce etc.), leaving only one public company somewhat comparable - BigCommerce. However, even then, it's challenging to make a like-for-like comparison. For a start, BigCommerce does not break down GMV or merchant numbers in any meaningful way.

What we know is that BigCommerce is a significantly smaller peer that, in revenue terms, is growing at 44% p/a (2020-21) compared to Shopify at 57% over the same period. However, an edge BigCommerce does have is staying within the boundaries of its core subscription platform, which drives substantially better margins, but caps its overall take rate.

Table 2 - BigCommerce and Shopify Metrics

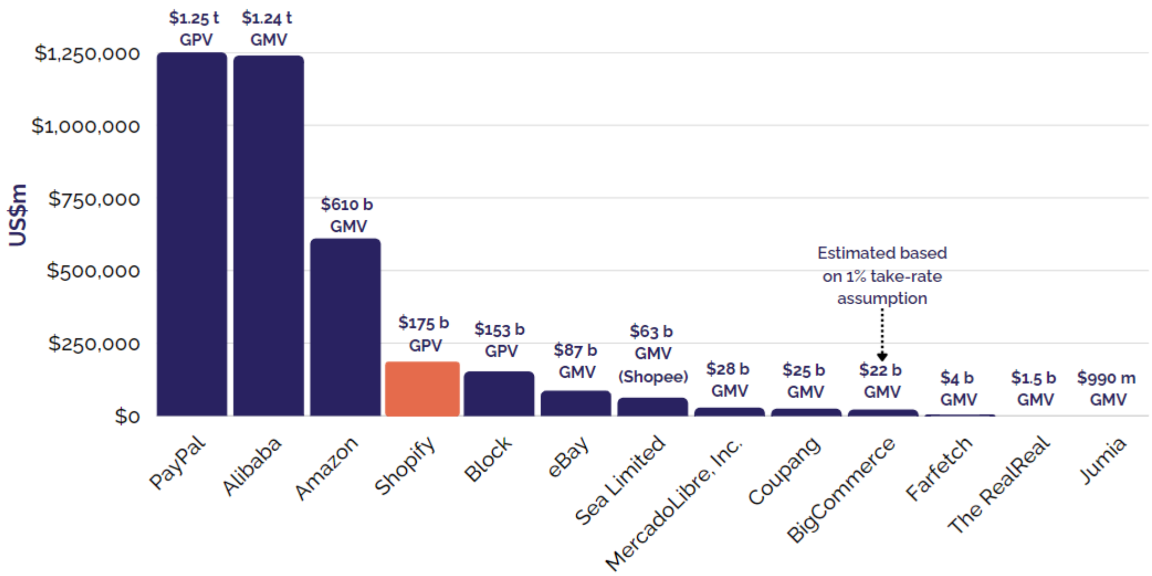
2021 Financials (US$m)	Mkt Cap	Revenue	Gross Profit	Gross Margin	Net Profit (Loss)	Net Cash
BigCommerce	$1,198m	$220m	$174m	79%	-$77m	$400m
Shopify	$34,513m	$4,611m	$2,481m	54%	$2,914m	$7,768

Source: BigCommerce, Shopify financial statements

If we assume BigCommerce's 'take-rate' (i.e. sales/GMV) ratio is ~1% (in line with Shopify's 5-year average take rate on Subscription Solutions), then their GMV would be around the $22bn mark (~15% Shopify's GMV).

For all other 'peers' there is publicly available information which allows us to view Shopify's GMV in context. This is presented below, with Shopify only lagging behind PayPal (where "Gross Payment Volume" has been used), Alibaba and Amazon. Shopify should continue to outpace the long tail as it heads towards $500bn - $1 trillion in GMV towards the end of this decade.

Figure 62 - Comparing GMV/GPV (US$m) - 2021



Source: Company financial statements (2021), Granite Bay

Its merchant solutions drive much of this GMV growth for Shopify, which will lead to an overall enhancement in GMV, retention and lifetime value, despite poorer margins.

Further, the metadata and efficiencies Shopify can gain through 'owning' the end-to-end supply chain should ultimately put them in good stead to see economies of scale (cost advantages) and incremental margin and take-rate improvements over time.

In saying this, e-commerce has a substantial Total Addressable Market (TAM), and there is significant room for many players to grow and add value to the ecosystem. Big tech (e.g. Adobe, Salesforce, SAP, Oracle), pure-play platforms (WooCommerce, BigCommerce), challengers (e.g. Ecwid, CommerceTools) and enablers (e.g. Block, GXO) all have a part to play.

The Amazon Effect

Amazon is the elephant in the room for e-commerce platforms and was not mentioned in the previous section as it does not offer the same product as those pure-play platforms discussed previously. However, as we learned earlier in this report, Amazon did have this platform - WebStores - but dissolved it, handing a large portion of an estimated 80k[57] accounts to Shopify.

Since then, Amazon's e-commerce business has grown significantly and is a clear leader in terms of the infrastructure offered to its merchants, namely Amazon Pay, Fulfilment by Amazon (FBA) and other services (i.e. advertising).

Here are a few high-level statistics as a reminder of just how big Amazon is:

[57] How Shopify Outfoxed Amazon to Become the Everywhere Store - Bloomberg

- Market Cap: $1.2 trillion
- Revenue (2021a): $470 billion
- Net Income (2021a): $33 billion
- ~300 million shoppers worldwide (and 200m Prime members)[58]
- In 2019, there were ~2.9 million active sellers on Amazon marketplace[59]
- Globally, more than 175 fulfilment centres with over 150m sqft of space (average 857k sqft per centre)
- Invested over $30 billion in the fulfilment network (and technologies)
- In 2020, ~50% of sellers utilised Fulfilment by Amazon (store, pick, pack, ship)

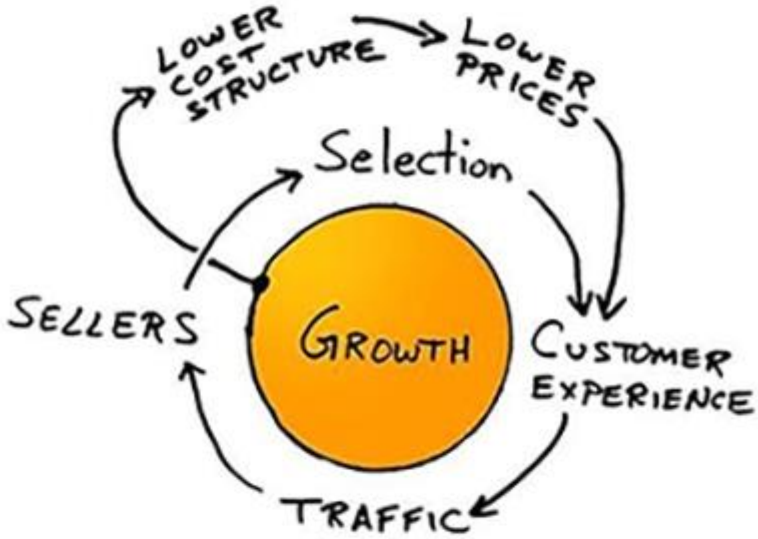
Much of the success of Amazon's retail business comes down to the business model and the significant moat they have built around their ecosystem regarding product breadth and availability, price and customer experience.

This business model is premised on an early sketch by Amazon's founder, Jeff Bezos, which is more broadly known as Amazon's Virtuous Cycle (or, more generally speaking - the Amazon Flywheel). In this (below), you can see how Amazon's growth and position have materialised over the years.

[58] Amazon Stats: Growth, Sales and More - Amazon

[59] Number of active Amazon marketplace sellers in 2019 - Statista

Figure 63 - Amazon Virtuous Cycle (Flywheel)



Source: Amazon

Starting with selection, by broadening the seller base to third parties, Amazon has widened the funnel of products available to the consumer. The seller ecosystem feeding this funnel can be broken, quite broadly, into five categories[60]:

1) Manufacturer / DTC: Produce own products, sell under brand name on Amazon
2) Private label: Sells third-party products or contract under different brand name
3) Factory brands: Brands sourced directly from factories
4) Resellers: Buy products in bulk and re-sell for a better margin; and
5) Aggregators: Purchases multiple Amazon brands, consolidates, creates efficiencies

For first- and third-party sellers there are pros and cons. In essence, for a first-party seller (i.e. Lego), they sell in bulk to Amazon for exposure to a large buyer ecosystem (with high conversion rates and advertising features).

With this, Amazon controls the inventory, logistics and pricing, leaving a lower margin in the hands of the seller. For third-party sellers they are likely to see better margins; however, could struggle to cut through with minimal brand recognition.

On the customer experience front, shoppers are offered the most competitive prices, with seamless checkout (thanks to Amazon Pay) and fast delivery (thanks to Fulfil by Amazon). This benchmark has set the expectation of shoppers who now expect free, 1-2 day delivery and free

[60] The Five Types of Sellers on Amazon - Momentum Commerce

return. Shippo CEO Laura Behrens Wu articulated this expectation in an interview with Stratechery in March 2022:

> *Consumers have those expectations from Amazon that shipping should be free, it should be two days, and whatever those expectations are, returns should be free. That is still carried over when I'm buying on this branded website. If the expectations are not met, consumers decide to buy somewhere else…Merchants are constantly trying to play catch up, whatever Amazon is doing, they need to follow suit.*[61]

For example, Amazon has hundreds of options priced from $12 with free 2-day delivery for something as mundane as a reading light. Plus, we can (and do) go from thinking about a product to purchasing a product within a minute (in fact, 28% of Amazon purchases take less than 3 minutes[62]).

This is the standard Amazon has set - ample selection, competitive prices, fast checkout and free/fast delivery and returns.

Amazon v Shopify

Shopify and Amazon are quite different in how they serve consumers and merchants.

Shopify is an open platform, while Amazon is a closed marketplace. They are, however, encroaching on each other's territories (which we'll dive into a little below).

Shopify allows a merchant to establish an online store via their platform and then link that store to numerous sales channels (in-store and online via social, search and third-party retailers like Walmart and Amazon). Shopify's goal is to get a merchant's product in front of as many shoppers via as many channels as possible and to optimise the merchant's GMV through a suite of products and services.

For Amazon, it's perhaps more customer (shopper) centric - creating a marketplace of every product imaginable, at the most competitive price, with the most seamless checkout and delivery.

Further, Shopify acts as the repository of all merchant inventory data. All product metadata and SKUs are within Shopify, with only a select number of SKUs pushed through various channels like Amazon. For example, Shopify merchant Concrete Minerals have hundreds of products

[61] An Interview with Shippo Founder Laura Behrens Wu - Stratechery

[62] Amazon Stats: Growth, Sales and More - Amazon

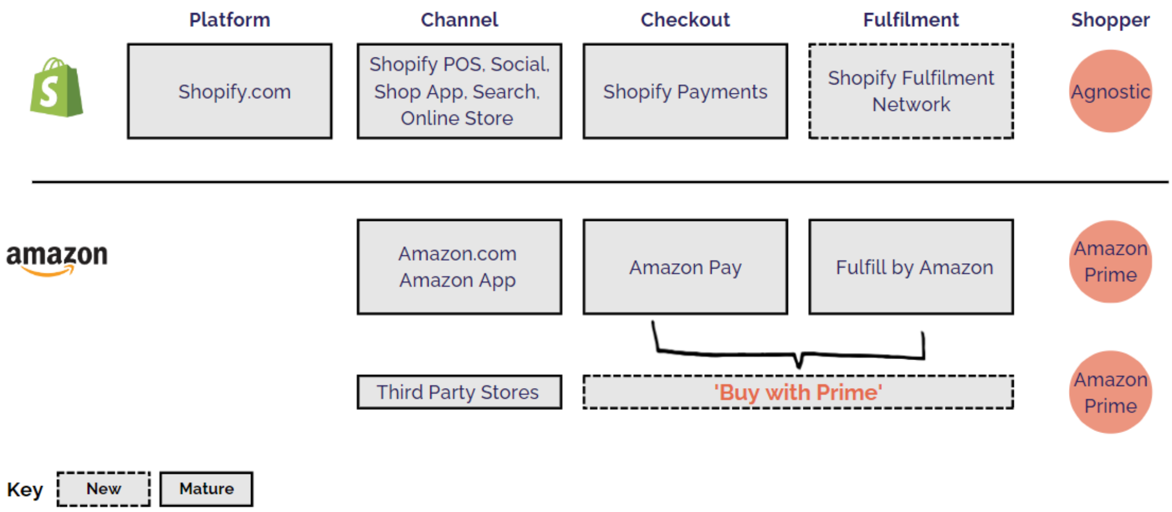
available on their online store, with only eight sold through the Amazon channel (at time of writing).

A brand like Allbirds skips Amazon and sells through its DTC channels or via Google (with hundreds of Allbirds products available via Google Shopping). In this way, Shopify gives the merchant all the power and choice.

However, as Shopify grows, it is looking to become not just a platform but an end-to-end solution, with its focus very much shifting towards shopper-centricity - in particular, ensuring shoppers have the optimal checkout experience in fast and affordable fulfilment. This gets them well and truly into Amazon territory!

In figure 64 below, we outline the various products open to both Amazon and Shopify under each category.

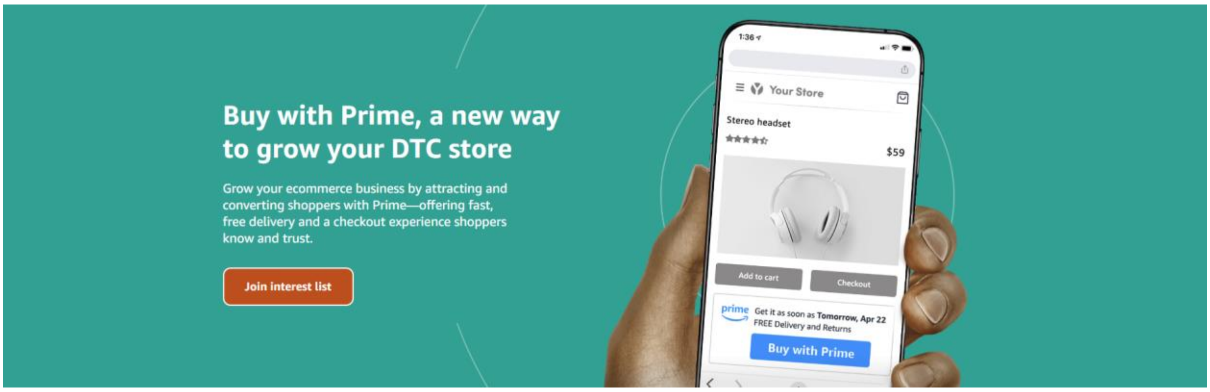
Figure 64 - Shopify v Amazon



Source: Granite Bay

Shopify's Fulfilment Network (SFN) is being developed to solve the fulfilment part of the supply chain; however, just as Shopify was ramping up their SFN plans (with capex allocated and Deliverr acquired), Amazon somewhat crashed the party with the launch of 'Buy with Prime' in April 2022.

Figure 65 - Amazon's 'Buy with Prime'



Source: Amazon

'Buy with Prime' effectively allows merchants not on Amazon to offer shoppers 1–2-day delivery and the Amazon checkout experience via their online store (as seen above).

According to Amazon, "Prime members will see the Prime logo and delivery promise on eligible products in merchants' online stores, which signals the item is available for free delivery, as fast as the next day, with free returns."

For example, I could (hypothetically) jump on the Allbirds online store and see 'Buy with Prime' across a range of sneakers and apparel products. This is a potentially compelling opportunity for Allbirds (and consumers) and leaves the door open for Amazon to encroach on SFNs territory whilst Shopify's busy building the infrastructure and capability to compete.

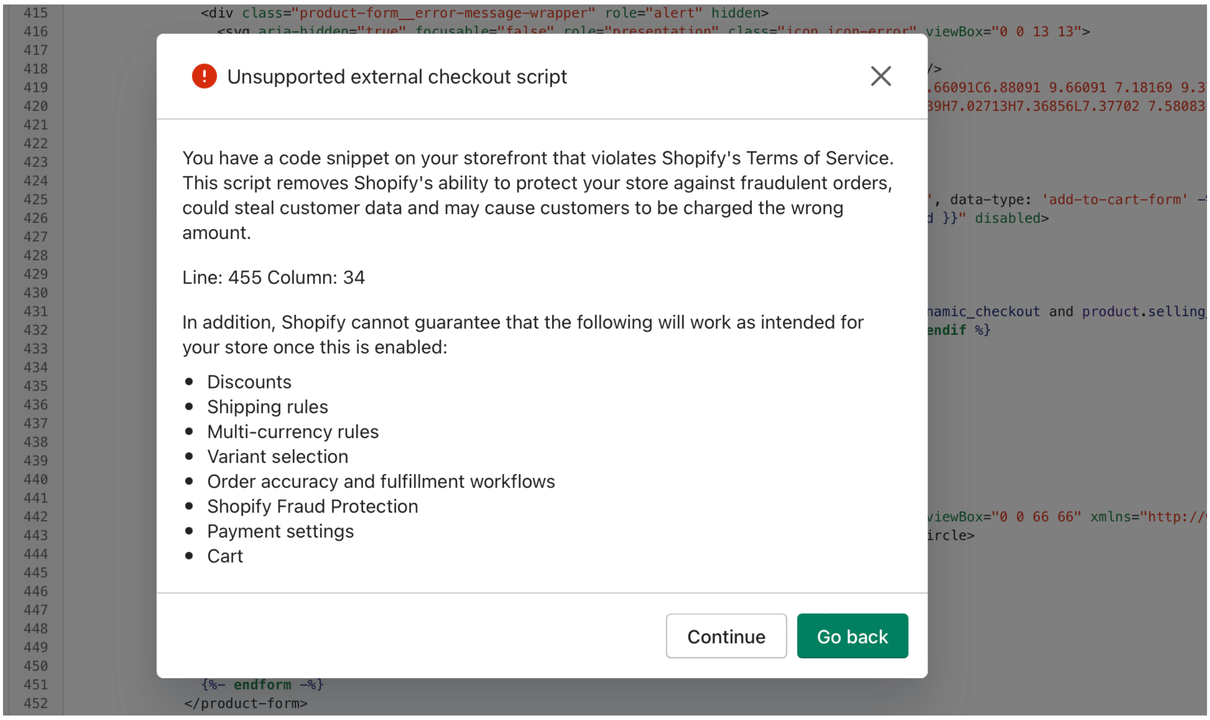
We know SFN have ambitions of offering 1-2 day delivery to 90% of US consumers, but that goal (even with the help of Deliverr's third-party network) could be a couple of years away from seeing any material traction. Further, SFN has not articulated their international strategy. Presumably, this could involve a 3PL provider like GXO; however, the longer Shopify drags its feet, the more opportunity they hand Amazon to pick up that lucrative checkout and fulfilment business.

Initially, Shopify appeared unmoved by this potential threat, generally towing the line of "what's good for the merchant is good for Shopify" however, in September 2022, this stance changed with merchants looking to install "Buy with Prime" faced with a '"violation of its terms of service".

With this, Shopify stated (below) that installing the feature "removes Shopify's ability to protect your store against fraudulent orders, could steal customer data and may cause customers to be charged the wrong amount"[63]. In addition, they raised other risks regarding guarantees over discounts, shipping rules, payment settings, etc.

Figure 66 - "Buy with Prime" Violates Shopify Terms of Service

[63] Shopify Tries to Fight Buy with Prime - Marketplace Pulse



Source: Marketplace Pulse

Indeed, there are workflows that Shopify cannot guarantee with "Buy with Prime", just as there would be uncertainties by allowing merchants to work with the myriad of other partners on the Shopify App Store.

The key here is that Shopify sees "Buy with Prime" as a legitimate threat. Particularly for those merchants actively utilising the Amazon sales channel, and particularly over the next 1-2 years as Shopify aims to build a fulfilment solution that matches Amazon.

Without doubt, “Buy with Prime” is a real risk for Shopify, however, a few things work in Shopify's favour.

Firstly, the acquisition of Deliverr and the investment and integration of Flexport allow Shopify to ramp up SFN much faster than initially planned. Secondly, a vertically integrated fulfilment system will create a more seamless and unified experience. Lastly, the asset-light model of SFN allows them to scale considerably faster than building the entire fulfilment stack internally and from scratch.

The ball is in Shopify's court to match Amazon on price and service....and soon. The longer they leave that window open, the greater the risk of losing 'incremental' revenue to Amazon.

Key Risks

Building on the threat of 'Buy with Prime', we present several other risks which are essential to consider, not just for Shopify but for the e-commerce sector as a whole.

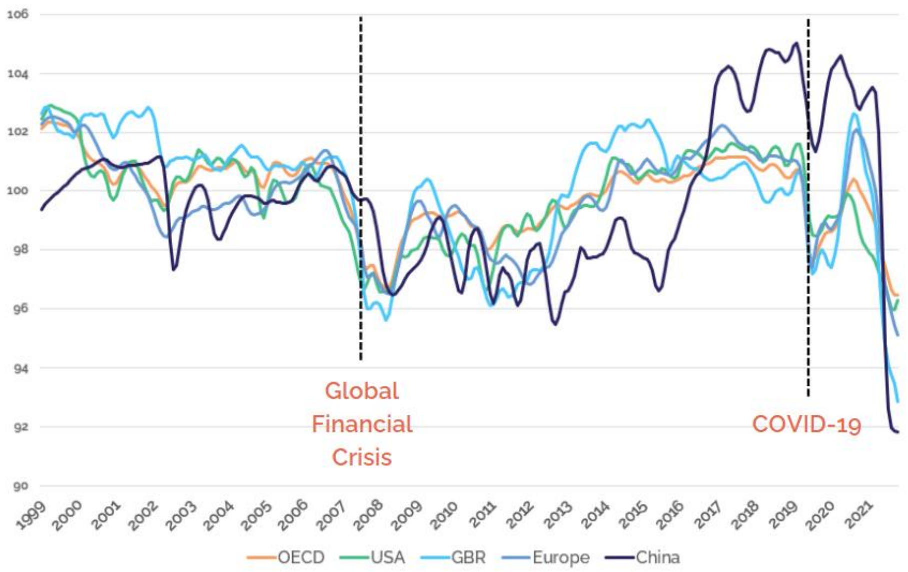
Macroeconomics, Geopolitical

Without doubt, the most significant risk playing out today is the Ukraine conflict, inflation, rising interest rates and consequent impacts on the cost of living and disposable income. This is evident when looking at consumer confidence levels on a global scale (below).

Such issues have a direct and material impact on spending and e-commerce growth, and as a direct result, long-term forecast for global e-commerce spending has been downwardly revised. These revisions factor in the probability of future interest rate hikes and continued deterioration in disposable income for at least the next twelve months.

Importantly, this does not account for any probability for increased conflict in regions such as the South China Sea. Any disruption to the status quo between China and Taiwan will undoubtably have a considerable impact on the global semiconductor market which will flow through directly (and potentially catastrophically) to global financial markets.

Figure 67 - Global Consumer Confidence (2000 - 2022)



Source: OECD, Granite Bay

Supply Chain Risk

Since the pandemic's beginning, supply chains have been impacted substantially, causing significant variability in the movement of raw materials into manufacturers, completed goods from manufacturer to fulfilment centres, and from fulfilment centres to the end consumer.

Such risks have catalysed Shopify's investment in end-to-end supply chain software (i.e. Flexport and Deliverr). However, any further disruption brought about by future pandemics, conflicts and other activities will have a material impact on the merchant's ability to inbound products and provide a consistent delivery service to the end consumer.

Competition

E-Commerce is a sizeable market, with total B2C e-commerce sales hitting ~$4 trillion. We expect this to surpass $10 trillion by the end of the decade.

On a global scale, a handful of players (Shopify, Amazon, Alibaba) are competing in the same field, with several regional leaders (Mercado Libre, Shopee, GoTo, Alibaba's Lazada) in the marketplace segment and several competitors in the platform space. These include Adobe/Magento, BigCommerce and WooCommerce.

On the fulfilment side, Amazon is expanding into offering their services to non-Amazon sites via "Buy with Prime" whilst social media conglomerate TikTok is reportedly building out its own fulfilment infrastructure[64].

Shopify is also faced with competitive threats within payments (Shopify Payments), domains, banking (Shopify Balance) and lending (Shopify Capital).

Geographic Expansion

There are many challenges in expanding a business model like Shopify's into international markets. Such challenges were evident for peers like Shopee as they (perhaps too quickly) expanded into regions throughout Latin America and Europe, catalysing a retreat of Shopee from some of those markets[65].

Much of this was catalysed by macroeconomic headwinds, with Shopee re-diverting capital to core markers with Southeast Asia. However, many of these markets are dominated by companies like Mercado Libre and Lazada, with much deeper regional knowledge, relationships and partnerships.

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[64] TikTok Chases Amazon with plans for U.S. fulfilment centers - Axios

[65] Shopee Closes Operations in Four Latin American Countries - TechinAsia

Other regions like India are actively looking to challenge the growth of Amazon and Flipkart (owned by Walmart) by establishing their own open retail platform[66].

Below is a glimpse of this landscape. As mentioned throughout this report, we don't view many of these companies as direct Shopify competitors (i.e. they do not offer the same end-to-end platform as Shopify). However, there are challenges in global expansion in terms of particular cultural nuances, politics, local knowledge/partnerships, building trust, infrastructure spending and maintaining the same levels of profitability.

For example, disposable income in emerging regions is considerably lower, hence smaller average basket size and GMV. Therefore, spending big on regional infrastructure when taking a clip on lower GMV is a big short-term risk to cash flow.

These are some of the reasons which inhibited Amazon's expansion into regions like Southeast Asia - a market dominated by regional leaders.

Figure 68 – Highly Competitive Global Landscape

Source: Granite Bay

Delivering on Product Roadmap

The launch of 'Buy with Prime' is perhaps the best example of how critical it is for Shopify to deliver on its promised product roadmap.

In this example, any delays to SFN could have a tangible impact on future earnings.

[66] New Indian Ecommerce Platform to Challenge Amazon, Flipkart - The Paypers

Further, the continued expansion of Shopify Payments and SFN has knock-on effects on the success of platforms like Shop App and Shopify Audiences and any ambitions around a more expansive advertising business.

Vulnerability to Hacks, Data Breaches

Shopify retains a considerable amount of data on millions of merchants, partners and shoppers around the world, and any compromise of such information would cause significant reputational risk to Shopify.

Further, there is an ever-present risk of cyberattacks. For example, Shopify has been subject to Distributed Denial of Service (DDoS) attacks in the past, which have taken parts of its network offline.

Reliance on Third Parties and Partners

Shopify depends on platforms like Stripe, Global-e and Affirm to deliver critical parts of the Shopify solution. This is particularly true for Stripe, which powers the Shopify Payments product.

Any material changes to the terms of service or any disruption to those companies (via DDoS attack or any other disruption) will directly impact Shopify and its customers.

There are also risks pertaining to the integration of acquired IP (i.e. Deliverr), and the risks that such integrations do not go according to plan or see cost blowouts, impacting product roadmaps and margins.

Key Person Risk

Shopify is a founder-led company, with much of the strategy, roadmap and growth decisions called by founder Tobias Lutke and President Harley Finkelstein.

For whatever reason, if either of these two executives were to be removed from their position, there could be an adverse effect on the company's prospects.

Comparable Company Analysis

There isn't a listed company that is a true comparable to Shopify due to the uniqueness of its business model (i.e. breadth of products) and its growth trajectory.

Certainly, on the platform subscription side, it's highly comparable to BigCommerce. However, Shopify differentiates itself each year by creating highly valuable 'ancillary' products such as payments, financing (capital) and fulfilment.

For this reason, comparable companies have been broken down into two sections. Firstly, competitors in the e-commerce landscape include global and regional leaders, marketplaces and platforms. Secondly, e-commerce 'ancillary' services such as payments, POS, fulfilment and robotics.

Table 3 - Comparable Companies: E-Commerce (as at Dec-22)

Company	Market Cap (US$m)	Rev Growth ('23-'25)	P/S (TTM)	P/S (2023e)	Net Debt / Equity	Gross Margin (%), TTM	EV/EBITDA (TTM)	EV/EBITDA (2023e)	P/E (TTM)	P/E (2023e)	FCF Margin (%) TTM
Global Leaders											
Shopify	$35,292	127%	7.05x	5.18x	-16%	54%	-	-	-	-	6%
Alibaba	$203,251	33%	1.71x	1.62x	-19%	42%	9.54x	7.64x	36.71x	15.10x	6%
Walmart	$356,569	8%	0.61x	0.60x	15%	25%	12.09x	12.11x	25.71x	24.17x	0%
Amazon	$1,159,242	58%	2.39x	1.94x	8%	42%	23.87x	13.70x	-	48.18x	-3%
Average		**56%**	**2.94x**	**2.33x**	**-3%**	**41%**	**15.17x**	**11.15x**	**31.21x**	**29.15x**	**2%**
Regional Leaders											
Zalando	$5,867	46%	0.59x	0.52x	1%	40%	23.36x	9.51x	185.12x	41.45x	-3%
Sea Limited	$29,733	61%	2.53x	1.93x	-9%	39%	-	-	-	-	-17%
MercadoLibre, Inc.	$42,821	129%	4.85x	3.25x	6%	51%	51.29x	28.47x	180.45x	68.75x	-18%
Coupang	$29,786	63%	1.50x	1.22x	-3%	19%	-	83.94x	-	-	-5%
Pinduoduo	$70,148	94%	4.85x	3.36x	-21%	73%	18.04x	10.33x	25.55x	17.90x	21%
JD.com	$67,898	65%	0.49x	0.39x	-29%	8%	27.58x	10.09x	-	24.84x	3%
Vipshop	$4,951	17%	0.33x	0.32x	-50%	20%	2.88x	2.35x	8.06x	6.73x	0%
Grab Holdings	$9,474	269%	11.44x	4.97x	-49%	-46%	-	-	-	-	-58%
Jumia	$534	132%	2.55x	1.81x	-63%	56%	-	-	-	-	-76%
Bukalapak	$1,670	-	10.32x	6.28x	-107%	45%	2.22x	7.43x	3.62x	-	-12%
Rakuten	$6,791	47%	0.57x	0.47x	-301%	-19%	-	5.40x	-	-	96%
Average		**92%**	**3.64x**	**2.23x**	**-57%**	**26%**	**20.90x**	**19.69x**	**80.56x**	**31.93x**	**-6%**
Marketplaces											
eBay	$20,794	13%	2.08x	2.10x	24%	75%	8.42x	7.49x	57.60x	12.10x	15%
Farfetch	$2,959	65%	1.26x	1.01x	3%	45%	-	31.76x	1.77x	-	-3%
The RealReal	$121	118%	0.21x	0.16x	235%	56%	-	-	-	-	-18%
Mercari	$2,266	41%	2.29x	2.04x	-26%	65%	-	24.87x	-	-	-12%
Overstock	$1,108	-9%	0.47x	0.53x	-35%	23%	8.73x	8.85x	13.74x	27.26x	-2%
Poshmark	$1,396	52%	4.06x	3.46x	-41%	84%	-	-	-	-	7%
Wish	$509	134%	0.52x	0.41x	-182%	40%	1.60x	1.39x	-	-	-53%
Average		**59%**	**1.56x**	**1.39x**	**-3%**	**55%**	**6.25x**	**14.87x**	**24.37x**	**19.68x**	**-9%**
Platforms											
Adobe	$136,448	45%	7.94x	6.86x	-1%	88%	20.11x	13.82x	28.35x	24.79x	35%
SquareSpace	$2,974	53%	3.59x	3.08x	14%	84%	-	20.80x	-	105.65x	43%
Wix.com	$4,216	57%	3.15x	2.73x	-7%	62%	-	19.40x	-	-	7%
BigCommerce	$978	82%	3.78x	2.89x	-1%	78%	-	-	-	-	0%
Average		**59%**	**4.61x**	**3.89x**	**1%**	**78%**	**20.11x**	**18.01x**	**28.35x**	**65.22x**	**21%**

Source: CapialIQ, Granite Bay, Company Financials

When viewing the corresponding tables, it's worth considering a few points:

- Shopify will likely be a high-growth company throughout the decade, and comparisons to more established businesses (even those maintaining their own relatively high levels of growth, such as Amazon) are likely to be unreasonable
- Shopify's balance sheet (net cash) puts it in a strong position compared to peers across all segments; although cashed-up regional leaders in China, Southeast Asia and Africa have the balance sheets to take advantage of ongoing regional growth
- Shopify can scale POS quite aggressively in the coming years and outpace peers such as Lightspeed and Toast
- Robotics/automation solutions gather pace this decade; led not only by Shopify but the likes of AutoStore, Berkshire Grey and Ocado

Table 4 - Comparable Companies: Ancillary Services

Company	Market Cap (US$m)	Rev Growth ('23-'25)	P/S (TTM)	P/S (2023e)	Net Debt / Equity	Gross Margin (%), TTM	EV/EBITDA (TTM)	EV/EBITDA (2023e)	P/E (TTM)	P/E (2023e)	FCF Margin (%) TTM
Payments											
PayPal	$97,907	56%	3.71x	3.08x	2%	47%	21.56x	12.80x	47.62x	26.82x	9%
Affirm	$5,328	108%	3.95x	3.13x	49%	49%	-	-	-	-	-11%
Shift4 Payments	$2,491	167%	1.48x	0.90x	30%	20%	30.95x	9.57x	-	22.69x	5%
Block	$33,358	72%	2.05x	1.60x	1%	25%	-	29.33x	-	-	1%
Mastercard	$285,120	64%	13.66x	11.07x	3%	100%	23.28x	18.56x	29.40x	23.78x	45%
Visa	$383,251	40%	13.65x	11.89x	2%	97%	19.84x	17.21x	26.25x	22.06x	45%
Global-e Online	$3,755	227%	12.29x	6.19x	-7%	38%	-	46.70x	-	-	5%
Paytm	$5,313	132%	7.57x	5.58x	-10%	-3%	-	-	-	-	0%
Adyen	$41,579	-59%	5.74x	23.33x	-13%	13%	52.59x	32.90x	77.47x	51.01x	27%
Average		**90%**	**7.12x**	**7.42x**	**6%**	**43%**	**29.64x**	**23.87x**	**45.18x**	**29.27x**	**14%**
POS											
NCR Corporation	$2,678	-100%	0.34x	0.32x	209%	25%	7.54x	5.54x	32.26x	7.87x	13%
Toast	$9,650	144%	4.37x	2.74x	-11%	16%	-	-	-	-	2%
Lightspeed Commerce	$2,746	114%	4.53x	3.66x	-31%	48%	-	-	-	-	8%
Average		**53%**	**3.08x**	**2.24x**	**56%**	**30%**	**7.54x**	**5.54x**	**32.26x**	**7.87x**	**8%**
Fulfilment											
GXO Logistics	$4,296	-	0.51x	0.44x	83%	16%	12.50x	9.91x	19.89x	13.61x	3%
J.B. Hunt	$17,207	15%	1.23x	1.14x	8%	17%	9.96x	9.12x	18.29x	16.85x	0%
Expeditors International	$15,051	-23%	0.79x	1.10x	-10%	13%	6.12x	9.98x	9.80x	15.72x	7%
Average		**-4%**	**0.84x**	**0.89x**	**27%**	**15%**	**9.53x**	**9.67x**	**15.99x**	**15.39x**	**3%**
Robotics											
Ocado	$4,406	41%	1.58x	1.29x	20%	38%	-	59.74x	-	-	-31%
AutoStore	$5,205	164%	11.17x	7.02x	6%	62%	40.55x	15.45x	-	25.93x	0%
Berkshire Grey	$346	393%	4.86x	2.25x	-29%	-15%	-	-	-	-	-120%
Average		**199%**	**5.87x**	**3.52x**	**-1%**	**28%**	**40.55x**	**37.59x**	**-**	**25.93x**	**-50%**

Source: CapialIQ, Granite Bay, Company Financials

Conclusion

Firstly, it's important to highlight that this report is for information purposes only and is not in any way a recommendation to buy or sell securities. If you are reading through an investment lens it is advisable to seek professional financial advice. The report's purpose is to highlight the opportunities and threats within e-commerce, for Shopify and its peers.

Without doubt, Shopify are faced with considerable challenges which have been articulated throughout this report (macroeconomics, competition, product rollout).

In saying this, Shopify's business model is well positioned to benefit from long-term structural shifts in retail as more and more merchants, and consumers go online in developed and developing regions.

Whilst North America, the UK, Europe and Australia to remain markets for Shopify, there is also tremendous opportunity for the company as it pursues growth in other markets - in particular, Southeast Asia, India and Latin America. In the latter markets, e-commerce growth will be driven by various factors, namely an increase in GDP/Capita over the medium-long term and accelerating penetration rates of internet and mobile phones.

Furthermore, Shopify is uniquely positioned, being an agnostic platform offering end-to-end solutions for merchants. This sets it apart from regional and global champions such as Amazon, MercadoLibre, Lazada and Shopee.

Shopify's prospects of acquiring and migrating merchants from competing platforms will likely increase in future as more and more value-add solutions are added to Shopify's core product. In particular, SFN, B2B and Shopify Audiences could be key lures for many merchants looking for more consistent customer service (i.e. < 2-day delivery), broader sales channels and more targeted / higher click-through advertising.

These products ultimately attract more merchants and accelerate the average GMV per merchant. This is fundamental to the Shopify flywheel - more/better channels, partners and capabilities will lead to more GMV and merchants!

Finally, Shopify's thriving partner ecosystem and 'agnostic' positioning put it in an excellent position to capitalise on future trends. Be it in-store, via new social media channels, more 'immersive' metaverse or streaming-based shopping experiences, or via its own Shop App, which has the potential to drive considerable usage.

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