Market evolution

Open outcry at the LME
From Pit to Pool
Chit Chat with Bruce Lee
Favourite pub/restaurants
The Three Oaks in Chalfont St Peter - because it serves London Pride, doesn’t have a TV (which helps keep out hooligans), has fantastic quality wine, and nice people. Or Mitchell’s in Cape Town. It’s on the waterfront, and they have a great selection of beers at a reasonable price.

Favourite movie
I’m a big John Wayne fan so…True Grit and/or The Shootist (his last movie before he died)

Ultimate dinner party guests
Margaret Thatcher
Nelson Mandela
Peter Osgood (Chelsea center-forward 1964-1979)
Mom & dad
Wife
Crumpet, Chelsea & Chablis (dogs)

Advice to 16 year old self
Enjoy life while you’re young (especially when you’re 16)

Favourite holiday destinations
San Francisco
San Diego
New York
Cape Town
But a favourite holiday would have to be somewhere in the UK-taking Crumpet (the dog)

Biggest extravagance
Race horses and betting on them

My leadership role-models
Nelson Mandela – perseverance & leadership while bringing South Africa together.
Margaret Thatcher – out of the box paradigm shift in terms of what she did in the UK at the time e.g. sold council houses, took us to war, took on the unions.

First record/cd
Bits & Pieces by Dave Clark 5

If I was Dean for a day
I’d make universities mandate that students turn up for lectures, and kick them out if they don’t. I’d make year one a bigger influence on passing a three year degree. And I’d bring more business acumen into the syllabus, regardless of what the topic is.

Where it all began
It might be a surprise to some people that I started my career as a green grocer.

Martin Harvey, CEO of TORI Global tells us some of the things he likes, admires, and would do, given the chance.
Welcome to TORI Perspectives,
our new regular publication aimed at giving you a fresh view of enterprise.

Welcome to the first issue of TORI Global’s ‘Perspectives’ magazine. Each quarter, we will be covering issues and trends in the business world with insights and interviews from leading professionals in their industry. The theme of this first issue is trading technology, and in particular, the transition from open-outcry to electronic trading floors.

Nearly every firm of any size will be exposed to the markets in some form, whether it be as a direct trading participant, an ancillary service provider, or through the money markets. And it will be clear to most that the process of buying and selling has changed out of all recognition over the last 30 years. We ask whether technology has reached a tipping point - are the complexity and speed of transactions so extreme that human intervention is becoming not just difficult but problematic? Are we losing control?

For those of a more nostalgic persuasion, there are still vestiges of an old world out there, and in Perspectives we also take a look at the dramatic world of the ‘pits’ - the disappearing art of face-to-face (or ‘open outcry’) trading as practiced by the London Metal Exchange amongst others.

We’re also very lucky to have some expert insight from Bruce Lee, CIO at U.S. giant Fannie Mae. Bruce, formerly at the New York Stock Exchange, has a wealth of experience in financial technology and he answers some of our questions on how technology is affecting both the role of CIO/CTO and the world of trading.

If, on the other hand, you fancy nothing more than a flutter, find out how easy it is to own a racehorse with Richard Phillips and the Adlestrop stables.

In the next issue we will be taking a look at green issues and how industry is tackling the need to reduce environmental impact.

Whether you’re reading this on the tube, or in the office, we hope you enjoy a little perspective…

Best Wishes
Katie Lawton
Editor

We would love to hear your thoughts so please contact us with any feedback.

perspectives@toriglobal.com
With its long tradition, the LME trading floor is ripe with old and quirky rules and habits — all of which are nostalgic reminders of the history of markets.

Contrary to popular belief, the precious metals gold and silver, are not traded on the London Metal Exchange, but on the over-the-counter market usually referred to as the London Bullion Market. Platinum and palladium are traded on the London Platinum and Palladium Market.
The TORI Global graduates spent a day at the London Metal Exchange soaking up the unique atmosphere of ‘open outcry’ trading. Here are some of their thoughts and experiences.

Lloyds of London, the London Stock Exchange (LSE) and the London Metal Exchange (LME) all have their origins in London’s coffee houses. Ale may have been safer to drink than water, but was not hugely conducive to business. Coffee houses were seen as a sound alternative to the taverns and inns; business fuelled instead by caffeine flourished and spawned some of the world’s most famous financial markets. Lloyds and the LME are still run partially in a way which would be recognised by the coffee drinkers of yesteryear.

Looking down on the trading floor at Leadenhall Street, the space is constructed in a series of three concentric circles, each one with its purpose and each one lined with clerks channelling information back and forth with a series of illusory hand signals.

The outer ring is comprised of clerks, closed in on either side to their neighbouring companies by great grey machines with numbers ticking across the displays, straggling multiple phone lines and gesturing to their colleagues immediately in front of them.

The second ring consists of clerical staff who stand behind the shoulder of their trader in the ring and communicate to them the information coming from the phones and also gesture to the rest of the room their company’s position and intentions.

The trading ring itself is set up with padded benches around the outer edge, divided by gaps through which traders can enter and exit. The ring is populated by one trader per company wishing to partake in the current session. These are overseen by two FCA officials who monitor trading conduct. So typically there might be around nine or ten people, depending on the popularity of the session. Whilst the outer-two circles are awash with activity for the entirety of each session, the traders will sit, patient and reserved for the first four and a half minutes of each session and then almost without catalyst will erupt.

Sessions are notoriously boisterous. The rabble of the crowded pit makes it almost impossible to be heard by anything other than a shout and the session often ends in the traders jumping to their feet and hollering at their target with outstretched arms.

With its long tradition, the trading floor is ripe with old and quirky rules and habits, which are nostalgic reminders of the history of markets. Nicknames such as ‘monkeys’ and ‘peewee’, fines for chewing gum and a leg on the red sofa, to name a few. Whilst traders may have ditched the top hat and tails of old, etiquette on the floor is still alive and well.

Some remember even stancher years past: “At the very least you had to wear a jacket and tie at all times, even in 100-degree heat,” recalls one who started in the 1970s. “and you certainly weren’t allowed to wear coloured shirts.”

To make sure traders abide by the rules, the LME has a series of penalties for “conduct of an unprofessional nature” that can see traders fined £500 for a first offence, up to £4,000 for a fourth act of misconduct.

The LME says the ring is an efficient platform for the simultaneous buying and selling of the same amount of metal for delivery on different dates, known as “carry” trades.

The ring is also highly liquid and trading volumes are high, making it a very active arena for the flow of the market. In some cases, it is easier to make more complex trades of multiple tonnages of metal with as many as 200 possible trading dates per metal using face-to-face interaction - it gets a bit more complicated electronically.

The board of the LME believes that in an era of market abuse scandals, such as the Libor price fixing scandal, trading face-to-face can act as a check on potential abuses by providing an open price discovery process for metals in a closely policed environment.

This price discovery process is central to the functionality of the 137 year old bourse. The daily official and closing prices for the most widely used base metals such as copper, aluminium and zinc are determined entirely, or in part, on the trading floor - the last price traded at the end of each five minutes of trading determines the market price of the metal. These prices are used as references for off-exchange transactions.

The LME survived the tin crisis of the 1980’s, the collapses of Drexel Burnham Lambert in 1990, Enron in 2001 and Refco in 2005 – all of which had exchange membership. It has survived by adapting to the ever-changing investment climate and the huge shift into the electronic trading era while balancing the needs of all its members and users.

The LME pit is a vestige of the past - no one doubts that electronic trading will eventually take over, specifically LME Clear - but it performs a valuable role, both culturally and operationally. At least for a little while longer.
For centuries the human voice was the main mechanism for executing a trade. Pen and paper were the tools used to record trades, and chalk and chalk boards were the basic technology to display quotes. The first stock exchange began in Amsterdam in 1603 and the earliest modern futures exchanges began in the 1860s. Face to face negotiation was the name of the game and the ‘open outcry’ exchange was the norm.

But toward the end of the Nineteenth Century, technology began its influence on the markets. When the ticker tape was developed in 1867, it was quickly adopted by exchanges first in the US, and then later in Europe. Likewise when technology made it possible to display clear, readable, and easily updatable prices to large numbers of members on the trading floors, electronic wallboards quickly pushed the chalkboards aside.

Exchange members still stood at the center of every trade and received a commission for their role in representing outsiders who wished to have their orders executed. They were not keen to give this role up to machines, but perhaps they realised, even then, that machines were going to play an ever greater part in how the markets operated.

The London International Financial Futures Exchange (LIFFE) is one of the better known of the historic ‘open outcry’ exchanges. Once the epicentre of the European derivatives markets, LIFFE quickly lost out to the German exchange DTB, an operation that fully appreciated the potential of screen trading. By the end of 1998, volume at LIFFE had fallen to virtually zero, while DTB traded 140 million contracts a year. In that same year, 1998, DTB merged with the Swiss SOFFEX to form Eurex, creating the largest derivatives exchange in Europe.

In the U.S., the floor-based Chicago Mercantile Exchange (CME) had, for over a century, been the world’s largest derivatives exchange. But it had rapidly lost market share with the onset of screen trading and was forced to introduce its own electronic platforms. By the end of the 1990’s, it was clear that the future belonged to screens.

Pits have plenty of advocates. “The computer between your ears is still far and wide greater than the best computer that we have when it comes to functioning the complex strategies in options,” says Chicago Board of Trade member and wheat options broker Virginia McGathey, president of McGathey Commodities.

But while options volumes for both pit and screen trading at CME Group’s exchanges have increased annually every year since 2008, business has steadily shifted to electronic. Screens have skimmed away about half of options pits’ market share in the past seven years, with open outcry holding 85 percent of total options volume in 2007 and just a 45 percent share today, according to CME data.

“We all knew it was going to end.”
Jerry Israelov, who has spent 25 years in CME’s open-outcry pits in Chicago.

A source familiar with the situation said the floor in Chicago, which made money in 2013, was now unprofitable. Which probably explains why CME have recently announced the closure of most of the open outcry futures markets in Chicago.

As we saw on page five, the London Metal Exchange (LME), another historic ‘open outcry’ trading institution, has also shifted the vast majority of its activity to electronic platforms.

So the days of ‘open outcry’ and pit trading are numbered. While it may still play a useful role in some markets and provides a cultural focal point for the likes of LME, there is little doubt that technology is now at the heart of global trading and that the human voice is slowly but surely fading away.

In the next section of Perspectives, we take a look at the future of technology in trading and how the likes of dark pools and high frequency trading are posing some uncomfortable questions for regulators and participants.
Most people with a modicum of experience in the global financial markets probably know the Warren Buffet quote (or at least a version of it):

“If you’ve been playing poker for half an hour and you still don’t know who the patsy is, you’re the patsy.”

When people traded face-to-face, the patsy was usually in plain view. Today it’s a tough call. So much trading is conducted electronically, either through, or by, computers and at such a speed and frequency, that it’s difficult to know who truly is the fall guy. Although many might argue that it’s usually the smaller parties that come off worst.

The two primary candidates for trading bogey men are High Frequency Trading (HFT) and Dark Pools.

HFT platforms allow traders to execute huge volumes of orders and scan multiple markets and exchanges in a matter of seconds. Many of the trades will be based on complex algorithms that automate the decision making process, since a human couldn’t possibly work fast enough.

Much of the edge sought by HFT firms is predicated on speed – i.e. the ability to outrun the competition or in some cases to outrun the other side of the trade. That speed is almost entirely dependent on technology, whether it be the fastest fibre or microwave connection to the exchange, the best designed algorithm, or just the most efficient infrastructure. Most high frequency trading is currently conducted by smaller, specialised firms, though banks are increasingly seeking to compete. This has led to a plethora of agile, ultra-competitive outfits all operating with a relatively light degree of oversight. There has recently been talk of market sentinels; virtual wardens to help moderate activity, but whether this is practical or likely to be effective is open to debate.

The pursuit of speed has led to firms laying dedicated fibre optic cable across the Atlantic to gain milliseconds, or proposing a network of drones that could bounce signals across vast distances. Traders have even come full circle and begun to place their hardware on the actual premises of exchanges where the shortness of cabling means almost instantaneous execution – the irony of once again having a physical exchange presence.

Research firm Tabb Group predicts high-speed trading constitutes 15% to 20% of the overall electronic activity in Treasuries and that has been growing 25% annually since 2011. And some market experts believe that HFT accounts for around half of all electronic trading, regardless of asset class.

While speed is one approach to beating the competition, another is stealth. Banks have found a hidden edge by setting up so-called ‘dark pools’ – essentially opaque independent exchanges in which trades are hidden from scrutiny. This allows large institutions to conduct sizeable trades without alerting competitors. Not surprisingly, dark pools have attracted HFT firms lured by the inherent privacy.

Continued over
In July 2014, a survey conducted by Valuewalk in the U.S. found that nearly half of all stock trading activity was being conducted in dark pools, and 84% of those trades were being carried out by automated trading platforms.

This may suit large players, but for many participants of dark pools, the danger of exploitation are very real. In 2014, the state of New York filed suit against Barclays alleging that all manner of scalping and manipulation went on within their dark pool, carried out by algorithmic and high-frequency traders without the knowledge of other participants.

Now in 2015 the case appears no closer to resolution – the government alleging shady practice, the bank maintaining that everyone involved is a grown up and capable of looking after themselves.

High frequency trading and dark pools are modern manifestations of the ways in which market participants constantly seek an advantage. In the days of ‘open outcry’ trading, advantages might have been slight - some privileged information here, a hint of swagger there. Now technology is in the process of making speed, volume and stealth the key metrics for success. While the quality of a firm’s algorithms may influence the success or failure of a particular trade, the ability to generate vast amounts of incrementally profitable transactions is in effect using technology to harvest opportunities, something that would have been impossible only ten years ago.

And so perhaps the biggest danger underlying technology’s influence on the markets is the growth of automation. Computers have until recently been used to help facilitate trading and make markets more efficient. But increasingly, the power and speed of artificial calculation is enabling firms to carry out greater volumes of trades that require little or no human input. And with the increase in trading speed, that begins to raise the risk of control being lost.

Technology will only become more capable and less separable from the way trading works. The questions will surround how much technology becomes the driver rather than the enabler and what issues that will present both participants and the markets themselves.

We put some of these questions to our guest interviewee, Bruce Lee, CIO at Fannie Mae and formerly of NYSE. Read on to find out what Bruce thinks.

A different perspective

In May 2014, high frequency trading volumes dropped a massive 13%. No one is sure why, but many associate it in part with the publication of Flash Boys, by Michael Lewis (author of Liar’s Poker). The book sheds a rather unflattering light on the shady world of automated trading...
CC: Given the way in which technology is expanding in influence, scale, cost and complexity (as well as in variety, opportunity, speed-to-market and flexibility) - has the job of CIO (and CTO) got easier or harder?

BL: It’s got more fun for sure – seriously, it’s a blend as it usually is. Some things got easier as tools and processes have matured (easier to virtualise, easier to outsource, easier to blend on-shore, off-shore, easier to find multiple offerings in Cloud) but some things got harder; specifically the time has become compressed and that tends to mean the core infrastructure can be layered for speedy delivery, and that can kick the can down the road and bite you later. Keeping the core moving at the speed of the edge is the challenge.

CC: Trading technology appears to be split broadly between infrastructure (i.e. exchanges, platforms etc.) and trading software (i.e. algorithms, high-frequency programs). Do you feel that there is a risk of the software out-running/out-gunning the infrastructure?

BL: Well that’s not really a fair question, since there IS no market without the technology. Given what market technology does, at the volumes and speed it does it, with the relatively few outages you see - I think it’s amazingly reliable stuff. The people that build it really care about keeping it running. Having said that, it’s like everything; if you don’t keep investing you eventually hit a wall and if you keep changing everything you eventually make a mistake. If the wall should have been avoided and the mistake was stupid, and you do it often enough, the market will work around you, find more reliable venues and self correct. I think we have seen that as events have played out following issues in the markets.

BL: Not really – the former (the infrastructure) always sets the constraint on the latter - the software. But more often than not it’s badly written software that hardware saves. There are usually ways to squeeze more out of the software in terms of efficiency, and then out of the OS software, out of the message middleware software. So I think the two move together and you have to focus on both constantly. Optimisation is an iterative process and I think the IT is used to that. What’s just as interesting now however is that commercially both sides – the central market and the participants - will move where they make money and it’s that equation that is changing as regulations, fair execution and other factors start to influence what is done more than raw speed.

Hi Bruce. Thanks for taking the time to talk to Chit Chat. You’ve spent over 20 years in senior technology roles, at BNP Paribas, HSBC, NYSE and now Fannie Mae, where you moved in 2014. What do you feel were the key issues facing CIOs of 20 years ago and what’s changed in the time since?

BL: The one constant is talent. It’s about the skills and the teamwork of your people. It was then, is now, and will be next. Outside of that I think budgets, planning, politics and all the other stuff is pretty much the same. The really big shift is cyber security. I didn’t think about that as much 20 years ago as I do today.
CC: Do you foresee a point where technology starts leading the market participant, rather than the reverse (or are we already there)?

BL: I think we went through that stage of market development. Networks, co-location, finding every microsecond. I think that has largely run its course. More traditional concerns on making fair markets, ensuring fair price discovery, creating a more level playing field. These seem to be the real issues today and technology will now be used to solve those problems.

CC: Does the trend towards open stack/cloud etc. mean that large institutional players might invest less in (generic) infrastructure and more in creating unique applications - that ultimately might benefit the end user more?

BL: Now that’s a complicated question. But yes, business value will come more from software and data and less from good infrastructure. In certain businesses we will still need deep technical knowledge and the ability to squeeze every cycle out of a box or a network, but for 95% of systems needs Cloud should cut it in the infrastructure, so software becomes key. Then the choice is really if you keep building applications in the traditional way but on top is IaaS, or do you embrace more PaaS and Saas to meet your needs. If infrastructure teams were disrupted by “as a service” concepts over the past few years, I think the app building community has to look as PaaS and wonder how close this is coming to a direct business user environment and traditional IT roles no longer apply.

CC: Can you outline in broad terms some of the evolutionary (or revolutionary) changes in technology you have experienced at NYSE and/or Fannie Mae?

BL: Tech changes all the time. These two companies are not any more unique than the general industry. To have started when the first PC’s were coming into trading rooms and seen the evolution through networked systems, grid computing, agent based solutions moving to appliance solutions, and on through the separation of storage from the server and the virtualisation of the OS and now into Cloud and mobility. I think we are all having a wild ride and it’s only going to get more exciting!

And on that note we say thanks to Bruce and wish him well for the rest of 2015.

Who is Fannie Mae?
Fannie Mae is the leading source of residential mortgage credit in the U.S. secondary market. The firm provides reliable, large-scale access to affordable mortgage credit across the country, for people to buy, refinance, or rent homes.

Bruce Lee is Senior Vice President and Chief Information Officer at Fannie Mae and was talking exclusively to Perspectives

www.fanniemae.com/progress
Horse racing - the sport of kings. For most of us it means watching our horse trail in, riderless, at the Grand National. Having your own race horse(s) is something for oil sheikhs and Russian oligarchs. Unless of course you join a syndicate.

Richard Phillips is an experienced racehorse trainer and proprietor of the Adlestrop Stables in Gloucestershire. The stables are sponsored by TORI Global and provide anyone with the chance of becoming a racehorse owner (either the whole horse, or just part - which, alas, you can’t specify).

There are several ways to own a horse. Sole ownership means you’re the owner and no one else. That means that all costs associated with looking after the horse are yours, but so are all the profits made - either through race performance, or from a future sale. You also get to help make key decisions, name the horse and choose the racing colours.

There are also four types of co-ownership:

**Company ownership** - where the horse is owned by the company’s shareholders and the company must appoint a registered agent to act on its behalf.

**Joint ownership** - for two to 12 individuals acting as a single owner.

**Leasing** - no capital outlay but an ongoing fee for a given period (as short as a single race, or for the horse’s entire career).

**Racing partnership** - a flexible set-up enabling from two to 20 individuals, of which at least two must become registered owners. The partnership can be operated by a trainer, a social group, a professional operator or a racing club.

The Adlestrop stables provide all the care and training a horse needs to be successful, so if you’re short of time, you can leave it up to them and simply make the trip to the racecourse to see your horse take the glory.

A number of syndicates already own horses at Adlestrop. The Aspirationals are a group of 30 sports fans who enjoy days out at the racecourse with a competitive horse at a reasonable cost. The syndicate raises money for the very worthy charity ASPIRE, with 50% of prize money won helping support people with spinal injuries.

While The Pink Ladies is a fun ‘ladies only’ syndicate that supports Breast Cancer Care by donating 50% of their prize money.

About Richard Phillips

Born close to Epsom racecourse, Richard knew from the age of five that he wanted to be a racehorse trainer. Riding ponies and show jumpers through his teenage years, he then spent eight years as assistant to Classic winning trainer, Henry Candy before setting up on his own in 1993.

In 2001 Richard took his training organisation to Adlestrop and there he has developed one of the finest training operations in the country.

In just his first year in the establishment he trained his first Festival winner. La Landiere won the Cathcart Chase following her brilliant victory in the Racing Post Chase the previous month.

On the back of that great mare’s success, Richard has gathered together a team of dedicated owners and talented racehorses that, he hopes, will make for an exciting and fruitful season.

To find out more about Richard Phillips and the Adlestrop Stables, please visit:

www.richardphillipsracing.com