A short history of trading

Equity trading has evolved almost beyond recognition since it originated more than 300 years ago. **Roger Aitken** examines recent technological developments and the changing face of capital markets

The origins of equity trading can be traced back to the end of the 17th century with *'The Course of the Exchange and other things'* published in 1698 by broker John Castaing in London. A twice-weekly list of prices printed on a single sheet of paper, it was a forerunner to the Daily Official List.

The markets have certainly come a long way since then. While companies still issue shares to fund growth, the sheer volume of product offerings and breathtaking speeds make trading today a very different experience.

Nicolas Bertrand, Head of Equities and Derivatives Markets for London Stock Exchange Group (LSEG), says: "The evolution of exchanges fundamentally has been one long story of diversification, with leading operators offering access to more and more markets across national borders and asset classes.

"Three years ago, our offering was centred around London Stock Exchange's cash equity market. Following the Borsa Italiana merger, both Italian cash and Italian derivatives products were added. Now, with Turquoise, pan-European equities are offered along with FTSE 100 and Russian GDR derivatives. And, within LSEG, we offer a wide range of exchange-traded funds and fixed-income products."

In many ways, it was the invention of the telegraph in 1837 that revolutionised the work of stock exchanges across the world. The creation of the submarine cable to France from England in 1851 followed, with New York connected 15 years later. Suddenly, the 16-day North American prices from the New York Stock Exchange could be received in 20 minutes.

Technological developments

Fast forward a century to 1971, which saw the first major electronic trading market, NASDAQ, in New York. Over the next decade, it became apparent that the future of trading would be electronic. A fundamental step in this direction was taken in 1986, when Big Bang heralded the deregulation of the London securities market. This prompted radical changes in technology development and use, fuelling a rapid increase

Today's market is highly sophisticated, with more flexible systems offering ultra-low latency and high bandwidth

in trading volumes. The value of all UK equities traded on London Stock Exchange has expanded twelvefold since Big Bang, to around £1.9 trillion. Over this same period, trade execution speeds have reduced from minutes to microseconds.

Pinar Emirdag, LSEG's Head of Professional Business Development, says: "Electronic trading has been part of European markets since Big Bang. Especially after advancements in the US in matching technologies in the late 90s, traders found the technology restrictive for latency sensitive strategies." However, the Markets in Financial Instruments Directive (MiFID), which to an extent came into effect in Europe in late 2007, further and dramatically transformed the market, ushering in more flexible, resilient, low latency, high bandwidth systems. These allowed for new functionalities and order types, enhanced by new connectivity solutions. In turn, this dramatically increased member firms' ability to create sophisticated algorithmic trading strategies.

Many of the changes that followed MiFID spurred competition and prompted the rise of so-called multilateral trading facilities (MTFs), effectively alternative trading venues. In the immediate aftermath of the European directive, there was a double-digit increase in the number of separate trading venues for UK equities to 19, while Europe as a whole became home to 27 exchanges and 19 cash-equity MTFs. Not all of these ventures were profitable nor survived, but those that did have developed and upgraded their facilities to create a vibrant and competitive equities-trading landscape.

As a result, today's market has become highly sophisticated, with more flexible and resilient systems offering ultra-low latency and high bandwidth. Traders can access new functionalities and order types to buy and sell using cutting-edge algorithms and trading strategies relying on real-time market data and pricing models. Operators have worked hard to offer the most resilient and fastest systems in a bid to capture business.

Late in 2011, London Stock Exchange migrated its own trading platform to MillenniumIT, an LSEG proprietary exchange technology solution, which slashed trading latency from between 1.4 and 1.7 milliseconds to below 0.2 milliseconds. Borsa Italiana's cash and derivatives segments migrated to the same platform in mid 2012.

Many and varied

Different investors have different needs, and today a host of various trading strategies are given room in London's thriving markets, ranging from 'buy and hold' for medium- to long-term gain, to statistical arbitrage where traders can profit from price differentials between two trading venues on the same instrument. Chart trading is popular, too, using technical analysis and modelling to spot value.

As Wallace Wormley, Managing Director at OSPARA, a specialist firm providing advice to wealth managers, states: "Simple approaches that look at valuation and risk

Advances in technology have allowed traders across the world to communicate and conduct business with each other at a remarkable pace

on a multi-year basis now stand alongside highly complex algorithmic strategies that trade millions of securities in a fraction of a second.

"None of these strategies guarantees that the traders or investors make money or effectively hedge their positions. But there's no question that the array of choices from which trades can be developed has escalated to staggering levels."

Some investment approaches tend to be organisational and market-related, such as fundamental, directional, technical and spread-related. Others focus more on leverage, concentration, illiquidity and latency. Both interact on a real-time basis in today's markets, but many believe that the growth in technical sophistication has encouraged some investors to focus more on complex systems than fundamental analysis, and not always to their benefit. As Wormley notes, ironically: "The gap between the complexity and sophistication of trading strategies versus effective risk management continues to widen."

Now, however, there is a growing recognition of the need to combine complex trading strategies with more effective analysis.

"As they get deeper into automation, we see traders looking for tools that allow them to operate as they normally would, with real-time interaction between strategies and complex workflow," explains Steve Smith, Chief Executive Officer of 4th Story, a San Francisco-based vendor that markets software for automated trading. "The more they can do this, the more strategies they run."

Eric Gulbrandsen, managing director at Maven Wave Partners Financial Services Practice, says: "While the focus has been on trade execution speed via low-latency and high-frequency trading architectures, firms are relying and investing heavily on lightning-fast decision support for their trading strategies. This requires real-time risk using massive datasets to develop effective trading strategies across all markets."

He adds: "Savvy firms are focusing on the advanced computing power and electronic availability of market data today to produce nearly real-time trading analytics. These span not only specific securities, but also entire markets in just a matter of seconds."

In recent years, the rise of new-entrant MTFs and subsequent consolidation of trading venues has encouraged competition and boosted innovation. Trading has clearly developed at an extraordinary pace and is expected to continue to do so, as technological advances allow traders to do more and more in less and less time. Certainly, London's capital markets have grown more complex, but they continue to offer a home to one of the widest arrays of investors and traders in the world.

Despite this increasing sophistication, in many respects very little has changed. Fundamentally, companies still access the equity markets in order to fund growth and expansion, just as the East India Company did in London back in the 18th century. ■

Roger Aitken is a freelance financial journalist