

Baton Systems

Redefining FX post-trade processing



Arjun Jayaram

Award winning Baton Systems is looking to shape the future of payments and post trade processing. Its distributed ledger-based platform enables real-time visibility and movement of currencies and assets, reducing settlement risk and increasing available funding and liquidity. e-Forex spoke with the company's Founder and CEO, Arjun Jayaram, to find out more about how Baton Systems is introducing fully interoperable digital solutions, from trade matching through to settlement, and the impact this will have on the FX market. Arjun was also joined by three colleagues from Baton's senior management team: Alex Knight, Head of EMEA; Jerome Kemp, President and David Ornstein, COO; to discuss the significance of Baton's recent completion of the world's first interbank riskless FX settlement outside of CLS.

Arjun, can you tell us about your previous experience in Fintech and explain how that led you to tackling a very specific challenge in the capital markets space?

Baton Systems is actually the second company I've founded, my first company was acquired in 2013. Following its sale I moved to Twitter and from there into payments. My background is in engineering, technology and product development and so I was able to develop a deep understanding of the complex constraints of the problems in the payments arena. Through a relationship with the CME, I was introduced to capital markets and to Baton's now President, Jerome Kemp, who was at Citigroup at the time and actually became our first client.

As I learnt more about payments and post trade, I came to realise there are fundamental structural issues that play a massive role in the colossal level of settlement risk faced by FX businesses every day. My passion to solve this problem and democratise access to the financial market infrastructure necessary to execute real-time, riskless settlements without the burden of pre-funding led to me founding Baton Systems about six years ago.

We are now at an exciting stage in our corporate evolution, we're rapidly maturing and beginning to really scale the business. One of the

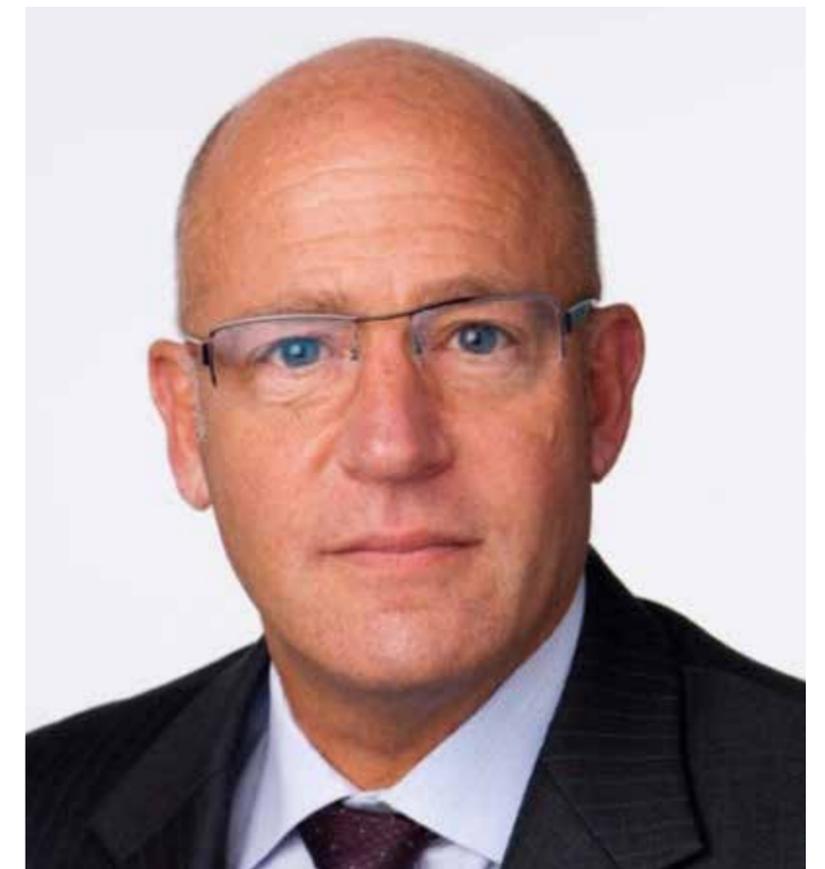
challenges we now face is ensuring we continue to protect the same core values and strong ethos that have been integral to our success to date.

Please tell us a little about your job and day to day responsibilities at Baton Systems.

As Founder and CEO my focus is primarily on strategy from a technology and product definition perspective. As I mentioned, we are now moving to the next step as

we start to see non-linear growth with interest continuing to increase from firms keen to take control and effectively address the risk, liquidity and funding issues that have plagued FX settlements, and other capital markets payments processes, for far too long.

At the moment, we move somewhere between \$12 billion to \$20 billion of asset value each day, but I am focused on how we can grow this by many multiples. That scale will



Jerome Kemp joined the firm as President last year

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Alex Knight brings a wealth of global experience in the industry

come from focusing on not just on the technology and product but by thinking about our whole organisation, which is why we've been laser focused on augmenting our team with the right people with the necessary skills and experience to help us to achieve our growth ambitions.

Baton has certainly attracted a number of top class technology, payments and capital markets veterans. Who are the key members of your executive team and what roles do they each play in helping to drive the business forward?

I've already mentioned Jerome Kemp, who joined Baton initially as a Senior Advisor and was appointed President last year. He's a leading industry practitioner with over 35 years of market experience, most recently as Global Head of Futures, Clearing, and FXPB at Citigroup. Last year he was inducted into the FIA Futures Hall of

Fame. Jerome is someone I respect a lot and as Baton's president, he is now empowered to work towards finally solving the key post trade and structural issues which kept him awake at night whilst in his previous senior leadership roles at Citi and J.P. Morgan.

Like Jerome, Alex Knight also brings a wealth of global industry experience. Alex joined Baton as Global Head of Sales and EMEA in 2019, following 18 years at Citi where he held a number of roles in innovative FX business lines including Global Head of FX Margin Trading. Together with Jerome, Alex is helping us to grow the commercial side of the business.

I brought in people like Alex and Jerome because they are experienced in not just building businesses but they've witnessed first-hand the extensive challenges that limited access to safe settlement mechanisms and 24 hour settlement cycles can

have on both a banks' risk profile and it's bottom line.

We're also privileged to count both J. Christopher Giancarlo, Director of The Digital Dollar Project and former CFTC Chair, and Bill Coen, former Secretary General of the Basel Committee on Banking Supervision, as Senior Advisors to Baton. Their backgrounds speak loudly to the importance of the regulatory agenda relative to Baton's objective to transform post-trade market structure.

Most recently we have added David Ornstein to the team. He joined Baton as COO this January. David brings 25 years of capital markets' experience, including 13 years as COO of Barclays' Global Markets business where he was particularly focused on both the regulatory change and business reengineering agendas. He brings to the team a deep appreciation of the intractability of legacy infrastructure in financial markets along with keen insights as to how to help institutions better optimise their end-to-end operational workflows and ultimately reduce costs.

Turning to Alex, what type of firms are now working with Baton and looking for it to meet their demands for capital efficiency, risk management and the competitive advantages that are always associated with the use of next generation technology?

If you look at our client list, you'll see it's the world's largest financial institutions where our main focus has been so far. We are continuing to have very detailed discussions with nearly all of the major banks globally around the critical issues that they have regarding FX settlements and intraday liquidity management

in their capital markets businesses. We are now starting to broaden our focus as we seek to serve banks outside of that very top tier, as well as members of the buy-side community.

The challenges that most large banks face is that they operate their post trade systems on legacy platforms and those legacy platforms are generally siloed. This adds to the complexity of the problem when these firms consider how to re-engineer their post trade processes - and as we know, ripping out and replacing critical elements of the post trade infrastructure is risky, time consuming and expensive.

As such, whilst we find when speaking with potential clients that the value proposition of our blockchain-inspired Core-FX solution is well understood, that with this technology the riskless settlement of all currencies pairs, at a time they choose, without pre-funding would be within their reach, we spend a lot of time demonstrating the interoperability of the Baton platform with existing legacy systems. These



Baton continues to win important industry awards

conversations focus on how we can securely and seamlessly integrate into existing systems and processes to deliver the flexibility, transparency, auditability and non-repudiation benefits of distributed ledger technology (DLT) in a manner that

doesn't disrupt their existing process, but rather enriches it.

Jerome, a major challenge for financial market participants is how to deal with the trillions of dollars of settlement risk and how to tackle intraday liquidity costs. Recent updates to the FX Global Code included changes to recommended best practice for FX settlements. What was Baton's response to these challenges and in what ways do they underline the advantages of your own solutions?

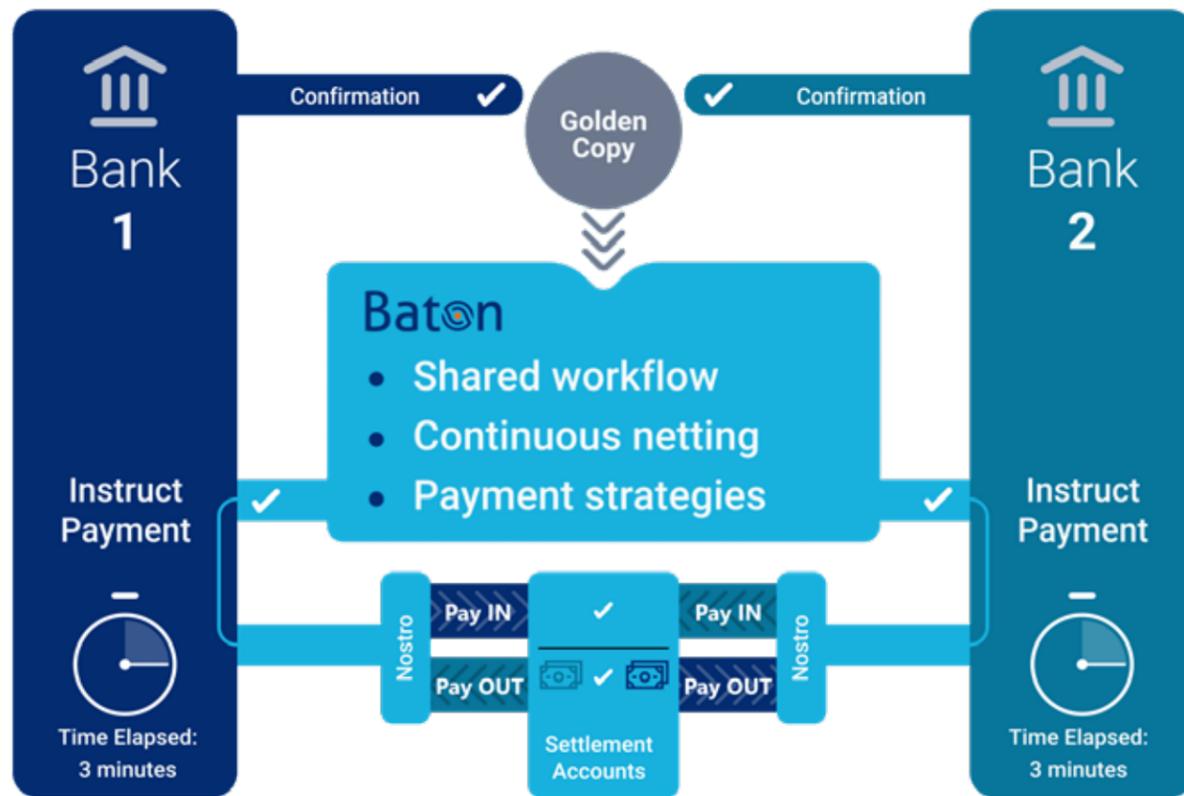
This is a very important point and one which I believe is going to be critical in terms of the overall evolution of the post trade space. These processes currently run on hardwired, server based networks and the move to fully digitised post trade infrastructure over the next few years will be reliant on the regulators stepping in to encourage innovation.



David Ornstein brings to the team a deep appreciation of the massive intractability of legacy infrastructure in financial markets



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Core-FX provides on-demand, secure settlement for real assets, held in real accounts at commercial banks, so it can be used for all currencies

We are very engaged with regulators in the US, the UK and elsewhere. Indeed both Arjun and I were recently invited to sit on the working group of the Committee on Payments and Market Infrastructures (CPMI) charged with examining the expansion of PVP solutions. Our regulatory engagement is focused on the evolution and development of approaches that will accommodate the considerable transformational impact that companies like Baton are having on the post trade environment.

Global regulatory bodies are keen to see the post trade space evolve and are very inclusive in terms of their approach. I believe that by and large global regulators are encouraged by the progress being made. We are essentially constructing a new ecosystem which allows for a very significant expansion of riskless settlement for FX transactions, beyond what is currently possible today. Regulators are very keen to see access to PVP settlement within the reach

of significantly more participants and cover a much greater range of currencies relative to the status quo, and Baton is proving that this is indeed possible.

And coming back to Arjun, Baton's Core-FX solution has been in the news recently after Wells Fargo and HSBC completed the first interbank PVP settlement outside of CLS using distributed ledger technology from Baton Systems. Can you explain the significance of this, for both the company and the industry?

FX is the largest OTC market with close to \$19 trillion of average daily volume exchanged, but the only venue where those trades can be settled with the benefits of PVP is CLS, which has 78 members currently and only supports selected currencies. CLS does solve a problem and has significantly improved the FX market, but it is a partial solution to the market problem. The number of participants operating in the global FX trading ecosystem

is in the tens of thousands, all of whom need access to safe settlement processes. Furthermore, there are over 100 currencies that need to be settled. We are focused on delivering the technology required to safely settle those FX trades that are currently ineligible for PVP protection via CLS, in order to extend the benefits of riskless settlement to the entire market.

By using DLT, we have enabled banks to connect into Baton's CORE-FX to move funds on a PVP basis in commercial bank money. Using Core-FX the settlement process, which used to take 24 hours, can now be completed in three minutes. Counterparties can settle on-demand, multiple times a day without the liquidity constraints that pre-funding introduces. This is achievable with full transparency and extensive flexibility that allows the parties to not only choose how they net or whether they settle in gross, but also to align settlement time-frames with corresponding liquidity events.

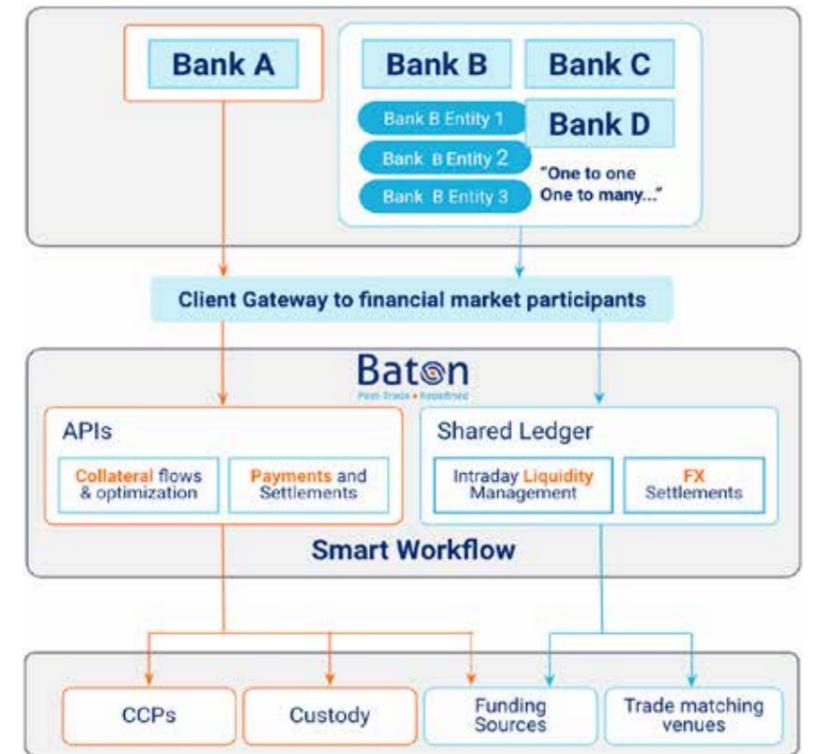
It is not just the technology that we offer, but also the governance and structure we provide with the Baton Rule Book, which enables participants to achieve legal settlement finality.

Can you elaborate on which currencies you cover and what the process is for increasing the number of currencies?

Core-FX is currency agnostic, we have actively settled 18 currencies to date, and have the ability to quickly add any currency to the network, including emerging market currencies. These currencies have experienced rapid growth in traded volumes over recent years, yet they remain ineligible for PVP settlement via CLS. They are often highly volatile with shallow liquidity and this leads to more constraints being applied in terms of the trading facilities made available.

As has been mentioned, Baton CORE-FX is based on DLT. David, why is this technology such a good fit for payments and post trade services in meeting this challenge and why has it not been done before?

I used to see a lot of start-up pitches based on DLT, but often those solutions were too much "Tech" and not enough "Fin;". By this I mean that they didn't really understand the complexity of the actual financial ecosystem well enough to understand the journey from the test bench to live deployment and actually delivering business benefit. Many of the FinTechs who plan to rip and replace aren't adequately cognisant of the challenges in delivering essential infrastructure in production, at scale. Organisations can't absorb change that quickly and won't be able to secure the permissions needed to do that. You've got to be able to very clearly justify why you're tinkering with an essential service.



Backed by a robust rulebook, with Core-FX clients can benefit from the latest advancements in DLT, with the certainty of a defined governance process

The way Baton is using DLT is different. It builds rails which run alongside existing systems and infrastructure. Baton facilitates the move from centralised to decentralised settlement without disrupting existing functions. It provides a viable alternative to the current process and workflows and facilitates a responsible and progressive migration, while offering full interoperability with existing legacy technologies, so there is no immediate need to try to rip and replace 30 years of code.

Finally Arjun, you have previously said that the world of clearing and settlement is on the threshold of revolutionary change. How ambitious are Baton's plans for playing a pivotal role in this and how optimistic are you that you and your team will be able to achieve them?

We are very optimistic. Our mission is to democratise the settlement process, improving it greatly from the current system characterised by centralised venues which exclude so many

participants from the opportunity to safely settle their FX trades. You cannot solve this problem until you solve the market structure issues. I'm excited because this is not a concept, a prototype or a project, we're now laying the rails and in a live production environment actually executing riskless settlements on a daily basis. What we're doing is truly game changing.

Every time we onboard a bank, that has a snowball effect and leads to further adoption. We can add unlimited banks, from multiple geographies, who will then be able to eliminate risk by using our platform for settlement. We see this as very much a win/win situation, not only for the large sell side banks, but also for their clients downstream and we are already seeing a significant uptick in interest following our December announcement. The whole team and myself included are very excited about our progress so far and the significant role we are playing in the long-awaited evolution of payments and settlements in the financial markets.



DAVID AND I AND THE WHOLE TEAM ARE VERY EXCITED ABOUT OUR PROGRESS SO FAR AND THE SIGNIFICANT ROLE WE ARE PLAYING IN THE LONG-AWAITED EVOLUTION OF PAYMENTS AND SETTLEMENTS IN THE FINANCIAL MARKETS

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