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Calvin Kwok,  
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Management

# BUILDING BLOCKS

**Alan Deans, moderator, *Listed@ASX*:** What are some of the friction points in the current **CHESS** settlement system that blockchain or distributed ledger technology could potentially address?

**Cliff Richards, executive general manager for equity post-trade services, ASX:** CHESS is a 25-year-old piece of infrastructure. It's a fantastic system and was a global leader when it was first introduced. But, like any ageing technology, it's not something we want to carry forward for the next 10 or 20 years. It has friction points because it is legacy technology that doesn't set us, or the market, up for the world we're heading

ASX is working with technology providers, intermediaries and issuers to bring a distributed-ledger-based **CHESS** replacement system to market. In this roundtable, we explore where the project is at, its potential and the way forward from here.



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into. This will be characterised by tension points that are structural not cyclical. There is margin pressure on intermediary businesses such as brokers, custodians and share registries. It’s not like the tide that has gone out is going to come back in a cyclical fashion and revenues are going to explode and those stuck costs are going to be hidden again.

When we were talking about replacing CHES we had two choices. We could implement technology and do largely what CHES did before, which is clearing and settlement services and maintaining the CHES subregister. Or we could take the opportunity to replace CHES and consult with the market on what it would like in terms of new features and functions. In doing so, we’ll have a foundation that will allow others that play in capital markets to connect to the same fabric as CHES through the distributed ledger. Over time we want to provide tools so providers can build new services over the top of that.

**Listed@ASX: So the ecosystem will become more vibrant as a result of this?**

**Cliff:** The distributed ledger aims to deliver data with high integrity. It produces an audit trail that’s virtually bulletproof. It has a promise of real time or near real time distribution of information. It means every party connected to it knows they’re in sync and any potential entity they are going to do business with is also in sync.

**Listed@ASX: Astrid, from your point of view in the registry business, what do you see as being the benefits of the new technology?**

**Astrid Raetz executive director, financial services, fintech, Automic:** We see this as an opportunity. Because we are a fintech we’re all about user experience. The new CHES replacement is going to provide a much better experience and

we think we can facilitate that. We can assist ASX companies to better understand who their shareholders are through this technology and start to give them insights into their shareholders as potential customers. So we’re looking at what we can do within the new CHES replacement system to get rid of frictions.

**Listed@ASX: James, is identifying shareholders an important issue?**

**James Hall, interim executive general manager, strategy, and general manager, capital markets, at AGL Energy:** Absolutely, but it’s not just about being able to identify them. We have 110,000 shareholders, most of which are Australian households. The biggest challenge is the speed with which we can get accurate information to them. We want their experience of being a shareholder to be as seamless and easy as possible.



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## An ASX Thought Leadership Discussion

At the moment, when they come to us it's usually because there's a pain point between them and the registry. It's not necessarily the registry's fault; it's to do with inefficiencies in the way information flows. Someone's not getting their dividend or details are wrong. That's a pain point we don't want. It's also hugely inefficient because someone like me or someone in my team ends up having to resolve that and that's a poor use of the highly paid professional's time. We also want to understand our shareholder base so we can understand to what extent people are buying and selling and what's driving that. That analysis is hard to do on the retail registry at the moment.

### **David Braga, CEO, BNP Paribas**

**Securities Services:** For the custodial industry the topic is one of scale and how we deploy global scale into the Australian market. CHESS is a great system. But for

global participants, it has local not global messaging and our systems are built from global messaging standards. The new platform will allow us to move to a global messaging standard. When the data is distributed and available to everyone, the question is what's possible on the back of that.

### **Listed@ASX: What kind of services would you as a custodian be able to offer?**

**David:** Better knowledge of the institutional investor base is one. There's still going to be a degree of opacity. It should remove some roadblocks along the way. But that won't be instantaneous. I don't think we know what's possible yet, but you can see it's going to be different to what we've got currently.

### **Calvin Kwok, general counsel and company secretary, Pinnacle**

**Investment Management:** We operate a number of listed products and entities. Understanding the whole ecosystem is critical for us.

### **Listed@ASX: So, there's going to be a period of time before we fully appreciate how the system works?**

**Astrid:** There are things we can predict now, like better proxy voting and more seamless corporate actions. But there will be opportunities that arise because data gives you insights you previously didn't have, given we're all seeing the same data and it's a single source of truth.

**James:** Ease of communication is important. We want to be able to contact people as efficiently as possible.

**Cliff:** We're still working out complex legal constructs because you're overlaying



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privacy implications. Conversations about what’s possible become much easier when the plumbing is in place; when you work through the legal implications.

**James:** The system won’t be ready for two years. So there’s enough runway for us. We’ve had access to the demo for a while.

**Cliff:** The real innovations will occur with tools we’ve given out to the market through our technology partner, which means anyone can write applications for this.

**Listed@ASX: What will it cost people to access the infrastructure?**

**Cliff:** It will be free for brokers to connect to the system for three years. We’ve had some feedback that’s not good enough. But we need to know what it will cost beyond three years. So we’re sharpening our thinking around that. We understand it’s not good enough for it just to be a better

mousetrap. It’s got to be a cost-effective mousetrap as well.

**David:** Right now there’s a fairly defined universe of people who participate in CHES. The challenge is there’s an undefined universe of participants who may be interested in access to this data in the future. So, the number of potential participants is much wider than is currently the case, but it’s still unknown because we don’t know what facilities we might create.

**James:** The other thing is the implication of the democratisation of access to information a system like this creates, especially when you think about the proxy side of things, which could prompt a much higher rate of participation.

**Cliff:** This doesn’t mean disintermediation – except for those protecting the way they do business today under a belief they can

sustain a business model for five, 10 or 15 years without change.

**Astrid:** At the end of the day, if you think about why people buy additional shares or participate in a rights issue, it’s usually because they have spoken to someone they trust. Over time people may start building trust with robo advisers, which may lead to disruption. But you are always going to trust a human being more.

**James:** You already don’t need to use brokers in today’s system. But people do because they are willing to pay. Changing technology doesn’t alter that.

**Listed@ASX: What’s the impact of blockchain on events such as capital raisings?**

**Cliff:** It should make it easier for investors to participate and it should make it easier for issuers to work out allocations. So two



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days out, if you’ve only raised half the money, you can work out what you need to do to get the other half.

**Listed@ASX: What about paying dividends?**

**James:** If the admin cost goes away, capital management becomes more efficient, whether it’s paying dividends, buying back shares or issuing stock. If you can manage your liquidity in a more agile way, ultimately there’s more cash in the shareholder’s pocket, and that’s a better run company. But I would not in any way want to suggest that’s a likely short-term possibility.

**Cliff:** We want issuers to have flexibility. But that can cause challenges for the custodial sector to be able to reflect that through to the asset owner. So we’re exploring how we can help do that in a way that gives better tools to the issuer but

doesn’t cause additional complexity for other participants.

**Listed@ASX: What assurances can you give that this technology won’t fail at some point?**

**Cliff:** Superior resiliency is one of the characteristics of a distributed ledger system. Things like unexpected power outages or floods are taken care of by data centre capabilities. Then we have other failure recovery mechanisms within the data centre and across geographically distinct data centres. The system can continue to work even when a part of it isn’t available. That’s not the case today although we’ve never had to pause the market due to CHES. Enhanced security requirements come into the new system. Security, resilience and recovery are inherent in the new technology. But we’re not forcing this distributed ledger technology on the market. The

replacement of CHES is available in a number of ways.

One is messaging, which is the way the financial markets work today. But we are changing from a proprietary, 30-year-old standard to international standards. Additionally, participants can choose to directly connect to the distributed ledger. They’re not mutually exclusive choices. Everyone will move to the new system and we are giving them connection-type choice.

**Listed@ASX: Where to from here?**

**Cliff:** We’ve consulted with the market about what they would like the replacement system to do and we have 50 high level business requirements. We’ve worked with the market to prioritise them. Some will go live with the CHES replacement and others we’ve committed to providing after the new system goes live. We expect to do seven



releases until May or mid-June 2020. Then we will spend around a year testing that everything works, with business continuity a priority. Then, we will confirm the exact go live date.

**David:** At one level, this is no different to what happened when we moved from T+3 settlement to T+2. So, the stock exchange has a lot of work to do, and they've got to get it right. Because this is a full replacement system, there's a lot more work that has to be done to validate and verify it. But because of its design, participants can choose their level of engagement and make it as simple as moving from T+3 to T+2.

**Cliff:** This looks massive if we count all the future potential benefits and we should be asking questions across the whole spectrum of opportunities. We owe it to the market to give it the benefit of our best thinking. However it's important to break

this down into smaller components and carefully step through each one – which is what we're doing with the market.

**Listed@ASX: How much preparation will issuers and service providers have to do to switch to the new system?**

**Cliff:** As an issuer, your company won't need to do anything differently to what it does today unless it wants to, or if a service provider is offering you a different optional service. But workflows around settlements and clearing are being changed and the main impact on participants is to their back office systems. The benefits beyond that are effectively opt-in.

We're putting in place a new infrastructure consistent with our DNA of operating market infrastructure. A share registry is better placed to think about how they can build more efficient services for issuers than ASX. A retail broker is better placed to work out the service

proposition for retail clients. There are few better placed than fintechs to think of the killer app. We're a while away from there. But we're really trying to build something people can capitalise on; this is ASX trying to export its efficiency. We're trying to paint the picture of what even a modest uptick in the application of this technology over three, five and seven years could mean for the financial markets and Australia's economy.

**David:** As an Australian working in a global firm, it's a real privilege to sit in a room in Sydney having this discussion. ASX should be congratulated for doing something which could be considered globally brave. One of the reasons it's been successful so far is that it's focused on being a CHES replacement project. It's not a hobby on the side. This has a real underlying requirement that must be addressed. That's given it a focus which has been helpful for ASX and the industry.

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