



# Taxation in real-time

## Gearing up for blockchain

The question is no longer whether blockchain will disrupt the tax system, but how far, how fast and how can you make sure your business is up to speed.

The impacts on system design, interactions with tax authorities and speed of tax return and settlement are clearly key considerations. Yet, blockchain also raises important issues in areas such as organisational culture, data confidentiality and relationships with the different parties in your business network.

So putting all the hype aside, what does blockchain really mean for tax compliance and management within your business? What are the main risks and opportunities? How can you begin preparing for the shake-up ahead?



# Gearing up for blockchain

In an increasingly digitised economy, in which almost everything can be ordered at the tap of a smartphone and transactions are routinely processed and analysed in real-time, it can sometimes feel like the tax system is still stuck in analogue.

From the collation, cleansing and verification of information to the preparation, validation and submission of returns, tax processes are largely paper-heavy and labour-intensive. Not only does this bump up the costs, it also leaves tax teams and tax authorities with less time to devote to genuinely value-adding activities. The operational demands are compounded by the difficulties of reaching agreement with tax authorities on interpretation and approach, which leads to uncertainty and heightened risk of audit and legal dispute.

Could a lot of this aggravation in the system be eliminated? In a previous article in our *Future of tax* series, we looked at how automation and artificial intelligence (AI) are bringing tax into the digital age.<sup>1</sup> Yes, tax authorities want more information in less time – as a result, completing tax returns and settlement in the same real-time as much of the economy is running will increasingly be the norm. The big digital pluses for your tax team and wider business not only include improving the efficiency of tax management, but also enabling tax teams to move to the forefront of formulating and executing strategic change.

Blockchain is set to play a crucial role in the digitisation of taxation by providing the ‘wiring’ needed for real-time record-keeping, verification and information exchange. Automatically fulfilled blockchain-enabled ‘smart contracts’ also offer faster and more efficient ways to evaluate and settle tax liabilities.

## What is blockchain?

Blockchain creates a common, tamper-proof record of transactions and information exchanges between different parties. Rather than being stored in one place, the digital ledgers (blocks) are distributed around all the participating parties in the information chain (hence the alternative term, ‘distributed ledger’).

As with any new and still largely untried technology, blockchain has attracted a lot of hype on the one side and scepticism on the other. Proponents say it could revolutionise almost every aspect of record keeping, exchange and settlement, along with underlying supply and payment chains. Detractors dismiss it as a technology still looking for an application.

The reality is more nuanced. Blockchain is not a magic solution and there are hurdles to overcome before it can be deployed effectively – its application within taxation exemplifies this. Yet, in the right circumstances it can deliver important benefits:

**Cost** – a distributed ledger has the potential to reduce the cost of transaction processing and data storage

**Speed** – a decentralised network can be faster and more versatile than a centralised server

**Protection against fraud and disputes** – near impossible to alter or overwrite without other parties knowing/agreeing

**Security** – superior encryption.

These potential benefits have put blockchain on the government radar and are encouraging businesses to look at how they can capitalise.

<sup>1</sup> [Seizing opportunities: Meeting the challenge of building a tax function of the future.](#)

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## What’s coming?

To date, the most prominent application of blockchain technology has been cryptocurrency, not only Bitcoin, but also a number of versions being developed by central and commercial banks.<sup>2</sup> Yet this is only one of many avenues. For example, financial services groups<sup>3</sup> are looking to blockchain to simplify ‘know your customer’ validation and complex multiparty exchanges such as trade booking. Blockchain-enabled smart contracts could in turn provide immediate triggering and settlement for transactions such as insurance contracts or performance rights payments.

Tax has comparable openings. On a basic level this would include faster and cheaper compliance by rationalising processes and simplifying data storage and exchange. But this isn’t all. Beyond doing what’s already being done more efficiently, the use of blockchain-enabled smart contracts opens up opportunities to take tax management forward. This includes instant settlement of sales tax, value added tax (VAT) or goods and services tax (GST). For example, a supermarket group could bring together supply, sales and tax within a distributed ledger that records all transactions and automatically pays the associated sales tax/VAT/GST.

These developments would enable tax authorities to move from block or scientific sample audits to smart contract reviews, which would reduce uncertainty for businesses and the need to prepare detailed justification of approaches. Smart contracts would only need to be reviewed for proper interpretation of the tax rules as the tax authority would have the blockchain to verify amounts and assets exchanged. This should reduce overall compliance costs. Moreover, all parties of the transaction could be reviewed simultaneously, with only the ultimate debtor being assessed. Eventually, tax authorities could use some form of ‘bot’ or AI to perform the majority of the smart contract review and then turn over more complicated issues for human assessment.

## In governments’ sights

Governments and tax authorities have blockchain firmly in their sights as part of wider move towards digitising the tax system and assessing tax in real-time.<sup>4</sup> Less developed economies are in pole position as they can build from scratch without hindrance from legacy systems – early movers include China and Estonia. Developed economies showing interest include a number of US states, along with the UK HMRC, which is developing a series of ‘proof of concepts’.<sup>5</sup>

The initial focus is likely to be indirect taxation, though other areas of tax management such as transfer pricing could be brought into play as blockchain networks develop. Eventually, blockchain could become the primary means of tax collection, possibly through the use of some form of government-endorsed cryptocurrency.

Could growing use of blockchain add further impetus to the move from direct to indirect taxation?<sup>6</sup> It’s possible that there will be some impact, though governments like the flexibility of different tax options. Ultimately, the balance between direct and indirect taxation will continue to be primarily driven by politics rather than technology.

<sup>2</sup> [www.gtnews.com](http://www.gtnews.com) – The BoE launching digital currency on blockchain tech would be international payments ‘game changer’ – 1 December 2017.

<sup>3</sup> [www.eng.cecabank.es](http://www.eng.cecabank.es) – Cecabank and Grant Thornton create the first Blockchain Banking Consortium in Spain.

<sup>4</sup> [Organisation for Economic Cooperation and Development – Technologies for better tax administration: A practical guide for revenue bodies.](#)

<sup>5</sup> [www.gov.uk](http://www.gov.uk) – UK Digital Strategy 2017 – 1 March 2017.

<sup>6</sup> [Let’s be clear, indirect tax is a business issue.](#)

# What's in it for you?

While governments' interest in blockchain is clear, you're bound to ask 'what's in it for my business?'

The opportunities to rationalise complex processes and reduce the need for repetitive documentation between parties are good starting points. Crucially, there are also opportunities to bring greater certainty to tax management and reduce the risk of disputes. In particular, your tax records and approach would be agreed up front between the different parties in the network, including tax authority/authorities, as part of the blockchain protocols, much as they would be in an advanced pricing agreement (APA). When combined with the move to more focused smart contract review, greater upfront certainty would limit the amount of audit defence time and need to hold reserves to pay disputed tax.

Moreover, all transactions would be available for review and any steps to secure a competitive advantage through special or questionable treatment of comparable transactions would be extremely difficult. Blockchain could thus create a more level playing field between competitors.

## Phasing in blockchain

So how long have you got to get up to speed? As much as some governments would like to, it's highly unlikely that a blockchain-enabled tax system could be ushered at the flick of a switch. Rather, the shift is likely to be phased in to allow time for pilots to be trialled and blockchain to become embedded into commerce overall.

### What we're already seeing

Blockchain is already beginning to be applied. On a basic level, this includes tying the blockchain technology to the enterprise resource planning (ERP) software, so that when the transaction is booked for accounting purposes it creates an entry and triggers any necessary tax payment transfer via the blockchain system.

### Next steps

The next stage is extending in-house record-keeping and the bilateral tax payer/tax authority arrangements to consortia of multiple sellers, buyers and tax authorities. This would pave the way for automatically fulfilling smart tax contracts across extended supply chains and tax jurisdictions. Tax authorities would be able to see that both buyer and seller agreed upon the sales price, asset to be transferred and amounts to be distributed by the smart contract.

Clearly, there is significant investment and effort involved in all this. A sensible way forward would therefore be to confine initial blockchain application to large transactions and a limited number of well-resourced participants. This would allow tax authorities to establish clear proofs of concept, while curtailing the cost and implementation burden for smaller businesses.

Governments could incentivise early adopters with tax discounts to help pay for implementation and offset some of the lost interest from holding sales receipts in accounts ahead of periodic sales tax/VAT/GST payment.

Over time, the technology would begin to gain greater acceptance. Systems would be able to cope with greater volumes, implementation costs would come down and any initial glitches or security issues will be addressed. Individual networks could also come together into larger consortia. These progressive developments would allow for a steady reduction in the size of eligible transactions ahead of roll-out across the tax system.

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## Overcoming the hurdles

While governments will continue to set the pace, larger businesses could also lead development as they seek to reduce costs and bring tax into line with the use of blockchain in supply chain, treasury and other business processes.

### Gaining acceptance

Any large scale change is bound to meet resistance, not only because it's going to have such a big impact on how tax is managed and when it's paid, but also because the technology is still largely untested and poorly understood. Tax authorities have an important role to play in winning greater acceptance for blockchain-enabled tax compliance by providing proper incentives to taxpayers (eg discounts, less review, etc) – Grant Thornton will be lobbying on behalf of our clients for this. It's also important to evaluate the implications for your business, the likely systems demands and, where possible, how to turn the coming developments to your benefit. We believe there are significant early mover advantages in terms of reduced compliance costs and greater assurance over tax provisions.

### Bringing partners on-board

Blockchain is a network arrangement that can only be applied at the pace of the slowest participant. It's therefore important to work with business partners in your supply and customer chain to assess the impact and potential benefits, and then establish agreed protocols. As this engagement is the linchpin of blockchain implementation, it's important to begin now rather than waiting for tax authority directives. As with comparable developments such as the move to just-in-time planning, larger businesses can assist their smaller counterparts. As blockchain is an enterprise-wide rather than just tax issue, it's also important for tax teams to be closely involved in the design and development of systems across the organisation.

### Data protection

Blockchain raises a raft of data protection issues. It's especially important to ensure that blockchain-enabled tax management takes full account of new regulations such as the EU General Data Protection Regulation.<sup>7</sup> A particular challenge is how to sustain necessary confidentiality when all data is available across the blockchain network. It can also be difficult to square 'right-to-be-forgotten' regulations with the indelible nature of blockchain data. The weakest link in the chain may well be the smallest and least-resourced participant, which underlines the importance of a supportive, network-wide approach to design and development.

<sup>7</sup> [Preparing your business for the GDPR.](#)



# Blockchain is coming and can't be ignored

Governments are looking to blockchain to simplify and speed up tax settlement. Many larger corporations are looking to bring the technology into their systems. While this creates challenges, blockchain application could also pave the way for the wider digitisation of taxation, greater certainty in tax management and closer integration between tax, supply and sales.

If blockchain is coming anyway, it's important to make the most of the potential openings. It's also important to lobby governments and tax authorities to ensure that this isn't just a one-way street of benefits for them, but rather a foundation for a fairer and more efficient tax system.

Gearing up for a blockchain-enabled tax system is as much about organisational design, network engagement and agreed protocols as technology. Ultimately, it should be viewed as part of wider digital developments within the enterprise. Again, this opens up challenges. But it's also an opportunity for tax functions to move up the queue for technology investment.



To read more insights about blockchain  
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If you would like to discuss any of the areas raised in this article, please contact our Tax experts.



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