OS-PAY TO SHAKE UP REMOTE RETAIL

Whitepaper

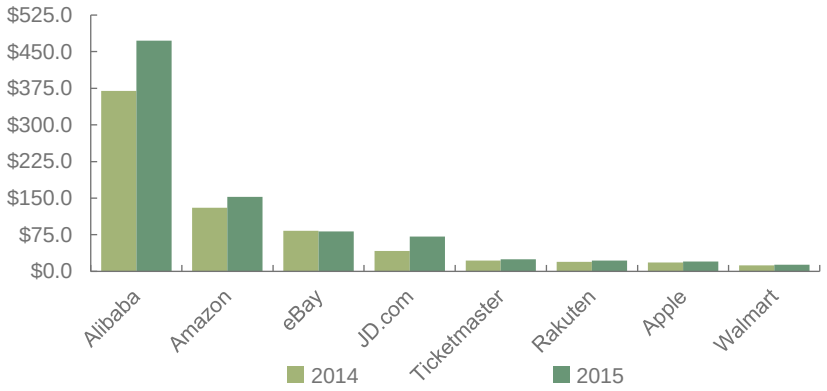
JUNIPER RESEARCH

1.1 eCommerce Status

eCommerce has been dominated by banking and retail services, with retail driving its early adoption. Retail services include both physical and digital goods; the latter is a diverse category of paid-for content that includes music downloads, ticketing, games and infotainment services amongst others.

Over the past decade, eRetail has accelerated to the point whereby, in 2015, online payments for physical goods purchases totalled approximately $1.66 trillion, while sales of digital goods and services generated a further $754 billion.

Figure 1: Online Gross Merchandising Value Sales ($bn), Selected Leading Online Storefronts, 2014-2015



Note: excludes transport ticketing merchants

Source: Juniper Research

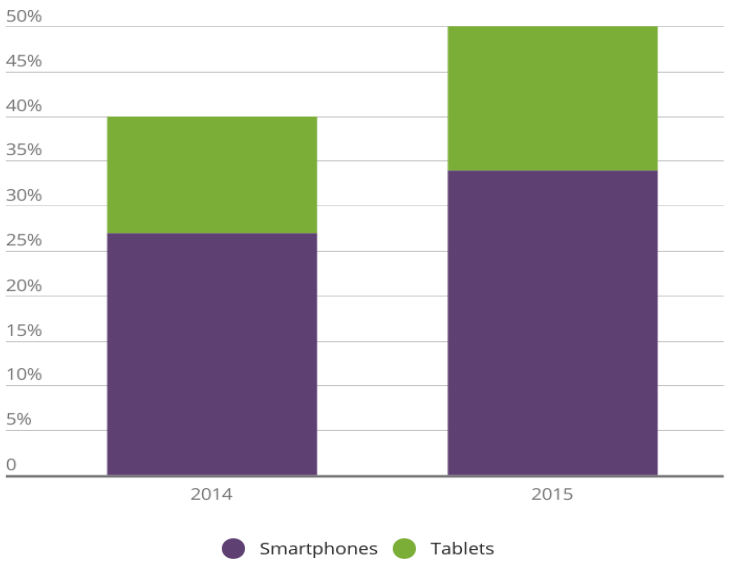
1.2 Changing Habits of Buyers

A common theme across much retail strategy is the need to reach 'Generation Y', otherwise known as 'Millenials'; consumers born in the 15 years prior to the millennium. Various academic and marketing studies have argued that Generation Y consumers have different priorities, as well as behavioural habits, to comparable age groups from preceding generations, underpinned by an affinity with, and a growing reliance on, digital technologies.

With Generation Y individuals accustomed to interacting at speed, via SMS, social media, instant messaging or email response, one notable trait that academics, sociologists and marketers alike have observed is an attendant desire to receive goods and services near instantaneously; a lack of patience compared with previous generations. Therefore, the ability to facilitate a speedy transaction should form a key part of a forward-thinking eRetailer's strategy.

Meanwhile, Juniper has observed a shift in the market from a position where the smartphone was used as a means for discovery but not purchase, to a situation where the smartphone is used for both product discovery as well as purchase. This trend appears to be a natural progression from the relatively stagnant consumer tablet industry, whose lack of steam has been compounded by the emergence, and prevalence, of larger-screened smartphones offering an improved purchasing experience. Indeed, as the following figure demonstrates, mobile as a whole is gaining traction as a remote goods purchase device, although the smartphone's growth is accelerating faster than that of the tablet.

Figure 2: Mobile Transaction Volume Growth as a Proportion of Remote Physical Goods Purchases 2014-2015 (%)



1.3 Payment Challenges

Credit and debit card payments have been, and remain, the primary payment mechanism in the online arena. There are now around 9.5 billion credit and debit cards in circulation worldwide. The dominance of the leading payment card provider is reflected in, and reinforced by, the fact that online retailers typically offer such cards as their initial payment mechanism.

1.3.1 Fraud Prevention & Security

Unlike transactions conducted at POS (Point of Sale), online transactions are not covered by credit card companies, meaning that online retailers are themselves obliged to reimburse customers whose cards were used for fraudulent transactions.

An increasing number of retailers have incorporated 3DS (3D Secure) as a means of reducing fraud. 3DS is an XML-based protocol that uses XML messages which link finanical authorisation with online authentication (eg a password), thereby verifiying the card used in the transaction.

Meanwhile a number of high profile data breaches at retailers has prompted a degree of concern. At the very least, a data breach has the potential to cause considerable inconvenience, as customers may need to change passwords and card details; at worst, it can lead to significant churn away from a particular retailer, together with possible remuneration requirements.

Therefore, the need to ensure a secure payment environment is only likely to increase in importance, particularly in light of recent revelations of the security of HTTPS encryption being undermined by attacks. Digital currencies such as Bitcoin or altcoin may offer some element of protection here; however, their use is not common amongst a non-savvy public, while Bitcoin has been, rightly or wongly, commonly associated with criminal activity which has hampered its adoption.

An emerging technology used to obfuscate many of the personal details of interest to black hats is tokenisation, where unique, but not personally-identifiable information, is associated with a payment in place of bank details. This fundamentally reduces the chance for online card

fraud, where the theft of a one-time-use token is of little use for wrongdoing. Tokenisation is a technique employed by mobile payment and digital wallet service providers, such as Apple Pay, Android Pay, Microsoft Wallet and Samsung Pay. Even in the event of the encyption of the communications channel being bypassed, tokenisation can ensure that little or no valuable data can be stolen when an online goods payment is made.

1.4 The Importance of OS-Pay

For some years now, it has been clear that merchant strategies should focus around the provision of an optimum experience, both on desktop PC platforms as well as the mobile device.

370 Million

Mobile handsets using Apple Pay or Android Pay in 2021

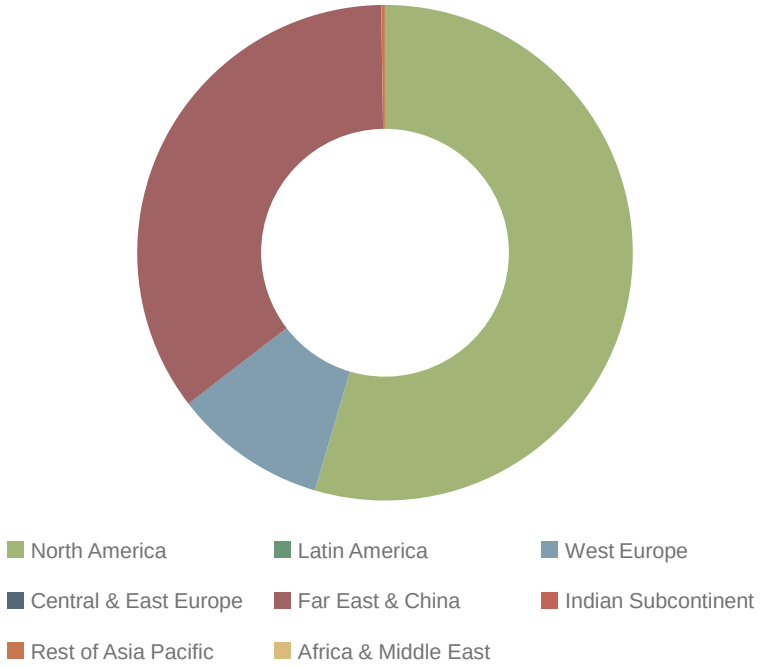
Nevertheless, the smaller screen of the smartphone, along with the relatively cumbersome nature of the touchscreen, means that closing a sale on a smartphone is more dificult to achieve. This is particularly true when the UI (user interface) consists of complex menu-driven mechanisms, as well as password entry for account login and credit card number entry for order confirmation. Indeed, payment mechanisms such as PayPal have had tremendous success in no small part due to their ability to reduce friction when placing an order as they have obviated the need to enter card details.

Thus Juniper believes that the entry of ‘OS-Pay’ (Apple Pay and Android Pay) to the market is likely to play an extremely important role in merchants’ future strategy. As biometric authentication becomes more common as a means of avoiding password or PIN entry, purchase friction can be further reduced. In the present app landscape, with average annual revenue per user declining, it is clear that any strategy that smooths the payment process for additional app content or other goods will be desirable for the seller. Meanwhile, the integration of an OS-Pay service, either into the app or mobile website, means that the consumer is presented with an increasing choice in terms of payment options where card or bank account details are no longer required to be entered.

1.5 Forecast Summary

Juniper estimates that the value of digital and physical goods purchased through mobile OS-Pay platforms will increase by 15 times in the next 2 years. A combination of in-app purchases and website retail payments is projected to drive annual spend via Apple Pay and Android Pay to $8 billion in 2018, up from $540 million this year.

Figure 3: Total Remote Physical & Digital Goods Payments Made Using Apple Pay/Android Pay 2018: $8 Billion



Source: Juniper Research