

Steady march towards a cashless society

A strong influx of innovation in new technologies and products across the ecosystem of global payments means that the shift towards a cashless society continues to gather pace. Where previously 'cashless' meant swiping credit or debit cards, the term now includes the add-ons of a contactless capability and mobile wallets – both now heavily used for e-commerce and point of sale transactions.

With such fast growth in investments across mobile and contactless payment technologies, Cipher – the leading platform for Strategic Patent Intelligence – tells an interesting story around the evolving patent landscape in this space. Most notable are Mastercard and Visa who sit in the top three owners of patent families across the examined technologies, whilst Samsung Electronics is the leading consumer electronics company ahead of LG and Huawei. US payment technology firms PayPal and the Jack Dorsey creation, Square, are also in the top ten list of patent owners. It's worth noting that Bank of America is the one of the only mainstream banks featured and also the top ranked owner in the more niche category of 'wearable devices for payment', followed in second place by Fitbit.

Digital wallets rival debit cards as preferred online payment method

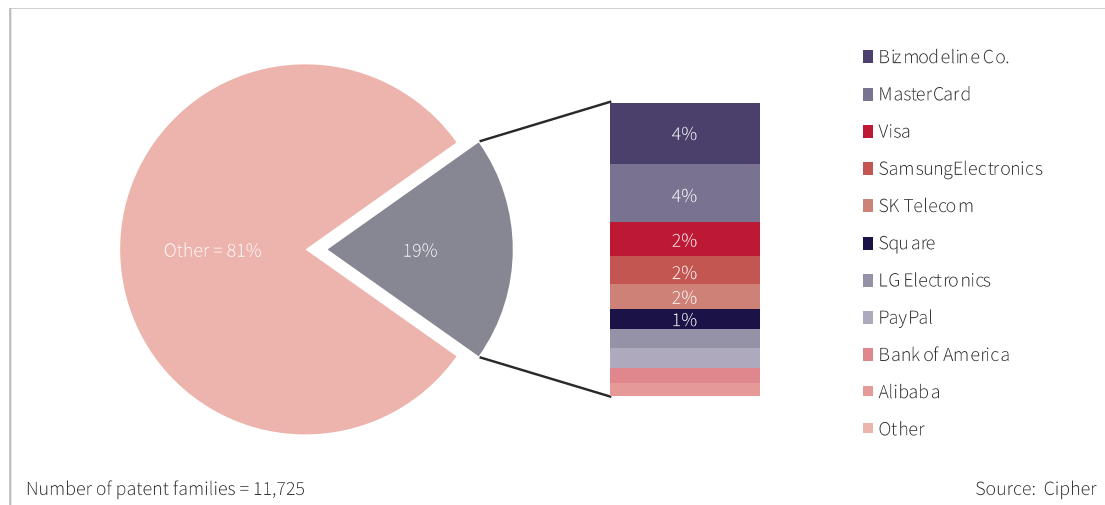
While we have yet to enter a full-blown cashless society, some are clearly adopting this trend more quickly than others. Sweden, for example, stands out as a leader in new payment technologies, whilst the US has been much slower at adopting this change. Sweden's central bank, the Riksbank, carries out a survey every other year to set the scene around payment patterns and how these change over time. In their most recent survey, the Riksbank estimated that cash withdrawals are made less often and the percentage of respondents paying for transactions in cash has steadily declined – to as low as 13% in 2018.

The UK also stands out as a leading adopter of cashless transactions. According to the Worldpay Global Payments Report 2020, only 27% of point of sale transactions in the UK use cash. Digital wallets and debit cards are now equally used as the preferred methods of payment for online transactions. The same report identifies the big 2020 trend in consumer payment preferences as the continued rise of digital and mobile wallets, accounting for 42% of global e-commerce spend in 2019.

South Korean focused Bizmodeline dominates the patent landscape of mobile and contactless payments

In our technology-driven world, never has it been so important to understand who is doing what in a space as rapidly advancing as payment technologies. Knowing who owns the innovations that are revolutionising the way we, as consumers, pay for goods is of paramount importance. Cipher has painted a clear picture of the patent landscape of four key categories across payment technologies; Contactless Payment, Mobile Wallets, Mobile Devices and Wearable Devices for payment (a breakdown of the four categories can be found in the appendix of this report).

Mobile Payment Technologies: Active patent families by organisation



The corporate landscape of patent owners captures a mixture of payment providers, technologies, consumer electronics, telecom, ecommerce and banking. Interestingly, the growth in recent filings across all four technology areas has significantly plateaued in recent times. It's worth highlighting that the 'priority year' refers only to the patent filing date. The number of filings in 2018 has been adjusted based on monthly filings from that year¹.

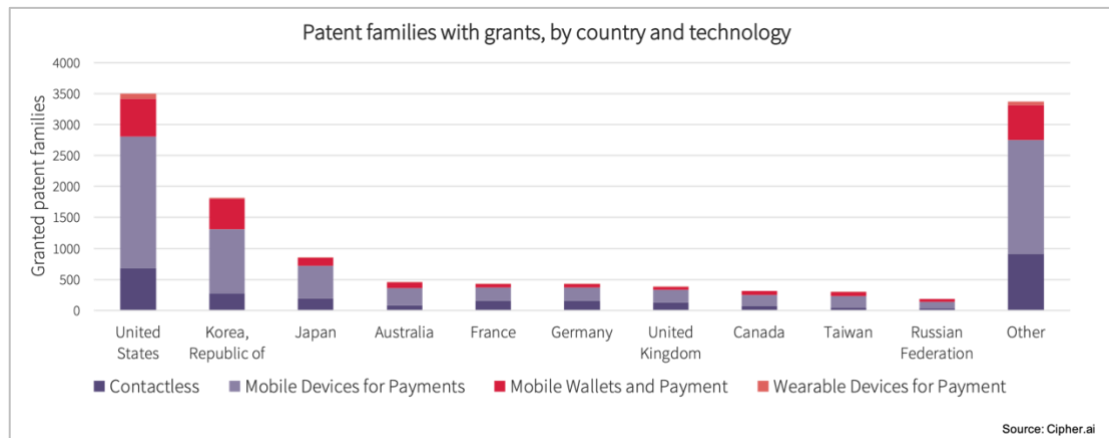
Additionally, patent families with only active documents in China represent 37% of all patent families and are included in the above charts, but have been excluded from the geographical analysis as well as the break-down of all four technology areas shown in the Appendix. Korea focused Bizmodeline is clearly the largest patent owner across mobile and contactless payment with MasterCard a narrow second.

Discrepancies where innovations are filed versus where they're adopted

The geographical distribution of these patented innovations tells an interesting story, with stark differences in those adopting these payment technologies and those actually filing the patents for them. According to UK based Merchant Savvy, which provides intelligence on topics including payment processing, China has an adoption rate of 81%, Korea 37% while the US has an adoption rate of just 29% and has generally been slow to adopt mobile payment solutions. As you would expect, millennials use these technologies habitually and are therefore transitioning into a cashless life quickly. What's more, mobile payments are expected to overtake payments made through credit and debit card transactions.

¹ The 2018 numbers for active families by priority year have been annualised based on 9 months of available data for that year.

Mobile Payment Technologies: Geographical distribution of granted patents



What's become abundantly clear is the disconnect between where these patents are filed and where the solutions are being adopted. Sweden, as one of the leaders in cashless adoption, has very few patents across these technology fields. Whilst the US is seeing a slower adoption rate but owns 36% of the granted patents in this space, followed by South Korea with 14% of granted patents.

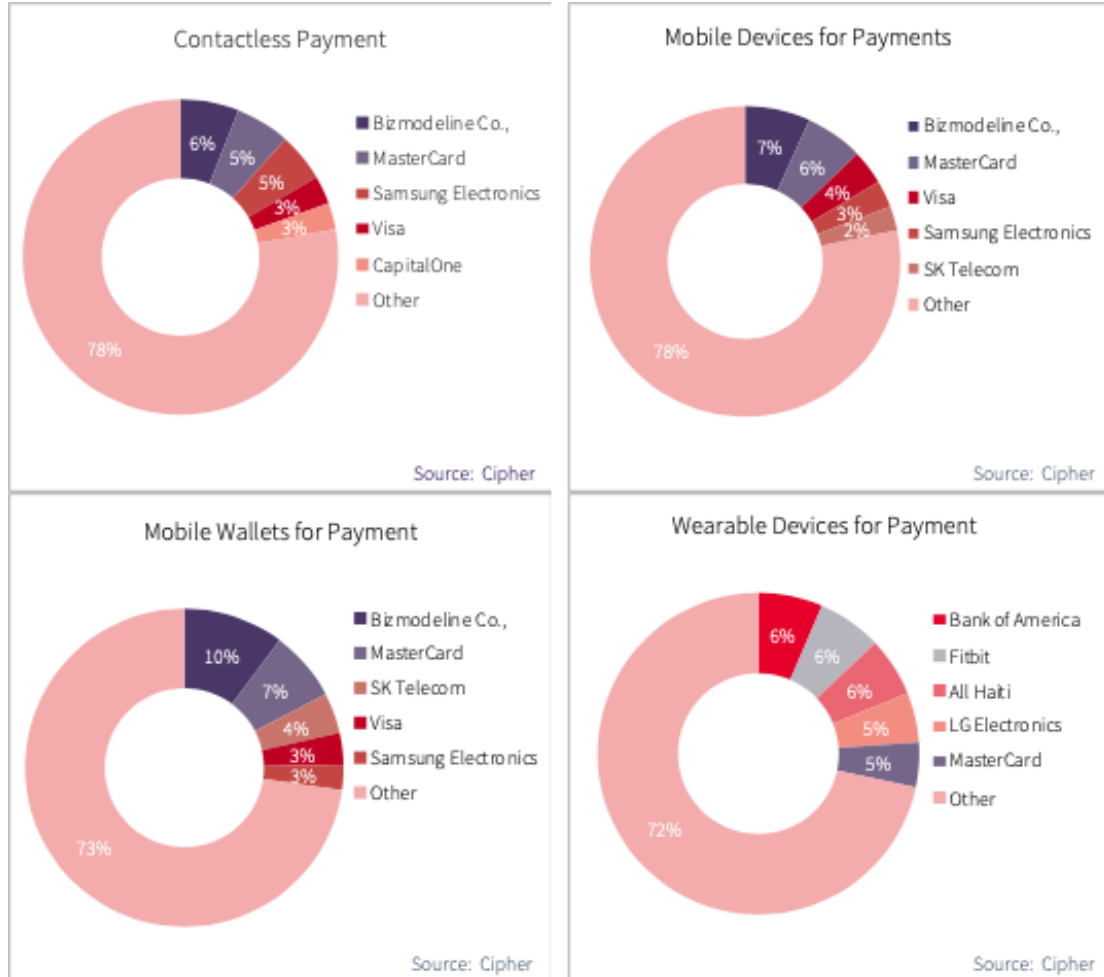
A cashless society is a polarising issue and as these habits start to be ingrained in our everyday lives, questions around who will be left behind start to emerge. Will the unbanked be increasingly marginalised? Will we move away from debit and credit cards altogether? Consumer demand is driving the shift from cash to cashless and is being facilitated by investment in new and innovative technologies by major players across telecoms, consumer electronics, payment technologies and banks. One thing remains clear: Strategic Patent Intelligence enables us to peel back the layer of uncertainty around who is doing what and where in this space.

For more information on who owns what and where in the Mobile Payments space, access Cipher via your subscription or if you'd like to understand more about the FinTech taxonomy used to run this report in Cipher, contact us directly at www.cipher.ai.

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Appendix

Mobile Payment Technologies: Patent owners by technology category²



² Patent families with only active documents in China have been excluded when generating these charts to give an overview which better reflects the worldwide patent landscape.