Exchanges, Trading & Clearing

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Brexit brings headaches to industry weary of regulation

Executives are still adjusting to the slew of post-crisis reforms, says *Philip Stafford*

Trading and clearing executives have had to work closely with politicians and policymakers since the financial crisis. They have endured many hours explaining how proposed regulations would affect their complicated world of markets infrastructure.

That plumbing — which includes exchanges, clearing houses, over-the-counter markets, derivatives and fixed income trading technology — has already been heavily redesigned. Now, just as the final stages of the sweeping post-crisis reforms come into sight, the prospect of further regulatory problems has suddenly appeared thanks to the UK's decision to leave the EU.

"The problem is that the rules were built on the assumption that London, one of the world's biggest and most important trading hubs, would be within the single market," says Jonathan Herbst, a partner at lawyers Norton Rose in London.

Scores of banks, exchanges and trading venues have based their operations in the UK in recent years, attracted by a mix of the favourable timezone, language, expertise and regulatory approach. Whether they stay will now depend on political decisions.

"There are nine circles in Dante's Hell and we are just at circle one of Brexit — limbo," says David Wright, chairman of Eurofi, a think-tank. Mr Wright is the former secretary-general of the International Organization of Securities Commissions and worked at the European Commission for 34 years.

For many the problem is simple. "No European city is ready to replace London as a centre of finance," said Sergey Shvetsov, first deputy governor of the Bank of Russia, at an industry conference in Geneva last month. Others note that a lot of the business London conducts — including insurance, trading, risk management, tax and legal services — is on behalf of companies in the rest of the world, and not just the EU. For optimists, the divorce may be a way to unhitch the UK from incoming EU rules that, to them, make little sense.

"We're certainly hoping that the UK will take a step back and look at Mifid II and some of the requirements that went well beyond the G20 agreements," Scott Hill, chief finance officer at Intercontinental Exchange, said at a recent event. The US exchanges operator has invested more than $1bn in London-based market infrastructure over the past 15 years.

'There are nine circles in Dante's Hell and we are just at circle one of Brexit — which is limbo'

The experience of Switzerland — which is outside the EU — offers some clues as to what the UK can expect.

Last year SIX Group, which operates Switzerland's domestic exchange and clearing house, needed to gain EU approval that its new laws were "equivalent" to those in the rest of Europe. "On the technical level with Esma [the European regulator] this worked perfectly well, in a very constructive and productive way," says Urs Rüegsegger, SIX chief executive. But he adds: "The EU Commission — the final approval [stage] — was rather a slow process and it was not very transparent."

He doubts the UK would have to make wholesale changes. "The age where each country could, at least in the financial sector, have completely independent

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Storm brewing: industry forecasts clouds after British vote — Ekaterina Nosenko/Getty Images

Inside

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US markets braced for trading tax grab

Regulation

Democratic politicians have proposed levies on financial transactions, writes *Gregory Meyer*

Waves of reform: Bernie Sanders and Hillary Clinton have each mooted transaction taxes
AP Photo/Andrew Harnik

Each US trading day, millions of futures contracts, billions of shares and hundreds of billions of dollars of bonds change hands. The volumes provide streams of revenue to exchanges and trading platforms — and some in Washington want to divert a rivulet to the federal government.

A group of Democratic politicians have proposed a financial transaction tax on trades of stocks, bonds and derivatives. Hillary Clinton, the Democratic presidential nominee, is seeking a narrower tax on high-frequency trading (HFT), the technique of using computers to execute transactions in fractions of a second.

Such taxes have been floated in Congress for years without success. But market participants are paying close attention nonetheless. "It's very much alive," says Bill Harts, chief executive of Modern Markets Initiative, a trading industry group.

Bernie Sanders, the Vermont senator and former presidential candidate, and Keith Ellison, a Minnesota representative, have each sponsored bills that would impose a tax of 0.5 per cent on the sale of stocks, 0.1 per cent on bonds and 0.005 per cent on derivatives such as futures. Another, introduced by Rep Peter DeFazio of Oregon, would levy a uniform 0.03 per cent tax on stock, bond and derivative transactions.

Mrs Clinton's plan would place a tax on orders — or messages that signal an intent to buy or sell — rather than transactions in stock markets. Specifically, her campaign says its tax "would hit HFT strategies involving excessive levels of order cancellations". Rapid-fire entry and cancellation of orders have become a central allegation in recent legal cases against "spoofing" — conduct in which traders try to dupe other traders by generating a false sense of interest in buying or selling.

Transaction taxes or fees are not a new concept. In the UK, traders pay a 0.5 per cent stamp duty on share transactions. In the US, investors are charged a 0.00218 per cent fee each time they sell a stock to help fund the Securities and Exchange Commission.

But the motivation behind the new proposals is different. According to Mr DeFazio's office, his bill would discourage financial speculation and raise billions of dollars of annual revenue that could fund free university education or repairs to infrastructure.

A study of the Sanders tax proposal by the University of Massachusetts Amherst estimated it would generate $300bn per year in revenue even if it led trading volume to fall by half.

Marcus Stanley, policy director of the lobby group Americans for Financial Reform, supports transaction taxes, calling the DeFazio proposal "a serious revenue raiser". He hopes the issue will be part of a debate over corporate tax reform after the election.

Critics say the logic behind such a tax is contradictory, as deterring trading would leave fewer transactions to tax. A 2010 study written by an academic at Johns Hopkins University and funded by Virtu, a high-frequency trading firm, said: "The dual goals of FTTs to deter speculation and raise revenue are irreconcilably at odds with one another."

The US asset management industry is also sceptical. Vanguard, the $3.8tn fund house, has lobbied against transaction taxes, believing they would "result in unintended and considerable costs for individual investors". The asset manager adds: "A tax ostensibly aimed at Wall Street would ultimately be detrimental to Main Street."

In derivatives markets, the White House and some Democratic politicians have proposed a trading fee to fund the Commodity Futures Trading Commission, the federal regulator. The industry's self-regulatory body, the National Futures Association, already tacks a one penny fee on each side of a contract to help fund its operations. In fiscal 2015, those assessments brought in $33.2m.

From 1917-38, US futures sales were subject to a federal transaction tax. The tax caused trading volume to fall in Chicago's wheat and corn markets, but measures of market quality did not immediately worsen and commercial players such as farmers continued to use the market as usual, a study by the CFTC chief economist's office found.

However, the tax reduced profits for middlemen on the exchange floor. In time they reacted by pressuring the exchange to make adjustments that "effectively allow[ed] the tax burden to be passed on to the end-user", the CFTC report says.

Mrs Clinton's proposal on high-frequency trading worries firms in that industry, which has been engaged in a public relations battle since Michael Lewis's 2014 book *Flash Boys* alleged the market was rigged in their favour.

Mr Harts of Modern Markets Initiative, which is backed by high-frequency trading companies, says that cancelling and replacing orders is not illegitimate and is in fact important for determining fair prices. If the aim of the proposal is to stop spoofing, that has already been outlawed, he says.

"It seems redundant to put a tax on something that's illegal. People who are spoofing should be subject to prosecution," he adds.

Blockchain starts transition from hype to everyday use

Systems

Exchanges and start-ups are making their first moves to implement the technology, says *Nicole Bullock*

Taking the stage at an industry conference this year, Peter Hiom, deputy chief executive at Australia's main stock exchange, announced that his remarks would touch on blockchain — "everyone's favourite topic" or, he joked, "the new black".

The technology behind digital currency bitcoin has been much discussed in finance. But so far a lot of the talk falls into two categories: education — understanding what the technology is and how it might work in different areas of banking and markets — and hype. Some of blockchain's most zealous supporters and early investors argue it could bring significant change.

Now start-ups and established players are starting to test different uses for the technology. The Australian Securities Exchange (ASX) has made some of the boldest moves to experiment with blockchain yet. It announced this year that it would move Australia's equities clearing and settlement system on to blockchain, working with Digital Asset Holdings, a start-up led by former JPMorgan executive Blythe Masters.

"Today blockchain is not a product or technology, it is more a journey or a process that companies are going through to understand what it can do for them," says Matt Roszak, co-founder of Bloq, which helps companies build blockchain networks. "It is very similar to what we saw with the internet 20 years ago or with the cloud 10 years ago."

Blockchain is an electronic ledger of transactions that is continuously maintained and verified in "blocks" of records. The ledger is shared between parties on computer servers and protected from being tampered with by cryptography. Some say it is a threat to banks and exchanges as it could disintermediate them by removing the need for a central reconciliation authority.

But others just see an opportunity for existing financial institutions to save billions of dollars by eliminating inefficiencies and the need for trade insurance. These cost savings would be most welcome to institutions that are struggling to boost their profits, partly due to the drag of heightened regulatory demands to increase capital since the financial crisis.

An analysis last year by Santander InnoVentures, Oliver Wyman and Anthemis Group estimated that distributed ledger technology could reduce banks' infrastructure costs — including cross-border payments, securities trading and regulatory compliance charges — by $15-$20bn a year by 2022.

"Every 10 years or so there are tremendous changes in technology in markets," Peter Randall, chief executive of Setl, a UK start-up, told a conference in Geneva last month. "It's now time to do 21st century technology in the post-trade space. Distributed ledger technology is a proper and fitting technology to drop into that."

Another exchange using blockchain is Nasdaq, which has employed the technology for trading private securities in the US and is testing it for the Estonian market. The US-based exchanges operator is also selling blockchain-enabled technology to other exchanges.

The Depository Trust and Clearing Corporation, a US clearing and settlement services provider, has introduced

> 'It is very similar to what we saw with the internet 20 years ago'

blockchain for storing credit default swap trade information. Meanwhile, Euroclear, one of the world's largest settlement houses, has joined start-up Paxos to develop a new settlement system for the London gold market.

"We will see a lot of different flavours to solve specific problems over the next 12-18 months," says Mark Smith, chief executive of Symbiont, a blockchain start-up. "We will see some start to take hold and have actual liquidity." He adds, though, that some of the bitcoin projects that showed early promise will end up being scrapped if the technology does not add enough value.

Last month, R3 — a financial technology company that is leading a consortium of more than 50 of the world's biggest banks — along with Credit Suisse, Symbiont and others unveiled a project to determine how blockchain could improve the syndicated loan market, which enables group lending by banks to a single borrower.

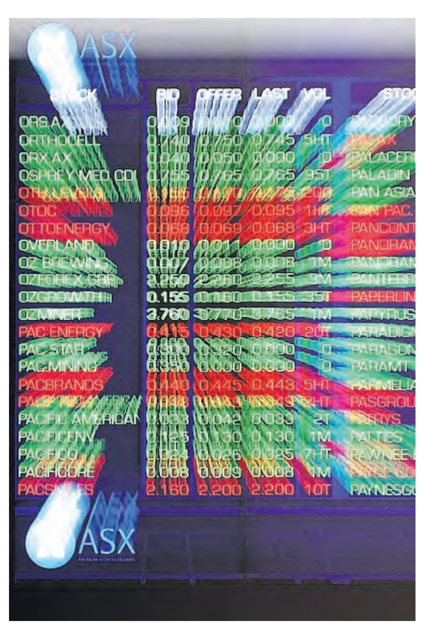
"Whilst I think we have a long road to go before blockchain is everywhere, I do think you are going to start to see the beginnings of real-world application built on blockchain [starting] in the second or third quarter of 2017," says Emmanuel Aidoo, head of the blockchain initiative at Credit Suisse.

One obstacle is convincing companies to adopt the technology. The industry would also have to create standards such as smart contracts — computer code that verifies and enforces terms of a contract — and a regulatory framework, while banks would have to integrate blockchain into their systems.

Ray Valdes, research vice-president at IT consultant Gartner, says that based on his analysis of the hype surrounding previous emerging technologies, blockchain is at — or just a bit before — the peak of inflated expectations among market players. He expects this will soon turn to disillusionment. "Starting early next year we will be reading articles in the mainstream press saying that this blockchain stuff isn't very good at all," he says.

"Then later, as people gain understanding, they will figure out how to make worthwhile use of this technology. That process could take years."

Additional reporting by Philip Stafford



Aussie rules: ASX is using the tech

Banks deflect attempts to bring sunlight to bond dealing

Treasuries

Banks and some investors believe reforms would weaken the market. By *Robin Wigglesworth*

One quiet October morning two years ago, the vast but normally placid US government bond market see-sawed violently for seemingly no reason, causing dropped jaws on trading floors around the world.

In less than a quarter of an hour, the yield of the 10-year Treasury bond tumbled and then rocketed higher, the third-biggest swing since 1998 and the only one of such a magnitude that happened without a clear trigger.

Last year a clutch of government agencies led by the US Treasury finally published its forensic account of the incident and found no obvious smoking gun. Instead it blamed a mix of investor positioning and algorithmic trading by high-frequency traders. But the report's most significant revelation was that it showed how little transparency there is in the Treasury market — despite its importance in funding the US government and as a bedrock of the global financial system.

It took regulators many months to compile the data that they needed for the report. As a result, the government earlier this year launched a proposal to collect information on every trade that happens in the US government debt market.

"The need for more comprehensive official sector access to data, particularly with respect to Treasury cash market activity, is clear," Antonio Weiss, a senior adviser to Treasury secretary Jack Lew, said at the time. "It is important to build on this growing consensus and we are committed to having a comprehensive plan to collect cash market data in place by year end."

That deadline — close to when the Obama administration will leave the White House — is approaching quickly, leading to a scramble among policymakers to get everything in place. But not everyone involved in the Treasury market thinks more transparency is a good idea.

So-called "primary dealers" — the banks that arrange Treasury sales and facilitate their subsequent trading — are worried that trade reporting to government agencies will eventually morph into public, real-time information sharing, similar to the "Trace" system set up for corporate bonds.

Trace, administered by the Financial Industry Regulatory Authority, has over the years let sunlight on to the historically shady corporate bond market and narrowed the bid-ask spread — the difference between the prices that investors can buy and sell debt.

But it has also deterred banks from facilitating big trades, as the prices of such deals will be swiftly shared with everyone, making it harder for them to make as much money.

Banks and some investors fret that Treasuries will meet the same fate. They argue it will lead to a deterioration in the market's health and worsen the already weakened position of the primary dealers as its central middlemen.

Deirdre Dunn, a senior Citi trader, said in a comment letter to the Treasury that her bank did not support a move to broad-based market dissemination "since it is likely to degrade liquidity further for limited overall benefit to the market".

Some asset managers, which depend on banks to facilitate most of their trades, have some sympathy with the banks' position. The Investment Company Institute, a trade body, has argued that regulators should carefully consider the pros and cons of a real-time information system.

While the ICI acknowledges that transparency would bring some benefits, it said in its comment letter that these advantages should be "carefully balanced" against the danger of eroding the Treasury market's liquidity and therefore its health.

But not all market participants are against more information sharing. An instant or near-instant public information system would be a fillip for high-frequency traders, which are becoming increasingly influential in the Treasuries market.

They argue that it would also strengthen the market and improve its overall health by giving everyone equal insight into its workings.

Rather than impair the market, Citadel Securities, the market-making arm of the eponymous Chicago hedge fund, said in its Treasury comment that this would empower low-cost, high-speed electronic trading firms and improve "execution quality" for all US government traders.

Wary of overreaching in the Obama administration's final days in office, the Treasury is expected to settle for something more modest, eschewing public reporting in favour of full, real-time insight into activity in the government debt market for regulators and government officials.

The US Securities and Exchange Commission is considering a proposal for all registered broker-dealers to report their Treasury transactions to Finra's Trace. This would involve reporting all trades by the end of the day, but the SEC does not propose sharing the information with the public — at least not yet.

The Treasury plans to set out its broader approach to transparency this year, but for one member of the public, shedding more light on the US government bond market is long overdue.

"It is startling to read that one of our largest markets in the US, the US Treasury market, lacks the basic transparency that our other markets have enjoyed for many decades," Jane Carson, an 80-year old individual investor, wrote in a public comment in response to the proposal.

"It is beyond embarrassing that an entire piece of legislation called Dodd-Frank was enacted to provide trade reporting for arcane instruments called 'swaps' and failed to include our government's own securities."

Investors' wait for Indian listings nears end

Asia Regulators have loosened their restrictions on investing in bourses, writes *Simon Mundy*

During a visit to New York last summer to woo US investors, Indian finance minister Arun Jaitley had his sales pitch interrupted at one event by loud complaints from an unhappy fund manager.

A delegate from Canada's Caldwell Investment Management used the question and answer session after his speech to lambast Mr Jaitley over the Bombay Stock Exchange's slow progress towards a public listing, complaining of "zero accountability" around the long wait for regulatory approval.

"I'm not sure that's a question," came Mr Jaitley's terse reply.

The snippy exchange reflected the mounting frustration of foreign investors who bought stakes in India's leading exchanges over the past decade to benefit from growth and liberalisation — only to find themselves unable to realise gains as the prospects of public listings were repeatedly pushed back.

In recent months, however, their vocal lobbying appears to have borne fruit. The BSE and its larger rival, the National Stock Exchange, have laid out plans for imminent listings after regulators shifted their stance.

The rush of outside investment began in 2007, soon after the government allowed foreign investors to buy stakes of up to 5 per cent in exchanges.

That January, NYSE Group, Goldman Sachs, private equity firm General Atlantic and a fund run by Japanese group SoftBank each bought 5 per cent of the NSE. Soon after, Deutsche Börse and SGX, Singapore's stock exchange, each bought 5 per cent of the BSE, and were later joined by other foreign investors including Caldwell and George Soros's Quantum fund.

The investors received a shock in 2010 when an official report recommended limits on the earnings of stock exchanges, and a prohibition of their listing on the grounds that an exchange "should not become a vehicle for attracting speculative investments". The report set the tone for subsequent regulatory treatment of the subject.

Speculation: Indian finance minister Arun Jaitley on a visit to New York last year — AP Photo/Richard Drew

A turning point came last December when the Securities and Exchange Board of India (Sebi) announced rule changes aimed at smoothing the path for exchanges to list. The BSE in June secured shareholder approval for a listing in which up to 30 per cent of existing shares will be offered for sale, at a reported valuation of about Rs43.7bn ($655m).

Also in June, the NSE said it would file a draft prospectus for its flotation by January. It has not given any indication of the size of the listing, but it was valued at Rs178bn in April when the state-owned development bank, IFCI, sold a stake to a Hong Kong investor.

> Algorithmic traders now account for about 40 per cent of trading on Indian exchanges

The exchanges have not indicated any intention to raise new capital through the flotations, meaning their operations are not expected to be affected. While demutualising exchanges tends to bring greater transparency and efficiency, "the next step of being listed publicly is not going to be a quantum leap", says Nick Ronalds, head of the equities division at the Asia Securities Industry and Financial Markets Association.

Even as it appeases one group of investors, the regulator has made clear its willingness to take on another, increasingly powerful one: algorithmic traders, who now account for about 40 per cent of trading on Indian exchanges, according to Sebi.

Both major exchanges have invested heavily in attracting high-frequency trading, using technology to reduce time delays and allowing traders to place their servers next to the exchanges' own, giving a tiny but potentially lucrative speed advantage. Last October the BSE claimed to have achieved an average order response time of six microseconds, shorter than any other global exchange had reported.

But a scandal emerged last year when an Indian website reported a whistleblower's claims that NSE employees had illegally transmitted data to high-frequency traders. The NSE lost an ensuing libel case, and the heightened scrutiny of the activity culminated this August in Sebi's proposal of a set of rules for algorithmic trading that would be, in some respects, the toughest in the world. Mooted measures include a minimum "resting time" before orders can be cancelled, and "speed bumps" that would impose delays on trades at random.

The document prompted a lengthy response from the FIA, a lobby group for the derivatives industry, which warned of "potentially detrimental impacts to market liquidity, increased risk and increased trading costs for investors".

Just as in the flotation of the exchanges, investor lobbying on this issue is likely to work, says Suresh Swamy, a partner at PwC in India, who notes the present government's concerted attempt to improve foreign investor sentiment towards India's policy environment.

"Sebi has become more and more responsive," he says. "I don't expect them to do anything in haste."

Brexit brings headaches to weary industry

Continued from page 1

regulations is probably over," he says.

The regulatory uncertainty has overshadowed a series of big industry deals this year. Nasdaq bought the International Securities Exchange for $1.1bn in June, presaging the Chicago Board Options Exchange's $3.2bn deal for Bats Global Markets last month. Dwarfing them all is the planned merger between the London Stock Exchange Group and Deutsche Börse.

The merger would create a behemoth — offering trading and clearing in equities and futures, swaps clearing, index and data analytics, and collateral management — on a scale no other exchange operator in the world can match.

Yet it also offers a test case for the post-Brexit world. The deal will reveal the UK government's approach to regulating market infrastructure. German watchdogs will have to assess whether it matters that the holding company was due to be based outside the EU. Brussels will weigh up whether it meets European competition rules. As the deal links two of the world's largest clearing houses, prudential regulators will gauge potential risks to the financial system.

The deal is a symptom of the vast changes in the OTC derivatives market and fixed income trading, once the preserve of big investment banks.

The LSE and Deutsche Börse intend to link their clearing houses, offering the banks billions of dollars in savings from the requirement to post margin to support their derivatives trading portfolios.

$3.2bn	$1tn
Amount CBOE paid for Bats Global Markets in September	Amount of notional FX swaps cleared by LCH this year

Tougher prudential and capital rules are restricting banks' ability to trade and to make profits from activities that were once the lifeblood of their businesses. For a market used to calling the shots, it has been a painful adjustment.

"The market structure had to be recreated — the old market structure, where banks originated all the trades, has gone away," says Seth Merrin, chief executive of Liquidnet, which operates equity and fixed income trading venues. "Anything that had been facilitated by

capital — derivatives, repos, any type of fixed income — the liquidity dried up."

Some banks have already withdrawn from the market. In their place came dozens of new bond trading platforms, each offering a centralised venue to entice traders. The market had little need for so many venues and there has already been a shake-out. But Mr Merrin predicts a centralised electronic marketplace will be established in their stead. "Like the way equities played out, fixed income will be the same," he says.

Post-crisis reforms are also having a significant effect. The first rules requiring more collateral to back OTC derivatives that do not go through clearing came into effect at the start of September and the results were dramatic.

LCH's foreign exchange swaps clearing business has this year cleared more than $1tn in notional — the broad measure of all outstanding derivative positions. Around a fifth of that was in September, as banks turned to clearing to reduce their margin financing costs. "Central clearing is one of the few available mechanisms capable of providing relief to [banks]," says James Bindler, global head of G10 FX at Citi.

Amid this regulation-driven change, parts of the industry have turned their attention to blockchain to reform antiquated post-trade settlement systems. Companies are trying to combine the peer-to-peer computing ethos of Silicon Valley with the money management of Wall Street, automating the networks of trust on which modern finance sits.

In spite of some scepticism over blockchain's applicability, start-ups such as R3, Digital Asset Holdings, Setl, Paxos and Axoni have forged partnerships with a host of infrastructure providers. Several of these start-ups have found that regulators are willing to adapt to new business practices.

"They are learning fast," says David Rutter, chief executive of R3. Industry executives preparing for the Brexit fallout will be hoping they will soon be saying the same thing.

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Exchanges, Trading & Clearing

Trading places: Edemir Pinto wants to expand BM&FBovespa's presence across Latin America — Mauricio Lima/AFP/Getty Images

Brazil's exchange chief rejoices at post-impeachment chances

Latin America

São Paulo's bourse plans to continue its regional expansion after year of political turmoil. By *Samantha Pearson*

Considering Brazil's recent political and economic crisis, Edemir Pinto — chief executive of BM&FBovespa, the country's exchange operator — can barely contain his excitement.

In August, Brazil's Senate voted to impeach president Dilma Rousseff, bringing to an end almost 14 years of rule by the leftist Workers' party. Analysts have blamed the administration for deepening the country's worst recession on record — which followed a crash in the value of commodity exports — and stunting the growth of the country's capital markets.

Taking Ms Rousseff's place, President Michel Temer has appointed some of the market's most respected figures to run the finance ministry and Brazil's state-controlled companies, setting the country up for what Mr Pinto hopes will be "a shock of capitalism".

"The economic team put together by today's government is a dream team . . . they are music to the market's ears," says Mr Pinto.

Over the past few years, Brazil's capital markets have borne the brunt of the country's multiple predicaments. The revelation of a vast bribery and kickback scheme at the state oil producer, Petrobras, one of Brazil's largest listed companies, disrupted the stock market and prevented any Brazilian company from issuing debt internationally for months. Meanwhile, government interventionism and, in particular, a financial transactions tax scared away investors and moved trades offshore.

As investors left the market and the economy slumped from 7.5 per cent growth in 2010 to its deepest recession on record, it became nearly impossible for new companies to float shares.

> 'The economic team put together by today's government is a dream'

"There is a lot of pent-up demand for public offerings — over the past three years we only saw two small operations," says Mr Pinto.

"Brazil was in such a bad [place and] the companies' prices were so low that it was better to hold out and wait," he says. "But now that Brazil is turning the page, the companies are coming back and making inquiries," he says, adding that about 60 companies have registered their interest in holding public offers.

However, while Brazil's new government has raised investors' hopes, the economic recovery will depend on Mr Temer's ability to push through fiscal measures to control public spending that ballooned under the Workers' party, costing Brazil its investment-grade credit rating.

The government has proposed two main reforms: establishing a public spending cap and reforming pensions. Most analysts expect the cap, a constitutional amendment that will eliminate real increases in budget spending for up to 20 years, to be passed by the end of the year with only minimal changes to the original proposal. In November the government is set to propose ambitious reforms to Brazil's generous pension system, introducing a minimum retirement age and delinking benefits from the minimum wage.

While unpopular pension reforms will be much harder to pass, the fact the government is trying to make meaningful spending cuts has already boosted investor confidence, says Mr Pinto.

"They are long-term measures but they completely change people's expectations and not just local businessmen but foreign investors too," he says. "This is what we need in Brazil — to change expectations."

But Brazil's economic and political crisis has not stopped BM&FBovespa's aggressive expansion in Latin America, says Mr Pinto. "Our competitors are not local but global . . . we needed to create the infrastructure to strengthen ourselves and compete in a global way," he says, pointing to BM&FBovespa's recent acquisition of Cetip, the country's largest clearing house.

After years of speculation over a possible deal and two failed bids, in April BM&FBovespa announced it would take over Cetip in a deal valued at almost R$12bn ($3.7bn). Once approved by regulators, the acquisition will increase BM&FBovespa's dominance in Brazil, allowing the operator to control depositary and clearing activities for all types of financial assets.

Meanwhile, BM&FBovespa has been pursuing an ambitious plan to purchase minority stakes in Latin America's largest bourses. "In Argentina, Chile, Peru and Colombia, you have large companies and pension funds but they are trading in New York, London and Asia . . . we need to find a way to make them use Latin America," says Mr Pinto.

The São Paulo-based group has already bought stakes in the exchanges of Chile, Mexico and Colombia and expects to complete purchases in Argentina and Peru by the end of the year, he says. BM&FBovespa aims to gain a seat on the board of each bourse, allowing it to work with each country on ways to integrate the region's markets further. "We have to unite because together we can do so much more," says Mr Pinto. "What is the point of fighting by ourselves in a globalised world?"

Malaysia's regional ambitions curbed by local problems

Asean

A lack of depth and liquidity has impeded the domestic bourse's attempts to attract foreign investors, reports *Jeevan Vasagar*

Market position: KL's stock exchange

Malaysia's stock exchange was among the region's most buoyant four years ago. Its problems since then reflect not only the country's political and economic uncertainty, but also its difficulties in attracting foreign investment.

The flotation of Malaysian palm oil producer Felda was the biggest initial public offering in Asia of 2012, raising $3.2bn at a gloomy time for new listings globally. In the same year, Asia's biggest hospital operator, IHH Healthcare, raised $2bn with a listing in Kuala Lumpur and Singapore.

For Bursa Malaysia, the country's stock exchange, that blockbuster year illustrated the effectiveness of Malaysian companies in raising capital. But one of the main reasons for that success has hobbled the country's ambition to become an entry point to Southeast Asia for global investors.

Malaysia's thriving pension schemes encourage asset managers to use their significant pools of savings to buy domestic equities. So while companies have easy access to capital, prices on Bursa are high, and trading is low as institutions tend to buy and hold — resulting in less attractive securities for foreign investors. "It is really a recycling tool of domestic savings," says Herald van der Linde, head of Asia Pacific equity strategy at HSBC.

On price-to-earnings ratios, Malaysia is the third most expensive equities market in the region after India and the Philippines, Mr van der Linde says.

Bursa's chief executive, Tajuddin Atan, told shareholders this year that the exchange has a "clear strategy to become a regional leader and Asean's multinational marketplace".

As things stand, however, Malaysia's exchange lacks the depth and liquidity to attract global investors, analysts say. The high valuations of Malaysian stocks also deter outside investors. Foreign investors pulled out net RM 19.5bn ($4.7bn) last year and RM 6.9bn in 2014, according to MIDF Research. So far this year, foreign equity investments are up net RM 0.2bn.

The average daily traded value of Bursa's securities market declined slightly last year, falling to just over RM 2bn ($480m). The comparable figure for SGX, Singapore's stock exchange, was S$1.1bn ($800m).

Bursa tried to attract more business from foreign derivatives traders with roadshows in the US last year. This brought in some new market participants. The bourse has also identified Islamic finance as a potential growth market. Revenue from Bursa's equities market fell 3 per cent last year on lower trading from domestic investors, but overall revenue grew due to rising contributions from derivatives and Islamic finance.

The Felda listing was a boon for Malaysia's prime minister, Najib Razak, as it provided a windfall of discounted shares for thousands of workers. The IPO boosted the premier's popularity ahead of the 2013 general election.

But since then the political climate has turned. The scandal around Malaysia's 1MDB state investment fund, from which more than $3.5bn has allegedly been diverted, has battered the ruling class and clouded investor sentiment. Mr Najib, who set up the fund and chaired its advisory board, denies any wrongdoing, as does the fund.

The scandal has had repercussions for the exchange. Plans for a $3bn stock market listing of 1MDB's power assets were first postponed and then abandoned as the fund grappled with questions about the scale of its debt. The assets were later sold to China General Nuclear Power Corporation for $2.3bn.

The 1MDB affair — which is being investigated by the US and Switzerland — underlines concern about weak governance in Malaysia. Foreign banks and potential investors fear becoming entangled in regulatory inquiries.

Since 2012, listings have dropped. Bursa had 11 last year, raising RM 21.2bn, down from 14 that raised RM 24.3bn the year before. Malakoff, a power producer, was a notable listing last year, raising RM 2.7bn. In general, though, the exchange faces a scarcity of companies of the right size and quality. However, 2015 was a lacklustre year across the region. SGX attracted just one listing of more than S$150m last year as well as 12 smaller ones.

The outlook for Malaysia, and Malaysian companies, is downbeat. Economic growth has slowed for five consecutive quarters, dropping to 4 per cent for the three months to the end of June. Exports have weakened while government finances have been constrained by the oil price slump.

> While companies have easy access to capital, prices on Bursa Malaysia are high

Yet politics offers the potential to revive Malaysia's corporate fortunes and those of its stock exchange. There is speculation in Kuala Lumpur about a general election next year, possibly as early as March, with traditional giveaways expected.

Data security concerns force banks up into the cloud

Q & A Rick Lane

The chief executive of software company Trading Technologies talks to *Neil Munshi*

Trading Technologies is a software vendor that was founded in 1994 and whose clients include banks, hedge funds, proprietary traders and brokers.

Neil Munshi *You have been among the industry's chief advocates for the cloud — how has the industry responded? What have been the obstacles to adoption?*

Rick Lane We've been saying for years that new technology is the way forward for the industry.

We initially made that statement more reservedly because our customers are some of the most conservative people on the planet. There were a lot of concerns — both justified and irrational — about that type of technology. But those concerns were unfounded in hindsight. Today just about every major bank who is a customer of TT's is leveraging the cloud in some capacity. The reason they're doing that, and why this transition happened relatively quickly, is that they wanted do it themselves and physically own the infrastructure and the network in order to be safer.

What banks and financial institutions have seen in the intervening years is that their data is their biggest asset. You have to be constantly innovating in the cyber arena in order to make sure your data is safe. Banks simply aren't equipped to do that, and the giants of the world — the Amazons and Googles — are.

NM *Where does cloud adoption in the trading industry go from here?*

RL Banks are starting to realise that security and safety can simply be done better. If you're global bank XYZ and you have ageing servers and networks and you're worried about data breaches, moving those servers from data centres to the public cloud [which is hosted by external providers] solves a lot of problems.

Plenty of banks, if not all, are today reaping the benefits of moving infrastructure on to public cloud severs. In the coming years banks will dramatically improve the way they deal with the increasing amounts of data. That means adopting cloud platforms.

By that, I mean fully managed platforms. The Amazons and Googles of the world have platforms that allow you to dramatically improve the way you can store and retrieve data, and also get a network effect that makes it much easier to deal with your clients and your partners.

> 'Banks and financial institutions have seen in recent years that data is their biggest asset'

NM *You have emphasised the importance of big data, and how much of it is untouched. How can it be used to gain an edge?*

RL Consider audit data. If you're a trader or FCM [futures commission merchant] or broker, every transaction that anyone in your firm places — such as an order or getting an order rejected or deleting an order — that all has to be logged for at least seven years. Fifteen years ago that wasn't a big burden because it was humans clicking a mouse, and volume was in terms of megabytes a day.

That has changed to terabytes. Storing audit data is becoming increasingly burdensome. But that is incredibly rich data, not only for the bank but for those looking to trade smarter, especially if they have done millions of trades and have that data at their fingertips.

I now have this massive amount of data that represents all of our trading activity, and I can overlay that with market data, so I can see what the market was doing when I made those trades. Doing that type of thing with traditional IT management would be difficult, if not impossible. Now it's a matter of clicking a few boxes on an Amazon cloud platform and clicking go.

Bird's eye view: Lane sees advantages of using the cloud
Rob Hart

NM *Finally, I wanted to get your view on blockchain, which some people are hailing as potentially revolutionary.*

RL I'm a little sceptical. Do I believe blockchain will play a significant role in our industry in the next five to 10 years? Probably. I don't think it's going to be the disruptive force a lot of people think and hope it is going to be. I base that purely on the fact that it hasn't disrupted already. If you have to try this hard for something to disrupt an incumbent technology or industry, chances are it's not inherently disruptive.

It presents us with an interesting solution to the notion of centralised clearing, but that's solely an academic look at this. It's certainly on TT's radar. Our mission is to provide access to the world's liquidity pools where trading happens.

To that extent, if anything, we would connect to a bitcoin exchange in the same way we connect to the world's derivative exchanges.