The future of payments
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The last five years have seen major shifts in how consumers pay for goods and services. With the internet and e-commerce (electronic commerce) continuing its meteoric rise, and smartphones offering a myriad of new ways to pay, businesses and their accounting partners have had to adapt to this new world of e-payments (Electronic Payments), as consumers continue to demand new ways to pay.

One of the largest shifts in the consumer payments sector has been contactless payments. According to the latest figures from the UK Cards Association, contactless payments totalled £1bn in November 2015. Richard Koch, Head of Policy at The UK Cards Association, said: ‘Making a contactless payment is fast, easy and secure. With so many retailers now accepting this technology, we are sure consumers will continue to vote with their wallets and use contactless cards as their preferred way to pay.’

A perfect storm of online retailing, apps, smartphone ownership and secure payment methods has presented businesses with a range of both opportunities and threats as their customers demand faster, mobile and more convenient ways to pay.

Clearly the smartphone has become the hub around which consumers now manage the vast majority of their lives. M-commerce (mobile commerce) is set to eclipse the massive growth in e-commerce that the internet has seen over the last decade.

Smartphones give mobile access to the internet, but also open a window onto apps, which have transformed how many businesses communicate with their customers and how purchases are now made. With a number of e-payment systems linked to apps, businesses can now reach a huge audience for their goods and services.

Apple’s Pay has helped to legitimise the whole concept of e-payments, as a secure and convenient way to make payments with smartphones. Apple Pay is of course not the only e-payment platform available to consumers. Google’s Wallet and PayPal are also market leaders. These are joined by a number of payment device platforms that offer businesses the option to take payments on the move with their smartphones and tablets.

What this means for accountants is that they have a number of new payment streams to track and place within the accounting structure of their clients’ businesses. Where credit and debit card payments once reigned supreme, today the payments landscape is more diverse with a number of possible payment methods open to businesses. Offering a number of payment options has always been a business imperative.

In addition, with new forms of e-payments, accountancy practices will need to fully understand and be able to integrate these new e-payment methods to ensure payments are categorised correctly for expense and tax purposes.

Faster, convenient and secure are now the watchwords for the payments industry. Businesses and accountancy practices all need to understand how these three components of today’s e-payments environment integrate together. Whether a business wants to offer mobile payment technologies via a smartphone dongle, upgrade their store’s EPoS systems with tablet-based tills, take advantage of in-app payments, leverage the power of buy buttons on their enterprise’s social media networks, or move towards a completely cashless payments structure, they need help and support from their financial partners.
A few words about bitcoin

Bitcoin is the most prominent of a number of cryptocurrencies, digital currencies that exist only in an online form. Having no central authority issuing or controlling it, bitcoin is designed to be low-cost to transact in and with no controls over it. Bitcoin can be exchanged between parties using a secure ledger system known as blockchain. New bitcoins are ‘mined’ rather than minted, created as a reward for the solution of the difficult mathematical problems necessary to keep the blockchain updated.

Bitcoin has a great deal of security behind it, and has attracted a lot of attention from the press and in certain tech-heavy segments of society. However, at present, the total size of the bitcoin network is still very small, and transaction volumes and latency are capped at a level far below what would be necessary to grow into a major component of the payments ecosystem. Therefore, detailed discussion of the bitcoin story is left out of this guide. If you want to find out more about the technology, please refer to the IT Faculty’s article on Blockchain in the May/June 2016 edition of Chartech magazine.
The use of e-payments in all their forms is accelerating and accountants’ clients will increasingly receive income via these e-payment systems.

Consumers are adopting a wide-range of e-payment methods depending on how and where they shop. Businesses and their accounting service providers will need to understand and support these payment methods.

The way in which payments are taken by retailers on the high street is also evolving with new POS (point of sale) technologies that offer many payment options to customers.

Until the arrival of Apple Pay, the e-payments market had not engaged with a sufficiently critical mass of consumers to make these systems appealing to use. What was needed was a mobile platform with a huge installed user base, but also one that had elements of its brand that communicated the future. Apple with the massive success of its iPhone was the perfect vehicle to legitimise e-payments.

For businesses offering Apple Pay once it became available from their banks was a commercial imperative that could not be ignored. Apple Pay is only available on the iPhone SE, iPhone 6 and 6s or later, or the Apple Watch when paired with the appropriate iPhone. To business owners, this may seem a limiting factor. However, when you consider that Apple sold 13m iPhone 6s and 6s Plus during its first weekend on sale, this gives a clear indication that there is a ready and waiting consumer base that can use Apple Pay on their phones.

The subsequent launch of Android Pay is another major step, with Android phones now accounting for 60% of the UK’s smartphone devices. Android Pay enables users to make transactions of up to £30 without unlocking their phone, while payments of more than £30 can be confirmed and completed through the use of a fingerprint or pin entry.

UK card payments summary 2015

Debit cards were used 106 times a year for £4,500 purchases (Average Transaction Value (ATV) £42, while credit is 69 times ATV £56).

On average, credit cardholders made just under 6 purchases per month.

Card payments made daily in the UK

2004: 15.7 million
2014: 31.6 million
2024: 52.5 million

All of the major card issuing companies are rushing to support contactless payments, with Mark Barnett, MasterCard President UK and Ireland, succinctly stating: ‘The pace of growth we are seeing in contactless is getting ever faster as we rely less and less on cash. Consumers enjoy the speed and convenience of tapping to pay. We expect this upward trend to persist with consumers continuing to migrate to contactless card payments and increasingly to mobile payments.’

As accountants support their business clients, they have witnessed a number of changes to the payments landscape over the last few years. Where traditional card payments had been the norm, the arrival of the internet and online shopping, together with payment platforms lead by PayPal introduced e-payments to businesses and consumers alike, changing the payments landscape forever.

Now with mobile commerce gaining pace and contactless payments in the high street gaining in popularity, accountants need to expand their knowledge base to ensure they understand these new payment methods, but more importantly the pressure points their clients may be feeling.

### 2.1 The e-payments process

The process that most e-payment systems adhere to involves the following steps.

1. **Consumer purchase**
   
   The consumer makes their purchase using their preferred e-payment method. This can be in-store, online or via their smartphone.

2. **Accepting the order**
   
   After the order has been placed this then moves into the merchant’s e-commerce environment. This means the e-commerce enabled store, which is being accessed via a smartphone, for instance, accepts the order.

3. **Secure e-payment**
   
   Whichever e-payment service provider the business has chosen now takes control of the order. Such providers can typically accept card and alternate payments across all sales channels – mobile, web, point-of-sale and call centre, while also reconciling payment activity with bank statements. The first security checks are performed here on the purchaser’s identity and their payment method.

4. **Transaction sent to bank**
   
   If the security is passed, the transaction then moves through the third-party processor and onto the purchaser’s bank for authorisation. The transaction is then authorised or declined by the issuing bank.

5. **Merchant’s system updated**
   
   If the transaction is authorised, the payment is then sent back to the merchant’s e-commerce system where an order confirmation is generated and sent to the purchaser.

6. **Merchant’s bank credited**
   
   The issuing bank of the purchaser then sends the funds to the merchant’s acquiring bank to complete the transaction.

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Source: CyberSource
2.2 Taking payments on the move

All businesses that take credit and debit card payments are familiar with the card terminals supplied by their banks. However, since the advent of the smartphone and tablet, more card readers have become available giving businesses a greater choice, both in terms of the device they use (eg, on a mobile device, smartphone or tablet) and the location (eg, on the move or in remote locations).

Sage in their report into the payments landscape¹ said: ‘Our survey of SMEs (small and medium-sized enterprises) shows that businesses are seeing the benefits and reacting to the rise of mobile searching and shopping. Significantly more respondents have a website optimised for mobile browsing this year than last year, as well as more having a mobile app (although this is still the minority). Of SME respondents, 50% have a website which is optimised for mobile browsing and 28% have a mobile app.’

2.3 Smartphone payments

Taking payments from consumers using traditional credit and debit cards is changing thanks to new technologies that leverage the power of mobile devices including smartphones and tablets. For businesses that need to take payments on the move, or that don’t have fixed premises, these payment devices are an ideal solution.

However, shops and stores are also seeing the value of moving from a traditional till to more advanced EPoS (electronic Point-of-Sale) platforms that offer integration with back-office systems – most notably their accounting services.

Not surprisingly, as e-payments have evolved the number of card readers now available for smartphones and tablets has also grown. The leading devices currently available to businesses include:

- iZettle (izettle.com/gb),
- PayPal Here (paypal.com/uk/webapps/mpp/credit-card-reader),
- GoSwiff (goswiff.com),
- Payleven (payleven.co.uk),
- Intuit Payments (payments.intuit.com), and
- PayAnywhere (payanywhere.com).

All of these options offer basically the same functionality in that they can scan a credit or debit card just as traditional merchant terminals can today, but use the leading smartphones as the device that communicates with the consumer’s and business’s banks to complete the transaction.

2.4 In-store payments evolve

The shopping environment that business owners can now create personalises the retail experiences of their customers and also offers them seamless payment options. So, for retailers, where image, promotions, seasonal pull and loyalty are important, new mobile and PoS (Point-of-Sale) devices and applications can help to drive footfall with smart apps and engaging new services.

Generally speaking, there are two PoS systems: integrated or standalone. The former is often supplied by e-commerce software vendors such as Actinic. These systems offer comprehensive e-commerce features. You are then free to match this software to any hardware components your business might need. This can be free-standing tills or mobile card readers.

¹ The Sage Pay Payment Landscape report
Integrated systems as their name suggests are complete PoS platforms out of the box. The software and hardware components will usually come from a single vendor. Often supplied by payment service providers, the beauty of fully integrated systems is that the hardware and software will seamlessly work together. Moreover, integrated PoS systems will offer a level of back-office support that is essential to enable the business to perform sales analysis, stock control and accounts syncing.

Consumers in-store constantly complain that queuing is one of the main pain points they feel. Here, some retailers are investing in mPoS (mobile Point-of-Sale) devices which enable staff to process e-payments using mobile devices that can in some cases also print a physical receipt.

The more forward thinking retailers are beginning to align retail NFC (Near Field Communication) within their IT strategy in order to take advantage of the full potential of mobile commerce and to make the mobile wallet a viable reality for their customers.

A pharmacy in Islington is a good example: Using portable PoS devices and Sage Pay, the business was able to fully integrate its payments into the entire business. The business explained: ‘It’s a very cost-effective and flexible solution. We can use multiple iPads on one till system, and we don’t have to pay maintenance contracts or high hardware installation fees. The iPads themselves only take five minutes to set up, and our less technically savvy staff members have found them easy to use. They also still allow us to provide a diverse range of payments options to them – we accept cash, credit and debit cards, and we’re working on introducing contactless at the moment.’

Making a closer connection with consumers as they enter a store has also been developing. Being able to connect with a consumer via their smartphone as they move around a store is a powerful paradigm that is only just being explored. Beacon technology exploits the Bluetooth Low Energy (BLE) technology that most smartphones now have as standard.

Some security concerns have been raised in relation to the use of this technology, for example in a retail environment where it may be possible to eavesdrop on the connection that is made by the store to a customer’s phone. However, with the release of the Bluetooth Core Specification 4.2, security is greatly enhanced so that after the connection is made, the smartphone uses encryption to ensure the integrity and privacy of the owner’s data.

Pioneered by Apple with its iBeacon technology, iBeacon is not just another version of NFC as the two technologies are very different. The key differentiator is the effective range of the transmissions, which for NFC is just a few centimetres, whereas, iBeacon can transmit to a phone up to 50 metres away. No tags are required, unlike for NFC, which continues to be expensive and time-consuming to implement. Beacons are cheap at the moment, and will continue to fall in price as economies of scale impact their manufacture and more vendors enter the marketplace.

If a customer walks past a display of trainers for instance in a sports shop, the system could alert the person that a discount is available from the same brand they had previously bought online. The future could see dynamic pricing, where an existing and valued customer is offered enhanced prices for a select group of goods when they enter the store. And already, digital payment providers such as PayPal are offering their own beacons to allow their customers to make payments via their handsets.

Beacons can also be used to enhance levels of customer service. For example a hotel can detect the imminent arrival of an existing client by checking his data with booking data. This enables the hotel to have the necessary room information completed, the key ready and any questions prepared regarding his usual meals, drinks and activities by the time the guest arrives at the check-in desk.

The future of this technology will see the continued integration of services into smartphones. In the US, FutureProof is already (futureproofretail.com) showing how a complete shopping trip to a supermarket could be completed with just a phone. Removing the need to use a store’s own scanning devices, customers can self-service for their entire shop. For businesses in other sectors, this concept could be adapted to offer fast and convenient shopping experiences – all with secure payments built into the system.
2.5 The internet of payments

As we’ve already seen, the way in which consumers shop for goods and services has been changing for the last decade. The next five years, however, could bring even more changes thanks to the Internet of Things (IoT). In essence, the IoT makes every object intelligent by embedding digital technology into its design. Fridges that automatically order groceries is a good example of this technology.

The Amazon Dash Button is an emerging technology that all businesses with an interest in IoT should be aware of. Essentially it is a Wi-Fi-connected device that re-orders your favourite item with the press of a button. To use the Dash Button, you simply download the Amazon App from the Apple App Store or Google Play Store.

You can then sign into your Amazon Prime account, connect the Dash Button to Wi-Fi and select the product you want to reorder. Once connected, a single press on the Dash Button automatically places the order. Amazon will send an order confirmation to your phone, so it’s easy to cancel it if you change your mind. Also, the Dash Button Order Protection doesn’t allow a new order to be placed until the prior order ships, unless you allow multiple orders.

For businesses, the Dash Button offers a potential way to connect their physical goods to digital ordering and of course seamless e-payments, though at the moment it is still very much in the early adoption stage.

2.6 The pros and cons of the current e-payment systems

All of the current e-payment systems are in development. The first generation e-payment platforms available to businesses have a number of advantages.

- Fast convenient payments can be made with a card or smartphone.
- Businesses can use the e-payment systems to enhance their loyalty programmes.
- E-payments can be integrated into online accounting services for better financial management.
- Costs are reduced by moving away from cheques and cash.
- Businesses management is improved with enhanced consumer purchasing information from EPoS and e-payments.

There are also a number of disadvantages that you should take into account when considering the use of e-payments.

- There is a cost to setting up and installing new EPoS systems for instance, and ongoing transaction costs attached to e-payment systems.
- Higher levels of customer security are needed to protect e-payments, which will also have a cost attached to it.
- New e-payment systems could shift the fraud liability from the banks to the businesses offering the e-payment method.
- Businesses may have to develop their use of several new e-payment systems to meet the demands of their customers.
- New e-payments regulations (most notably PSD2) could alter how e-payments are regulated, which could lead in turn to additional costs to businesses.

Accountants and their clients will need to assess all of the pros and cons of each e-payment system before implementing it to ensure that it meets the business’s needs when supporting the customer journey to purchase.
The Age of e-money

Businesses increasingly have to offer not only a plethora of e-payment options, but also provide different payment journeys dependent on the retail channel their customers are using. Consumers want to shop in-store, online, with their smartphones – often using several of these options simultaneously. Consumer habits are changing: with easy access to the internet, price and features can be checked in-store, which may or may not result in a sale. Businesses then must be aware of which channels their customers favour and support them with appropriate e-payment options.

Stephen McGee, New Business Sales, Sanderson Multi-Channel Solutions, explained: ‘Gone are the silo methods of retailing. Everything now has to be integrated, seamless and cohesive. The internet and the development of mobile devices has revolutionised the retail sector, which means that consumers research before they buy and shop at their convenience, anytime, anywhere.’

We have witnessed the steady expansion of payment systems. PayPal/PayPal Mobile, Amazon Payments, Google Wallet, MasterCard’s MoneySpend, V.me from Visa and Pingit from Barclays have all been developed and create a rich e-payments environment, which must be managed. E-money can now be transferred to anyone with a payment card or a smartphone. This diverse e-money environment will continue to expand and also simplify.

For businesses and their accounting partners, the familiarity that e-money is bringing means consumers in general will become more accustomed to using e-payment systems. Where security concerns dogged the expansion and use of credit cards for online payments, e-money and e-payments are progressing much faster than online payments did, thanks to the convenience that contactless payments offer to consumers. There will always be a level of risk involved with using these payment methods, but the ease of use, speed and convenience is outweighing these concerns for the vast majority of consumers.

The management of these diverse types of e-money and e-payments all have a common denominator: the merchant account remains at the centre of all these transactions. Accountants will clearly have to ensure all revenue streams are fully accounted for, with the costs and deductions fully itemised for tax purposes.

Key points

- Consumers want to shop using a variety of different channels. For businesses this means providing a correspondingly wide-range of payment options.
- Contactless payments will continue to expand in popularity to become the dominant means of payment in physical retail outlets.
- Business owners will continue to adopt e-banking and the integration between this and e-payments will become increasingly important.
3.1 The rise of contactless payments

The recent Sage Pay survey (mentioned in 2.2 Taking payments on the move) concluded that there has been a significant increase in businesses that accept contactless payment – 31% compared to 26% last year. And it is not just the big retailers. Half of businesses with 20–49 employees accept this type of payment and, overall, another 26% say they plan to do so in the next 12 months. Smaller businesses are much less likely to accept or plan to accept contactless payments.

Contactless payments have reached a tipping point of popularity and acceptance and are being pushed hard by major payments players. Consumers are expecting to be able to use contactless in more and more scenarios and SMEs cannot afford to ignore this growing trend.

The so called ‘wave to pay’ phenomenon has quickly become commonplace. The rapid adoption by major retailers is testament to the power of this e-payment technology. Barclaycard expect 2016 to be a ‘record-breaking year’. Even with a current contactless transaction level of just £30, the convenience with which payments can be made is proving increasingly popular. The transaction value limit will inevitably rise as more retailers offer the payment method to their customers.

Contactless payments are also leveraging next generation security systems to protect payments that will in the most part be completed via mobile devices. Smartphones will increasingly have built-in security systems.

What this means in practice is that when a contactless payment is made, a unique code is generated called a ‘token’. The token is used to identify the payment and account holder to the retailer’s till.

The main attraction of the token system is that the consumer’s card number is not revealed, as would be the case with a traditional card payment. The card information is stored on the smartphone or in the card issuer’s (Visa or MasterCard’s) networks.

The token is unique to each transaction. Anyone gaining access to the token would not be able to make a fraudulent payment, as they would not have access to the consumer’s card information. This level of security delivers the anonymity that consumers want and has robust security built into the payment channel from end-to-end.
3.2 Contactless considerations

Should accountants be advising their clients to adopt contactless payments in their businesses? As with any financial service, care needs to be taken in order to determine whether contactless payments are appropriate for the business concerned.

VeriFone² offer these six steps to successfully embracing NFC, EPoS and contactless payments.

1. **Be prepared to exploit NFC platforms**
   With smartphone manufacturers now committed to NFC, it’s no longer a ‘chicken and egg’ situation. By being NFC-enabled at the outset, retailers can gain considerable competitive edge with customers and also benefit from close working partnerships with key industry players before the market becomes too saturated.

2. **Remember PoS is not just about payments**
   NFC delivers two-way, real-time communication between the merchant and the consumer. With NFC, merchants and retailers of all kinds can turn their point-of-sale into a much more valuable point of interaction that provides customers with intelligent and ultra-secure checkout capabilities.

3. **Get creative at the PoS**
   Mobile will open up new opportunities for loyalty, promotion and brand building. This requires a new level of creative input and the involvement of marketing and communications functions. Make sure all relevant departments across the organisation are engaged, informed and up to speed with mobile commerce and what it means to them and their activities.

4. **Be socially active**
   Social media can help brick-and-mortar retailers reach out to customers and increase brand awareness, but also gauge interest and needs to help turn around shops at risk. Facebook can serve as a focus group, allowing retailers to learn about customers’ preferences.

5. **Choose a partner with proven ability**
   For mobile commerce to reach its potential, many payment devices currently in the field will need to be upgraded. It isn’t simply an issue of adding an NFC reader, it requires deep software richness at the PoS to interact with customers and manage a services-based model encompassing new applications and deployments.

6. **Leverage existing spend**
   Many retailers are currently replacing their PoS estates in order to comply with the latest PCi standards. Stores with regular, low-value, high-volume cash transactions may also be looking to upgrade devices to take contactless payments. Any investment in PoS infrastructure today should include a roadmap for NFC enablement.

   What is clear is that the larger retailers which have already adopted contactless payment for cards and NFC enabled phones, will drive other businesses to adopt contactless to stay competitive.

   Today consumers use a number of criteria to choose the shops and stores they buy from. Increasingly, which e-payment options are available will become a key reason one retailer is chosen over another.

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² Erik Vlugt, “How tablets and smartphones will revolutionize retail”, verifone.com
3.3 How e-banking interfaces with payments

Business owners and accountants alike have embraced the advantages that e-banking now offers. The ability to manage the financial health of a business on any device connected to the internet is a powerful tool. In their report *Future Trends in UK Banking* the Centre for Economics and Business Research (Cebr) concluded the following.

- UK mobile banking is expected to see a rapid rise, to 32.6m users in 2020, up from 17.8m in 2014. This expansion of the mobile banking market also gives significant opportunity to new entrants to gain market share. The total value being moved through mobile apps is projected to reach £3.4bn/week in 2020, up from £1.7bn/week in 2014.

- Users of bank mobile apps report being more satisfied with their banking provider than those that don’t use the software. In addition, costs are significantly lower to the bank per online and mobile transaction compared to in branch or over the telephone.

- Significant changes are also taking place in payment channels. Non-cash, non-card payments are expected to be used for more than a fifth of transactions by 2020, up from virtually nothing at the start of the decade. The rise of people using their mobile to make transactions in-store is expected to be a key driver of this trend.

- Almost a quarter of banking users expect to be banking with an alternative payment provider (e.g., PayPal) within two years, highlighting the threat to incumbents not just from new challenger banks but also from other, less traditional avenues.

The continued evolution of e-banking with more services being offered by the big four banks, leveraging the power of app technology on smartphones and tablets, has a direct impact on e-payments and correspondingly on accountancy practices.

As e-payments proliferate and e-banking offers more sophisticated services, so integration becomes a very important aspect of these services. Businesses are actively looking to reduce overhead costs and save time with every aspect of their enterprise’s operations – including how e-payments are managed and how these impact on their e-banking services.

Many accountancy practices have been using online accounting systems for several years. Businesses have also been quick to adopt the cloud-based services that now exist. Adding e-payments and e-banking into the mix with other business services will require accountants to offer a correspondingly wider range of services.

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3 “Future trends in UK banking”, the Centre for Economics and Business Research (Cebr)
Opportunities and threats

4.1 How appropriate are e-payments?

Many businesses and their accounting partners may have heard of the phrase ‘frictionless payments’ but not fully understood the term. Essentially it is all about making an online purchase as simple as possible, with the minimum number of clicks required to complete the transaction. This is relevant because figures suggest that around 70% of mobile shoppers abandon a purchase if their experience using a store’s app is difficult, confusing or doesn’t offer the correct payment options.

Consumers will of course have traditional credit and debit cards, but are also likely to have a PayPal account or use Google Wallet, which means reducing the friction customers feel when making a payment.

To determine which e-payment methods are appropriate for businesses it is useful to pose the following questions.

- Which existing payment methods do your client’s customers already use?
- Does your client need to integrate online and offline payments?
- Does your client plan to or already have a store that can be accessed by mobile devices?
- Does your client already use any form of online accounting services?
- Will your client need to support contactless payments in their stores?
- What is the typical order value your clients will need to process?
- Are your clients in the B2B or B2C space?

The answers to these questions will give a useful steer on how your clients might begin to embrace e-payments, or expand the number of services they already offer to their customers.

4.2 The business case for e-payments

The business case for adopting e-payment systems is being driven by the ubiquitous smartphone that places a secure and convenient payment channel into the hands of every consumer. The massive success of chip and PIN and, more recently, contactless payments are rapidly evolving a number of e-payment services.

It is increasingly the case that if a business can offer the right payment options delivered in a seamless payment system, then it will see the number of transactions and their value increase. The number of

Key points

- Consumers will increasingly demand fast, secure and seamless e-payment options from the businesses they buy from.
- Businesses that can offer ‘frictionless payment’ options will become the most favoured by consumers.
- All businesses, along with their accounting support services, will need to offer e-payment options that have robust security systems to protect client payments.
e-payment services on offer can seem bewildering, but an analysis of customer preferences will easily lead a business to the right e-payment option(s) to offer.

And retailing is inexorably moving towards the omni-channel. As the high street and online shopping channels are not separate, it is important that accountancy practices understand how these channels are integrating, and how e-payments support this move to integrated shopping.

Can businesses risk not adopting the multichannel approach to selling their goods or services? The simple answer is no, as the market they now operate in won’t tolerate businesses that have not evolved as the market has.

What is clear from the developing e-payments industry is that there is so much choice, and consequently businesses will need help to master these new payment methods, and place them within the context of their businesses.

4.3 General risks and concerns

In their report into e-payments, Ofcom highlighted some of the pressure points that users of e-payments may feel and the risks that must be resolved.

Confusion

There is potential for the great variety of propositions, standards and technologies in emerging payments innovations to lead to consumer confusion in terms of their functionality and how to use them safely.

Exclusion

There may be a risk of consumer exclusion if new payment methods are unsuitable for those lacking particular technical knowledge or confidence.

Privacy

There may be potential for consumers to feel that their privacy is being invaded by payments innovations that make use of personal data or location-targeted advertising.

Security

If payment innovations are developed without sufficient regard to security, then consumers could suffer increased risks (eg, from fraud). New technologies and innovations need to be properly tested before being released to consumers in order to increase consumer trust in internet payment services and reduce payment fraud. This is covered in more detail in section 4.4. Security and fraud with e-payments.

The provision of appropriate guidance is an important factor in ensuring that consumers minimise the risks they take. Ofcom has published a consumer guide to using apps safely and securely on mobile phones, which incorporates input from the FCA (Financial Conduct Authority) on the use of mobile banking and payments.

For businesses adopting Apple Pay, the lack of information that Apple releases about the customers using the system could also be an issue. The increasing use of CRM systems has meant that businesses have become accustomed to gaining a detailed insight into the buying habits of their customers in order to allow them to better target promotions. However, they do not, at present, have access to this information with the Apple Pay platform.

4.4 Security and fraud with e-payments

One of the most important components of e-payments is security and fraud prevention. As we move increasingly toward a cashless society, e-payments will become the norm, and so must be protected with robust security measures.
Technologies such as smartphones can now be used to authenticate customers and protect their payments. When the process is handled by a Payment Service Provider the transaction will be encrypted and a token generated. A process called ‘delayed authorisation capture’ is used to check the authenticity of the payment and ensure that it matches the needs of PCI compliance – which all card issuers insist on. In effect the Payment Service Provider is managing the PCI security component of the payment, removing this burden from the business that is making the sale.

Tokenisation is a process by which the payment data is replaced with a surrogate value called a ‘token’. The major benefits for merchants are that storing tokens instead of payment data reduces the merchant’s effort to implement PCI DSS (Payment Card Industry Data Security Standard) requirements and limits the risk of card data security breaches. A stolen token is useless to fraudsters because they have no way of linking it back to the consumer’s payment data.

Apple Pay, meanwhile, offers a very different way to manage the security aspects of e-payments. Apple iPhone owners can load their phones with their credit card information, or even take a photo of their card to include their cards within the e-wallet built into their phones. The information contained on the card is encrypted and then saved to what is called a Secure Enclave, which is in effect a special chip embedded in the phone.

Apple controls the hardware and the software on its devices which is often referred to as a ‘walled garden’. What this means in practice is that Apple can build security features into the hardware of its devices, which is inherently more secure than some other payment technologies that rely on software-only encryption and authentication.

Security is robust on the iPhone SE, the iPhone 6 and 6s, and later, which you need to use Apple Pay. The company has already moved to a six-digit passcode to access these phones. The Secure Enclave element of the phone’s main processor chip is unique to every device, which ties the credit cards on the phone to only that specific device. When a contactless payment is made by a consumer, the card processor knows who the owner of the card is, so sensitive financial and identity data isn’t passed over the network.

Another aspect of e-payment security is the issue of where liabilities will be focused. At the moment, card issuers and the major banks accept liability, but this could change in an age of e-payments, where more responsibility could reside with businesses and their customers.

The use of contactless payments continues to rise, but are they a safe way to pay? Many businesses would like to embrace the advantages that this payment method offers them, but concerns about fraud and security persist. Card cloning has always been possible, but with today’s contactless payment cards broadcasting their information to anyone listening, there is an element of risk that must be mitigated.

Sage Pay offers these steps to help your clients protect themselves from fraud.

- Analyse customer information and purchasing behaviour, so that you can assess a customer’s profile, order and delivery details before accepting a transaction.
- Use tokenisation to avoid storing payment data that could be compromised by criminals.
- Beware of orders that are placed late at night or early in the morning, and orders of high quantity or value, particularly if the product is easily resalable.
- Always check the delivery address is valid.
- You could use the banking industry’s Address Verification Service, which compares the delivery address provided for the order with the billing address details for the payment card held by the card issuer.
- Invest in geo-location technology to find the shopper’s location and help identify if the order is coming from a high-risk country.
- Maintain a fraud database to track breaches and help you close loopholes – criminals will continue to target a business until the window of opportunity is closed.

Fraud and wider cybercrime are clear and present dangers for all businesses. Your accountancy practice will be expected to offer current advice regarding how clients can protect their businesses when using all forms of payments.
Accounting and e-money

Key points

- Online cloud-based accounting services will increasingly integrate with all e-payment systems.
- Accountants will have to understand the shifting e-payment environment to offer timely and accurate advice to their clients.

Those of you in accountancy practices will increasingly be asked to manage a growing number of e-payment channels through your own business, and those of your clients, as e-payments becomes the dominant form of payment in the B2B and B2C sector.

How businesses now manage their accounts has also changed out of all recognition thanks mostly to the development of online accounting services. The cloud has delivered an instant access culture where business owners can link together their banking, accounts management and new e-payments they offer to their clients into one integrated system they can access anytime and anywhere via their smartphones.

It is important to understand how these different revenue streams are set up, and ensure they are identified within separate incomes so that they meet all regulatory requirements.

5.1 Online accounting services and e-payment support

Cloud accounting has transformed how businesses manage their finances. In addition, accountancy practices have also been able to leverage the convenience that cloud accounting offers to them and their clients.

Today there are a wide range of online platforms that offer businesses a variety of online accounting services. Many of the services are aimed at smaller enterprises or micro-businesses such as freelancers, as they offer easy access and low costs.

All of the major online accounting applications offer e-payment integration. Xero for instance enables payments to be taken via a range of systems. Whether you use iZettle, Stripe or eWAY, for example, you can add it as a payment service in Xero and apply it to your invoice template. Add a ‘pay now’ button so that your customers can pay immediately in the way most convenient to them when they receive your invoice by email.

For many businesses their first foray into e-payments will be PayPal. The ease with which a business can set-up an e-payment channel has seen this payment method become highly popular. For accountants that need to reconcile these payments with either an online or offline accounts application, PayPal offers a Mass Payment file that is stored in the business’s account history, which includes details of every transaction completed. The file generated is tab-delimited, which means it can be imported into Excel for instance.
5.2 Integrating e-payment systems

One of the significant benefits of coupling e-payments with online accounting services is the level of integration that is possible. Businesses want to see the financial aspects of their businesses with a single dashboard approach, which many of the online accounting services offer.

When e-payments are considered, businesses need to manage the different payment options they are offering to their customers. E-payments will be from a variety of sources, for example a contactless payment, a PayPal payment from a debit card, or a mobile payment via a smartphone using a card reader. Accountants need to see these payment journeys and be able to compile them into a payments overview that is both accurate and useful to their clients.

Many of the online accounting applications have been actively developing their integration with e-payments. A good example is QuickBooks. For accountants, there is QuickBooks Online Accountants, which uses a dashboard approach to view account information. You can see all of your clients’ books in one view, and get important information such as the last reconciliation date and which books need immediate attention.

5.3 Supporting clients in e-payments

As an accountancy service your clients will look to you for help in the following areas.

**Simplifying their accounting workflow**
Assess your clients’ use of e-payments, whether they use online accounting applications and how they currently manage their tax affairs. These components will need to be integrated together to deliver a seamless e-payments process.

**Optimising e-payment systems**
It is very easy to simply set-up a PayPal account and consider that your clients’ e-payment obligations are complete. Instead, assess which e-payment systems they currently use and ask whether these could be changed to improve efficiency to customers and reduce transaction costs.

**Flexibly controlling e-payments**
The power of e-payments is the flexibility they offer. Help your clients develop their e-payment systems to allow as much flexibility as possible. Use e-payment systems that can easily scale as your clients’ businesses expand.

**Assessing supplier support initiatives**
Not all e-payment systems are made the same. As this market is in the gold rush phase of its development, take time to assess the credentials of the business offering the e-payment service, to ensure full compliance with payment regulations and high levels of security such as PCI compliance.

There is little doubt that e-payments will expand their reach and popularity. The development of mobile banking, e-commerce and m-commerce together are the perfect environment for e-payment systems to flourish. As they offer many benefits in addition to simply reduced costs for businesses, e-payments will eventually become the dominant payment methods used by consumers.
Case studies

Cass Art

Having traded solely on the high street for 30 years, the team at leading independent arts supplier Cass Art knew that in order to expand their reach and make their store truly accessible to customers from all over the UK, they needed to move online.

Mark Cass created Cass Art in 1984, with the aim of making art accessible for all, no matter age or experience. Now a leading independent stockist of arts materials, Cass Art stores can be found in six key locations across London, including Hampstead, Soho and their flagship store in Islington. However, while seeing local growth from their high street presence, the Cass Art team realised that they were missing out on a huge customer base across the UK.

E-commerce manager Debi Magonet said: ‘We needed to expand beyond London and connect with all the UK’s creative communities. The move online presents a steep learning curve for us as a business because it’s a completely new channel, but it will help make Cass Art accessible to the whole nation.’

Using Sage Pay, Cass Art is able to offer customers fully branded and secure payment pages, as well as enabling them to buy on mobile optimised pages. ‘A number of other gateways couldn’t be seamless with the e-commerce platform we developed, and would automatically pop up in another window or look very different to the rest of our site which is frustrating and a little off putting.’

With a focus on the customer journey, the Cass Art website offers many choices to make the process as pain free as possible, with functionality such as postcode look up, next day delivery and click and collect.

Internet Fusion

Internet Fusion is a UK-based, online retailer of clothing and action sports equipment. Founded and run by action sports enthusiasts, the company supplies a range of products and leading brands through its 14 niche websites (which include Blackleaf.com, Webtogs.com and FitnessFootware.com).

With its focus on providing excellent customer service and specialist products, Internet Fusion has established a sizeable international market. The firm sells significant amounts in English-speaking countries with an outdoors culture: Australia, United States and Canada. It also has a large European market.

Director Ian Bristow says, ‘We’ve been quite surprised at how much we sell to Australia and America, especially as so many of our brands originated there. We believe it’s a combination of pricing and availability; sometimes the things we sell are not available in their home markets.’

The company’s international presence resulted in a requirement to easily accept international payments in native countries. Today, one third of revenue comes from international sales and 70% of company’s sales are processed by PayPal.

Ian explained, ‘it helps that PayPal is so well known. People use PayPal all over the world and it helps us to have the symbol on our site. Customers who use PayPal feel an extra reassurance that PayPal is there to resolve any issues.’

Looking ahead, Internet Fusion plans to increase the number of local language sites it runs. The Nordic countries are already an important market for the firm and as it targets those with local sites, it will use PayPal to quickly offer payment in local currencies.
Into the Blue

Into the Blue is one of the UK’s best known experience gifting companies. The company started life in 1996 as Air Activity Gift Vouchers, an off-shoot of Air Displays International Ltd, offering flying experiences to enthusiasts attending the world famous Biggin Hill Air Fair.

When the company started trading, experiences were marketed by mail order, with all orders being received and processed by post. This worked perfectly in the company’s initial phase but increasing demand meant Into the Blue needed to find a smarter approach.

Consequently an e-commerce solution was implemented to enable online sales and basic payment fulfilment. However, the service and user experience did not meet their requirements as they experienced a number of serious outages during particularly busy periods.

They therefore looked for a solution that would address four key challenges: easing server strain, enhancing security, improving the uptime of their site and providing detailed reporting.

MasterCard Payment Gateway Services was able to offer Into the Blue a fully integrated, hosted payment solution that captures the card data and performs the requisite authorisation. This has transformed the company’s ability to manage its server infrastructure and has created a reliable payment service that can easily deal with high traffic volume, while allowing the company to develop its multi-channel strategy.

The hosted payment processing technology is scalable, so it can grow as the company grows. In addition, it supports a wide range of multiple card types, multiple currencies and multiple acquiring bank connections.

Security is a key concern and the solution offers a highly flexible and tailored approach to fraud management which means legitimate business isn’t turned away.

Compared to the company’s previous payment approach, Into the Blue has experienced almost no downtime – even in busy periods – which has increased daily sales and overall revenues. A spokesperson said: ‘MasterCard Payment Gateway Services brought us the reliability and resilience that we needed to be able to cater to a highly seasonal customer. We can now offer the same consistent quality of experience and service all year round and we’ve seen the results positively impact our bottom line.’

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Into the Blue
Summary and Conclusions

7.1 What are the key e-payment trends?

Across the e-payments landscape, there are a number of trends to pay attention to.

**Faster payments.** One of the most important aspects of any payment system is how fast it is to use. Consumers are constantly looking for anything that can make their lives easier to manage. Wireless card payments are currently the fastest growing e-payment type, as consumers realise the convenience this brings. Expect to see similar levels of enthusiasm as smartphone-based e-payment systems continue to develop. The Faster Payments Service in the UK will continue to influence this aspect of e-payments, as we move into the future.

**More mobile payments.** The smartphone will become the digital wallet that millions of consumers and businesses will use to pay for goods and services. The banks and major retailers will continue to expand the number of e-payment types available including more support for Apple Pay, which will continue to expand its reach to become one of the main e-payment platforms consumers will use. Mobile payments will also continue to expand on Android smartphones and tablets. Apple may have the limelight at the moment, but there are many more Android devices in use, making them an e-payment channel that must be supported.

**New payment options.** The e-payments landscape is still evolving. Your accountancy practice can expect to have to manage new e-payment systems that will appear on the market. Faster and simpler payment systems that link consumers’ bank accounts to merchants will become increasingly popular with platforms such as Paym and Zapp making their presence felt.

**Improved security.** As using credit cards online took almost a decade to become an acceptable and secure form of payment, e-payments are now moving through a similar phase of their development. Authentication methods today that are dominated by PIN numbers are likely to move to biometric identity authentication, as pioneered by Apple on its iPhones.

**Apps and integrated payments.** The use of apps continues to be massively popular. The future will see more integration of payment systems into apps, particularly as research (Flurry) indicates that already 90% of the time spent on mobile devices is on using apps. This level of usage will drive the market to ensure e-payment services are built into apps for instant and seamless payments.

7.2 Opportunities for small businesses

The influence that e-payments will have on the small businesses will be profound. In the past, the development of any new payment system has driven businesses to innovate in order to ensure they can offer the payment methods their customers want to use.

Key points

- Using e-payments can be a differentiator in the marketplace. The Millennial group of consumers are particularly attracted to these payment systems.
- The future means more e-payment methods being used to pay for a diverse range of goods and services. Business will look to their accountants for support, advice and guidance.
One of the growth areas e-payments will be associated with is social media networks. All of the major networks are actively developing ‘buy buttons’ that can be used to instantly purchase the goods or services that are being discussed on the social media network.

And as the Millennial group of consumers use social media as their primary means of researching a new service or product they want to buy, it makes sense to build e-payments into these networks to offer instant and seamless purchasing. Businesses will need to enhance their existing use of social media networks to include e-payment options.

As already noted, apps and e-payments will move closer together. The desire to do more with apps on smartphones and tablets will continue to evolve and become a key influence on how a small business manages e-payments. Again the Millennial group of consumers has embraced apps, using them to run all aspects of their lives – including their purchases.

Consequently small businesses need to look closely at how their customers are accessing their products and services and become more creative in terms of exploiting new opportunities for loyalty, promotion and brand building at the point of sale.

Multi-channel shopping is the norm today for millions of consumers. Social media is at the centre of many consumers’ lives. And the smartphone is now ubiquitous. Together these three elements will influence how payments are made and how accountants need to support these components of their clients’ businesses in the context of e-payments.

7.3 Helping clients choose the right e-payment systems

The Sage Pay Payments Landscape report offers the following advice.

- **Be prepared.** The introduction of more e-payments is inevitable. Businesses need to be prepared for these changes.
- **Don’t be apprehensive.** Many new payment methods are just an adaptation of things that have been around for a little while now and won’t be brand new to you.
- **Embrace the new.** All new payment methods are and will be defined by approved industry standards, so there’s no need to fear them.
- **Don’t rush to buy.** NFC, the technology behind both contactless and Apple Pay, can be used in conjunction with most of the latest card payment terminals in the market, so won’t require new and expensive technology. Check with your payments provider on whether your technology needs updating or not.
- **Listen to feedback.** If you’ve been getting lots of requests for a certain payment type that you don’t offer, then act.
- **Be aware.** One major difference between today’s contactless debit cards and the future is the value of transactions that can be processed. Currently capped at £30, this is set to increase. This change will demand new technology as suppliers bring in additional ways to verify whether a transaction is legitimate; for example, with biometrics.
- **Be ready.** Make sure you look to your provider to give you guidance on when and how they will support you in providing these new payments methods.

The businesses that your accountancy practice support will increasingly have to manage an expanding number of e-payment systems. And your accountancy business will also need to increasingly offer multiple e-payment options to clients.

Choosing the right services and implementing them sensibly will ensure the right e-payment platforms are chosen and that they offer advantages to the business and customers alike.

As the payments landscape continues to evolve, the help and support accountants will need to deliver will also advance. Your accountancy practice needs to be aware of the changing e-payments industry, especially how regulations could impact its development, and how new e-payment systems will enter what is already a crowded marketplace. As a trusted financial adviser, the future of accountancy will be to offer timely and authoritative support when it is needed.
Appendix A: Glossary

**API**
Application Programming Interface. Used to connect one software application – such as a store on a smartphone – to e-payment systems.

**Beacons**
BLE devices that can detect a smartphone is near and send promotional messages and coupons.

**BLE**
Bluetooth Low Energy. A wireless communications technology that can be used to connect smartphones with a store’s network for promotional messages.

**Contactless payments**
The use of a credit or debit card in physical retail stores where payment is made without the need to insert the card into a reader and enter a PIN.

**E-banking**
The use of the internet to manage a business’s financial transactions, many of which would have previously been only possible via the postal system or by visiting a branch of a bank.

**E-commerce**
The sale of goods on the internet. Payments are made using credit or debit cards. Examples include Amazon and Argos.

**E-money**
The general term that describes all types of electronic payments including those made with smartphones and payments made using credit and debit cards linked to accounts with online retailers. E-money also includes the transfer of cash between electronic devices.

**E-payments**
The payment for goods and services made on the internet using a debit or credit card. E-payments is also often used as an umbrella term for all forms of electronic payments made by consumers, either on the internet or via smartphones in high-street stores.

**EPoS**
Electronic Point-of-Sale. A computerised device that enables retailers to take a wide range of electronic payments from customers.

**E-wallets**
The use of smartphones, replacing traditional wallets or purses, to carry digital cash and payment information. Examples include Apple Pay and Android Pay.

**FinTech**
An umbrella term for companies developing applications and platforms for the financial services technology sector.

**IoT**
Internet of Things. Where everyday objects are given a level of intelligence, as they are connected to the internet.

**M-commerce**
Mobile commerce is the general description for goods or services that are purchased and paid for using mobile devices such as smartphones or tablet PCs.

**MCX**
Merchant Customer Exchange. A consortium of US companies often referred to as CurrentC that uses a smartphone app for customers to make payments.

**NFC**
Near Field Communication. The short-range wireless communication system used by smartphone e-wallets and contactless cards.

**Omni-channel**
Where businesses have multiple sales channels including a physical store, online shop and mobile-enabled website.

**PCI DSS**
Payment Card Industry Data Security Standard is a set of security protocols used by the major credit card companies.

**Transaction token**
To protect the identity of the purchaser and their payment details, a token or unique number is created to identify the payer throughout the transaction process. A key feature from a security perspective is that the customer’s details are not transmitted.
Appendix B: Products and services

**Person-to-person payments**

The ubiquitous adoption of the smartphone has placed a mobile payment device into the hands of everyone. Making a cash payment to family and friends is now as simple as sending a text message. Services include:

- Google Wallet
- MasterCard’s MoneySpend
- Paym
- Pingit
- Zapp.

**Debit and credit card readers**

Shops and stores have used physical terminals to take debit and credit card payments for decades. It is now possible with the addition of a device to turn a smartphone or tablet PC into a terminal reader. Examples include:

- GoSwiff
- Intuit Payments
- iZettle
- PayAnywhere
- Payleven
- PayPal Here.

**Online payment service providers**

The internet has transformed how businesses sell goods and services to their customers. Today consumers want to be able to use their debit and credit cards when they visit online stores. Examples include:

- Adyen
- Amazon Payments
- eWay
- PayPal
- Sage Pay
- Stripe
- V.me from Visa
- WorldPay.

**Mobile e-payment service providers**

Instead of carrying a physical credit or debit card, these can now be placed on a smartphone to make payments online and in physical shops and stores fast and secure. Examples include:

- Android Pay
- Apple Pay.
Appendix C: Useful resources

Centre for Economics and Business Research (CEBR)  
cebr.com

Faster Payments  
fasterpayments.org.uk

Financial Conduct Authority (FCA)  
fca.org.uk

Payment Systems Regulator  
psr.org.uk

Payments UK  
paymentsuk.org.uk

UK Cards Association  
theukcardsassociation.org.uk

Other Resources

Future Trends in UK Banking: The Centre for Economics and Business Research (Cebr)  
fiserv.com

How tablets and smartphones will revolutionise retail  
blog.verifone.com/how-tablets-and-smartphones-will-revolutionize-retail/

Innovation in UK consumer electronic payments  
stakeholders.ofcom.org.uk/market-data-research/other/technology-research/2014/e-payments

Payments Fraud and Control Survey 2015  
afonline.org/

Sage Pay: payment landscape  
blog.sagepay.com/sage-pays-payment-landscape-report

The FCA’s role under the Electronic Money Regulations 2011  
fca.org.uk/your-fca/documents/emoney-approach

About the author

Dave Howell is a freelance journalist, writer and publisher. With over 20 years of experience writing about business and technology, his work has appeared in the national press and leading specialist magazines including the customer magazine for Gemalto, the leading European payments technology partner,  
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Because of us, people can do business with confidence.

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