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January 2015

Treasury priorities for 2015

As we begin the New Year, we consider what will be keeping treasurers awake at night. No doubt there'll be a smattering of regulation and market trepidation, but we're likely to see impressive projects around automation too.

The Corporate View

George Zinn

Corporate Vice President and Treasurer
Microsoft

Cash Management

As collateral's role in the markets continues to grow, some experts believe that it is becoming 'the new cash': a currency equivalent underpinning the operation of the capital markets and the broader economy

Corporate Finance
The funding mix

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Question Answered
E-invoicing and SCF

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Treasurers behaving badly

At the start of a New Year, it's traditional to review our priorities and path for the future. We often think about what we'd like to achieve and what we can do better over the next 12 months – both in a personal and professional capacity. But to make this review a truly useful process, it's important to take a 'warts and all' approach. Frequently, the biggest mistake people, and companies, make when looking to improve their situation is sugar-coating their current predicament or refusing to fully acknowledge their weaknesses.

These kind of mental biases affect every decision that we make, whether we recognise it or not. And when it comes to financial decision-making, cognitive and emotional influences can be so strong as to distort markets – the study of this effect is called 'behavioural finance'. Of course, you might not think that, as a trained finance professional, these kinds of biases would affect you, but remember that these are innate tendencies, not conscious behaviours.

Take prospect theory, for instance. This outlines how human beings value gains and losses differently and will take decisions on perceived gains rather than perceived losses. So, if a treasurer is given two equal choices – such as the opportunity to invest in a fund, but one is expressed in terms of possible gains and the other in potential losses – they would most likely choose the former.

Experts in behavioural finance believe there to be over 120 such biases which affect the way we make investment decisions. Herd mentality is a well-known one; where we follow what our peers are doing simply because, well, everyone else is doing it. Many will also be familiar with the dangers of hindsight bias and overconfidence when investing. There are other, less obvious, tendencies that many of us harbour, however, which might make you think twice about whether your investment decisions are truly rational. Take confirmation bias for example. This involves being receptive to information which affirms your ideas and confirms your beliefs, while disregarding or devaluing contradictory information. The best example of this is the Dot-Com Boom – despite repeated warnings from analysts, many investors simply carried on regardless; a mindset that former Federal Reserve Chairman Alan Greenspan memorably described as "irrational exuberance".

Another interesting psychological quirk is outcome bias. This is the tendency to base your investment decisions on previous outcomes, such as past returns, as opposed to thoroughly examining the reasons why the outcome was positive or negative. Ring any bells?

Of course, behavioural finance is by no means an exact science. But it does provide an interesting complement to traditional financial theory that strategic treasurers may want to bear in mind when planning for the year ahead.

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J.P. Morgan: the most powerful man in America

John Pierpont Morgan is first to take the spotlight in Treasury Today's series examining the lives of famous figures who have shaped the financial world. Despite being born into a well-connected family, it was really Morgan's personality and vision that saw him climb the ladder to become arguably the most powerful man in America at the time.

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When the balloon goes up

Bad things can and do happen, but rather like insurance, business continuity and disaster recovery plans are things that most companies hope they will never need to use. However, if trouble does happen to strike – whether it be a natural disaster, a comprehensive technology failure, a terrorist attack, pandemic illness or a multitude of other horrors – would you know what to do?

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Collateral: the $4 trillion question

Some experts believe that collateral represents nothing less than 'the new cash': a currency equivalent underpinning both the operation of the capital markets and the broader economy. For treasurers who have been worrying that the scramble to meet tougher collateral requirements might price them out of the derivatives market in 2015, there is some good news in store.

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George Zinn

Corporate Vice President and Treasurer

George Zinn started his working life on the floor of the Chicago Mercantile Exchange. A few well-timed professional moves later he found himself at the doors of the mighty Microsoft Corporation. Having ascended the ranks and taken on the mantle of Corporate Vice President and Treasurer, Zinn entered the history books in 2009 by leading Microsoft's AAA-rated $3.75 billion inaugural debt issuance. He talks to Treasury Today about keeping the world's biggest software business in rude financial health – and reveals how one early career dream was an aspiration too far.

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Algo trading: for a few dollars more

Whether it is referred to as automated trading, black-box trading or algorithmic trading, the use of computers and mathematical formulae always makes trading more systematic because it takes the emotional element out of trading activities. Typically associated with large institutional investors and professional traders, does it really have a place in treasury?

These pages contain edited versions of a few of the Treasury Insight pieces written in the last month. The full versions are posted on treasurytoday.com as they are ready. The Treasury Insights weekly email summarises the new pieces from that week plus other news relevant to treasury. You can register for this free service at treasurytoday.com

Are you an FX 'numpty'?

Over the past few years it's something we've all become wearily accustomed to. Another scandal erupts involving the manipulation of financial benchmarks; an enquiry is then promptly launched which, once concluded, leads to banks paying out yet more money to the regulators in large fines.

So here we go again. In November 2014, five banks each agreed to stump up sums totalling circa $3.3 billion to the US, UK and Swiss regulators to settle investigations into certain practices in their spot foreign exchange trading businesses.

The details that emerged about the manipulation of FX benchmarks, such as the WM/Reuters 4pm fix, will have shocked corporate treasurers. This was not, after all, a handful of small, isolated cases. As the number of banks hit by fines attests, this was very possibly routine practice. And corporate treasurers will have been on the other side of many of those suspect trades.

Precisely how much businesses have lost out as a result of the manipulation is difficult to calculate. However, according to estimations from New Change FX (a UK firm that provides an alternative benchmark to users of foreign exchange to independently analyse and understand their transaction costs), a treasurer that was, in the majority, on the fix in cable between the start of 2012 and June 2013 would have lost an average 11 bps per transaction.

Philippe Gelis, CEO of peer-to-peer trading platform provider Kantox believes there is little doubt that trust in banks has taken yet another hit from the latest revelations. "When we speak to our clients, it is clear that they are beginning to lose faith. They will go on using them, of course, because they need all those services they provide, but trust really has vanished." Even though the manipulation has now been uncovered and 'punished', treasurers are not likely to take any comfort, he adds.

Changing behaviours

If imposing yet another fine on the banks is not going to be enough to restore trust in FX rates, then what will? Andy Woolmer, Managing Director of New Change FX, says there is a solution. "Treasurers need to use an independent mid-rate," Woolmer says. And, as one might expect, that is precisely the service New Change FX provides: live streaming mid-rates across 42 different currency pairs.

For the treasurer, at least, the process is reasonably straightforward. Treasurers call their bank, ask for the New Change FX mid-market rate, and state that they would like each transaction to be benchmarked using the rate, allowing them – each time – to see how their trade compares to the mid-rate and saving on the need for a transaction cost analysis subsequent to execution. Of course, treasurers lose out on the automation provided by electronic trading by doing this, but for many, that will be a price worth paying.

One might argue that Woolmer's message is somewhat self-serving. But that doesn't mean there isn't an element of truth in it. For readers who are not familiar with Scottish colloquialisms, the eminent linguist Professor David Crystal defines a 'numpty' as "somebody who displays a lack of knowledge or awareness". For a while, dealers were able to use the opacity in the way FX trades are executed to manipulate the market and profit at the detriment of their unsuspecting customers. Now though, the game is up.

Still think SEPA is a waste of time and money?

With all its local nuances and a general misunderstanding of what SEPA is supposed to be, 'clarity of message' would have come as a welcome relief for the corporates that have been struggling with their implementation projects almost from day one. For Eddy Ouwendijk, Managing Partner at Payments Advisory Group (PAG), an international consultancy practice specialising in payments, SEPA remains a battleground where clarity and simplicity seek to triumph over administrative adversity. Only then, he feels, will SEPA finally become what it was always intended to be: a standardised and cheaper way of making payments across the Eurozone.

Not that SEPA is without success to date; Ouwendijk comments that it has already clearly shifted the balance of power between corporates and banks in favour of the corporates. Furthermore, it has helped some corporates see that payments "are not some sideshow" but are in fact a complex process "that can have quite an impact on the company as a whole". Even the banks that had seen SEPA as something that could be allowed to "drift a bit" suddenly realised the importance of the flow of payments when regulatory pressure was finally applied.

Indeed, when at last the mandatory end-date of 1st February 2014 (subsequently 'extended' to 1st August) was imposed, many corporates that had viewed SEPA merely as an obstacle to overcome, took on board the full complexity of their own payments operations, notes Ouwendijk. "They recognised that managing SEPA was not just an issue for IT to handle – 'and good luck with it' – but that it was also a regulatory problem which, if seen in the right light, could be a catalyst for realising genuine commercial benefits." Many companies and banks, he adds, had to rethink their business strategies, platforms, payments systems and operational procedures to comply and are now seeking a return on their investment.

The fix

The key to making the most of SEPA is that it should be acknowledged as a commoditised process where the whole point is that it is a many-to-many connection. But as projects got under way by the banks, and later by corporates, Ouwendijk believes it exposed the workings of many a payments system for the first time. "Their processes had worked for years and no one had really needed to thoroughly understand how it worked," he explains. "But suddenly they had a new system with new rules and regulations which would only work if every part of the chain was connected properly. That was not the case, hence in the end there were many unhappy customers." It was, he muses, "a great source of learning for the corporates".

Whilst initially the general view of SEPA was of an imposition "that involved a lot of effort and cost with very little benefit", although there seems to be a slight shift in attitude towards a more positive view, Ouwendijk notes that for many corporates SEPA is still "a dirty word".

By recasting it as an 'international payments project', it may be possible to gain better insight into the client's wider payments and collections processes and risk models. By fully understanding the collections process, for example, a business can work with its own clients to understand rejections and repair them quickly. This not only gets more traction with those clients but also improves days sales outstanding (DSO). But delving into company processes serves also to get employees in different functions to communicate, where previously they did not. Discussing shared issues around payments from different angles allows those issues to be resolved a lot earlier, to everyone's advantage.

Make it work

It has taken some time for SEPA to arrive, but now that it's here the question to be asked is what's next? Besides the inevitable modifications and improvements to products and scheme (including additional regulation such as the aforementioned PSD2) which will lead to SEPA 2.0, SEPA already provides ample opportunity for corporates, at least from Ouwendijk's perspective. He says corporates need to realise that they must move into the driving seat. Centralisation of systems will reduce operational costs, increase efficiency and increase buying power vis-à-vis the banks. Furthermore, regulation even offers the opportunity to change their current position on the payments value chain from 'user' to 'participant' such as Payment Service Provider or Payments Institution.

Treasurers play a role in addressing disaster risk

Managing risk is at the heart of what the treasury function is all about. But while most treasurers devote significant time and energy to managing threats around interest rates or foreign exchange, reducing the risk of natural disasters – not just to the company, but globally – is unlikely to figure very prominently in the treasurer's priority list. After all, what has the private sector got to do with reducing disaster risk in the wider world? A great deal, apparently. And what's more, not only can incorporating metrics and principles that discourage investments which increase disaster risk have a positive impact on the world at large, but it can also positively affect the performance of investments and contribute to their mid- to long-term sustainability.

Indeed, the United Nations (UN) feels it is virtually impossible to address the problem of disaster risk without the help of business. "Economic losses from disasters are out of control and can only be reduced in partnership with the private sector," according to Ban Ki-moon, Secretary-General of the UN.

Now the leaders of an initiative aimed at tackling disaster risk are calling out to corporates for their participation. R!SE is an initiative with the overall aim of ultimately making all investments risk-sensitive, by utilising both public and private sector resources and expertise to reduce disaster risk around the world. What's more, treasurers are a community that RISE is looking to reach out to.

Launched in May 2014, R!SE has the ambitious (some would say impossible) objective of 'making investments risk sensitive' by 2020. Scott Williams, a Director at PwC who is one of the lead coordinators of the initiatives, accepts the timeline is very ambitious but counters that drastic action is necessary. "We had to set out with extraordinary ambition because the data, the currently largely invisible risk information, is showing us that if we continue to construct risk at the rate that we are, and at an accelerating rate, in terms of large infrastructure and other developments in emerging and developing fast-growth economies, then it may be too late by 2020. We have to bend the curve well and truly by 2020."

Corporate impact

But, some corporates might still be asking, why should we be concerned with disaster risk? They should think back to Hurricane Sandy, which, in addition to killing at least 286 people and causing almost $70 billion of damage, also forced the closure of the New York Stock Exchange and Nasdaq.

And while some may be inclined to think otherwise, Williams says some recent disasters could have been a lot worse, both for the corporate world and for society at large. "It's fair to say we have been very lucky with the type of disasters that have happened – if Superstorm Sandy had continued at hurricane strength three or four as it made landfall and hit central New York with that sort of strength, then Wall Street could have been shut down for three or four months instead of two days."

He concludes that corporates need to wake up to the topic sooner rather than later. "The latent conditions for catastrophic disruption are already built in to our system. The fundamental mispricing of risk is endemic within our economic and financial systems because there is a disconnection between the price setting mechanism in those systems and the physical reality described by science." He says continuing to build infrastructure in seismically active areas without seismic protection is just one example of risk-blind investment behaviour.

A thing of beauty

By 2015, "not only will 75% of the world's population have access to the internet, so will some six billion devices". This was a projection last year offered by Stefan Ferber in an article in the Harvard Business Review (HBR). The spread of connecting technology, argued Ferber, would lay the groundwork for the creation of a "global system of interconnected computer networks, sensors, actuators and devices all using the internet protocol".

The actual figure for global internet penetration currently (October 2014) stands at just over 40% (representing almost 3 billion users). Whilst HBR's projection is likely to be somewhat short of the mark, internet reach is nonetheless spreading rapidly each year and Ferber makes a reasonable assessment when he writes that the connection between billions of devices and the internet has "so much potential to change our lives that it could be considered to be the internet's next generation".

The system of connectivity Ferber references is the 'Internet of Things' (IoT), a concept that was the brainchild of British technology pioneer, Kevin Ashton. Ashton had been working as an assistant brand manager at Procter & Gamble (P&G) when in 1997 he became fascinated by the way in which Radio-frequency identification (RFID) could be used to manage P&G's global supply chain (RFID can transfer data wirelessly and can be deployed as a means of tagging and tracking goods).

From Coke cans to everything

The first internet-enabled 'thing' actually surfaced in the early 1980s at Carnegie Melon University. Programmers managed to connect a campus Coca-Cola dispensing machine to the internet (the internet at that point being a purely academic tool) to check to see if it was empty or not.

Ashton, who went on to co-found the MIT Auto-ID Centre in the US, subsequently recognised that most computers at some stage rely on humans for information, typing it in or scanning a bar code, for example. He understood that as humans we have "limited time, attention and accuracy", making us "not very good at capturing data about things in the real world". If, however, computers could independently gather everything they needed to know about things, he believed we would be able to "track and count everything" (including the content of drinks machines) without error or lag.

Today – as RFID, wireless technologies, micro-electromechanical systems (MEMS) and the internet merge – every 'thing' that can be assigned an IP address (by embedding within it the right technology) has the ability to transfer its data over the internet. The more this is understood, the more IoT reaches further into everyday life: in addition to the aforementioned smartphone-controlled consumer devices, smart meters are being deployed in increasing numbers by the utilities industry, and heart monitor implants are used by medical teams to track patient progress. But the current use of this technology is only just scratching the surface.

"It's all about proactive management," says Bob Stark, VP Strategy at technology firm, Kyriba. He is excited about the future of IoT and believes it could have a genuine application in the finance and treasury space. As a "conduit between devices and decision-making tools for corporates", he believes that the concept is likely to sit around workflows such as in inventory management.

Treasury things

In the supply chain space, for example, by using connectivity to monitor stock flows, a buyer's needs can be known and acted upon more rapidly than ever before; if the buyer is running out of product (and just about any item can be counted, tracked and traced), the supplier is able to re-stock automatically on a just-in-time basis. Every time more product is needed, the decision can be made automatically to ensure that goods are in stock when they are needed and even manufactured in time to meet the need. This process would be fully automated, with no human intervention.

Treasury or finance teams on both sides of the supply chain will need to be alerted because cash will either be going out to pay for the goods or production, or cash will be coming in. From a financing point of view, the monitor could even be set up to trigger a supply chain finance arrangement to ensure the supplier is able to produce sufficient product for the buyer.

"For treasury, IoT requires aligning financial flows and processes to enable those business actions," explains Stark. "If inventory is ordered, then treasury is updated. If products are sold, treasury is updated." These are obvious examples which, he says, are not difficult to implement from a treasury perspective. "The premise is that treasury has to be connected to the rest of the business – it can't be on an island, not knowing what's going on elsewhere."

It is well acknowledged that treasury is becoming more commercially involved in many firms. For Stark, in the supply chain example, its impact, influence and responsibility for working capital places inventory as a key component of the function. However, he notes too that treasury alignment from a technology standpoint is "often not as optimised as it could be". ■

Longer versions of these articles are available at treasurytoday.com/treasury-insights

E-invoicing evolution

"I've recently heard talk about e-invoicing being integrated into supply chain finance platforms. Is this really happening? Also, what other developments in the e-invoicing space should treasurers be aware of?"

Matthew Stammers, European Marketing Director, Taulia:

There is a revolution starting to happen in supply chain finance (SCF). What was previously an elitist programme between businesses, global banks and the very largest suppliers, is shortly to become a democratised process between a business and all of their suppliers because of what e-invoicing brings to the party.

Initially, SCF was a bank-led initiative that was developed in order to help large multinational corporations improve their working capital KPIs. For these large companies, it worked well within this narrow remit. However, the solution has always promised so much more, and in this format the benefits were limited, in so far as that it would only work for a company's top 25 to 100 suppliers. This was primarily due to the regulatory constraints on the banks – as the providers of the SCF programme – surrounding KYC, anti-money laundering and also in more recent times Basel III. The on-boarding process with suppliers was therefore very arduous, and the costs outweighed the benefits when companies were looking to on-board all but the very largest suppliers onto their SCF programme.

The new generation of SaaS based e-invoicing platforms, however, are game changers as they approach the subject from a very different perspective. These providers approach SCF and e-invoicing from a supplier-adoption approach, where the most important aspect is getting as many suppliers on the platform as possible. This is vital because without a critical mass of suppliers using an e-invoicing platform to send, receive, and process invoices, a business doesn't have a viable project. The 'DNA' of these SaaS-based vendors is therefore driven by this supplier adoption approach.

Traditionally the benefits of using an e-invoicing solution include increased automation, accuracy and efficiency. It is a useful tool to improve a business's accounts payable processes. However, it is not a game changer in this guise. Where e-invoicing starts to get really exciting is when it's used to enable and underpin a dynamic and electronic trading relationship between a business and its suppliers. The core feature of e-invoicing is that it connects a business with the majority or all of its suppliers. This network can then be used to offer early payments to these suppliers.

How so? This can either be through utilising excess liquidity or, if the working capital position is sensitive, through the injection of third-party financing – what was previously known as Supply Chain Finance. And because the goal of an e-invoicing network is to connect a business with all of its suppliers, financing opportunities are now available to the whole supply chain, not just the top 25-100 largest suppliers.

The primary benefit, therefore, from such a solution is that it resets the relationship between a company and its suppliers, allowing corporates to strategically approach the management of their supply chain. For example, a company can utilise the strength of its credit rating to offer third-party affordable financing to all its suppliers, thereby strengthening the health of a supply chain. Or the treasury function can utilise excess liquidity to fund early payment in exchange for a discount, reducing a company's Cost of Goods Sold (COGS). From a treasury perspective, this offers an opportunity to step beyond its usual remit and be involved more deeply in the strategic goals of the organisation. Of course, using a SaaS service offers corporates other operational benefits through using the cloud, including: full visibility, real-time information, quick on-boarding and set-up, enhanced security, cost savings on resources and continually updated software.

The SCF and e-invoicing space is one that is constantly evolving and the current incarnation of SaaS providers have removed all of the barriers that have historically prevented widespread adoption. There are other exciting developments in this space that providers like ourselves are beginning to realise surrounding the use of big data. There are now years of supplier trading history on a provider's servers and by using analytical tools built into the platforms this can be analysed, looking at areas such as risk and credit worthiness. This creates a powerful analytics suite that can allow corporates to model scenarios based on what suppliers have been doing and are likely to do.

All in all, the benefits of e-invoicing and SCF are becoming increasingly strategic and vital to corporates – creating a very attractive solution.

Venkatesh Somanathan, Asia Pacific Head of Trade Finance Product Management, Global Transaction Banking, Deutsche Bank:

The trends that we are currently seeing around invoicing, and e-invoicing in particular, are dovetailed into a wider trend surrounding what corporates expect from their banking partners. Corporates now look to banks to offer more than their 'traditional' payments and financing functions and expect them to address some of the challenges that they face in other areas. It is here that an opportunity lies for banks to reinforce and 'retool' in order to meet the developing needs of corporates.

It is as a result of these new requirements that developments such as integrating e-invoicing solutions into supply chain finance (SFC) platforms take place. This integration is part of a greater effort to ensure that corporates can have an automated end-to-end solution across their supply chain. At the heart of this is the auto-matching capability that automatically reconciles a corporate's purchase order with a supplier's shipment documents. Once this reconciliation has taken place, a payment file will then be generated on the electronic platform used for supplier financing.

E-invoicing can also be introduced into this process so that when a purchase is made, all parties can reconcile the various documents and generate an invoice to the buyer, which can then be matched against the order and shipment details. Once this automated process is completed, corporates can quickly and seamlessly conduct the next phase of payment and financing.

This solution can offer corporates numerous benefits, primarily due to its integrated nature, which means that treasurers will not have to duplicate work and enter the same information multiple times on various platforms, thus offering greater efficiency and also reducing errors. Another benefit is the increased visibility and control over the transaction across its life span that a treasurer can have. Finally, with a greater number of companies using shared service centres (SSCs), electronic solutions are becoming increasingly vital as they allow for cost savings through reduced investment in resources, infrastructure, software and technology.

Currently, we have a number of clients using this solution. These are the most advanced multinationals with very large supplier bases. Yet, I believe it is possible that one day this solution could be adopted by smaller corporates. There are, however, a number of challenges that must be solved before this can become a reality. The first challenge is that any corporate wishing to utilise this type of solution must have the technical capabilities, as must the suppliers in their supply chain. Secondly, there are still some markets – such as China and India — where local regulations limit the use of such solutions, although there are steps being taken to change this. Finally, current e-invoicing and supply chain finance solutions are primarily bundled in with a bank's propriety platform. However, corporates have multiple banking partners. Therefore, there needs to be a bank agnostic platform. It is my belief that going forward, BPO transactions will help to facilitate and develop the external requirements for e-invoicing, creating a universal bank agnostic platform. ■

TT comment

E-invoicing in 2015

According to e-invoicing expert Bruno Koch of Billentis, 2015 may well be a seminal year in the development of e-invoicing, with many countries around the world making the practice mandatory.

In January 2015, a further group of taxpayers in Ecuador will be required to support e-invoicing joining companies from the financial service industry, exporters and telecoms industry who adopted the technology last year.

There will be further developments in Central and Eastern Europe too. In Germany, the Ministry of Finance has released new legislation that is relevant for e-invoice processing and storage. From 2015, e-invoicing and VAT e-administration will become mandatory in the Ukraine. Elsewhere, in Slovenia, all domestic suppliers to the public sector will be required to send only electronic invoices to public administrations from January 2015.

In Southern Europe, changes are also afoot as e-invoicing will become compulsory in some large market segments in Spain. The change comes after many years of debate and the mandate covers invoices issued by certain suppliers of goods and services to the Spanish public administration. This will be live early 2015.

With such developments on the horizon, it is likely that e-invoicing will become an increasingly important agenda item for corporates, creating many opportunities for efficiencies. Treasury Today will keep readers informed about vital developments in this space.

The next question:

"What is the state of play with the Payment Services Directive 2? What will the major changes be? And what do I, as the treasurer of a European company, need to think about in relation to the PSD2?"

Please send your comments and responses to **qa@treasurytoday.com**

Lower oil price to boost EUR/USD?

Following recent drops in the price of oil, growth expectations in Europe and the US have been impacted. The question now is what will the economic impact of the oil price slump be on these two economies, and how will the EUR/USD exchange rate react as a result?

Owing to rising production and lower demand (because of the growth slowdown in Asia and Europe), oil prices have dropped sharply (this article was written in the first week of December). The pullback of the past two months has several implications for EUR/USD. In the immediate future, Europe and the US will be paying less for oil so the trade balance will improve – most of all in Europe, as the United States is itself an oil producer (so will need to import less). This state of affairs will strengthen the euro. In addition, falling oil prices are bound to influence growth expectations. Consumers will end up with more money in their pockets to spend on goods and services that are produced domestically, which will boost both economies. However, there are differences:

- In the United States, energy exploitation has been an important growth engine in recent years. As this is a capital-intensive sector with high returns, the dollar has benefitted from foreign capital flowing into the US. Plus, the trade balance did improve on the back of domestic energy production. Now that oil prices have dropped, investment could decline and less capital will flow into the US. Moreover, many (small) oil companies have borrowed money based on the assumption that oil prices would continue to rise. As long as they do not, many experts fear bankruptcies and mounting losses. All of this will have a negative impact on the dollar.
- The flip side of this is that cheaper oil will have a positive effect on US consumption. It will boost consumer confidence. Therefore, people will be inclined to buy other goods and services with the money they save on gasoline. Not unimportantly, the price of petrol will drop relatively faster in the US than in Europe because taxes play a less significant part in the United States.

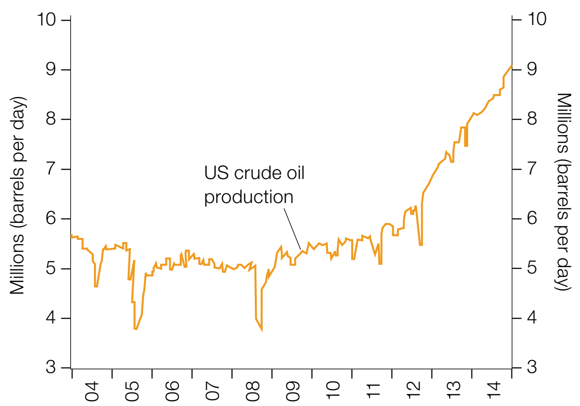
On balance, we think lower oil prices will directly benefit the US to a somewhat greater extent, particularly as the US economy is already in an upward economic spiral (more jobs, expanding consumption, higher investment, increased employment, etc). Falling oil prices may provide a positive impulse, which could act as a catalyst. If so, the growth differential between both economies will increase, to the advantage of the dollar.

Indirectly, the oil price slump will have various consequences. Inflation is bound to ease further. As the central bank is already worried that inflation is minimal and that inflation expectations are falling, it will come under pressure to ease its policy (large-scale QE). Not that the ECB will labour under the illusion that this will drive up oil prices – or inflation – but at least it will create the impression that it is serious about inflation. As a result, inflation expectations will not drop as fast and there will be a lower risk of a prolonged deflationary spiral. Simultaneously, lower oil prices will boost the economy. Specifically the strong EMU countries, which are opposed to massive QE, will use the latter as an argument to block a large-scale bond-buying programme. In our view, the ECB will steer a middle course; it will probably opt for large-scale QE but not as much as the weak Eurozone countries and investors are hoping. The result will be upward pressure on the euro.

US inflation to ease up?

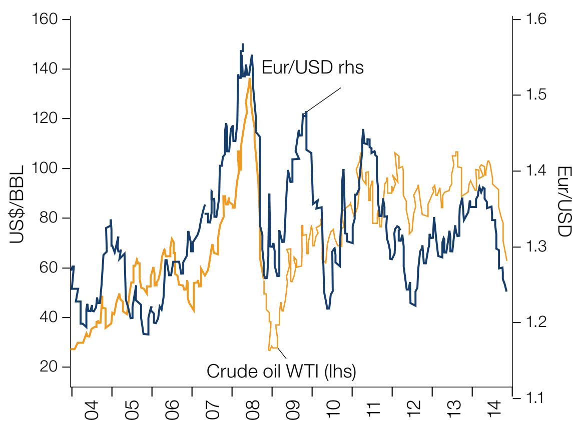
The relevance of this to the Fed is that the oil price pullback will put downward pressure on inflation. Some policy makers will fear that inflation will ease too much. In combination with the uncertainty about the negative impact on the US oil industry and US growth in general, this could encourage the Fed to postpone its rate increases until the end of 2015 – even if lower oil prices will boost consumption and growth in the near future. At best, the delay will have a neutral effect on the dollar but it could also weaken the greenback. After all, many investors take into account that a rate hike will take place

Chart 1: Crude oil production



Source: Thomson Reuters Datastream/ECR

Chart 2: Crude oil and EUR/USD



Source: Thomson Reuters Datastream/ECR

halfway through next year. By and large, we believe that lower oil prices will bolster EUR/USD. This will – temporarily – change the decade-long positive relationship between EUR/USD and oil prices.

A key question in regard to EUR/USD is why have oil prices dropped? Is it because of a rapidly expanding supply? If the answer is 'yes', this would:

- Provide oil-importing countries (Europe, the US, China, and Japan) with a positive impulse while growth prospects could improve around the world.
- Mean that the oil price slump will continue until demand increases or supply decreases. In the short term, demand is not that sensitive to price fluctuations. Therefore, supply will have to decline. US oil companies, in particular, will feel the effects because they face fairly high costs while production has increased strongly in the past period. In many other oil-producing countries, the oil industry is the most lucrative sector. Therefore, these governments will be inclined to subsidise production – more so than the US government, which is dealing with private businesses.

This amounts to a relatively negative scenario for the dollar in the coming months. If it holds true, a EUR/USD rally to 1.35 would not be a surprise.

An alternative scenario is that falling oil prices are the result of lower global demand due to decelerating growth. This could be true as the long-term growth prospects for Europe, Japan, and China are mediocre (see ECR's recent Global Financial Markets reports). On top of this, for quite some time, lower bond yields have indicated that deflation risks are increasing. If this is correct, there will be ongoing downward pressure on inflation and growth in many parts of the world.

The latter would strengthen the dollar as there would be mounting pressure on central banks in the countries where deflation risks are high (Europe, Japan, and China) to ease their policies and depress their currencies. As the US economy is doing better – mainly due to the performance of its domestic sectors – it is well able to cope with a strong currency. The United States will also become a more attractive investment destination.

Conclusion

For now, it seems that oil prices are falling due to increased production in the US alongside sluggish demand in Asia. In other words, we regard the pullback as a positive 'shock' to the economy and expect the euro to benefit more than the dollar in the coming months (= the first scenario). In our view, EUR/USD will, over the coming weeks to months, rise to 1.30-1.35.

However, once the negative impact of lower oil prices on US oil production and the postponement of the Fed rate hikes have been discounted in EUR/USD (somewhere between 1.30-1.35, probably), the pair can resume its downtrend. In the circumstances, the US economy will continue to have the best growth prospects (see also our regular EUR/USD reports). On balance, delayed Fed rate hikes will boost the US economy. Precisely for that reason, the Fed will likely need to increase its key rate faster at a later date. In contrast, we think there will be constant pressure on the ECB to do more – even after the central bank announces QE. Most of all, should the euro appreciate against the dollar in the months ahead, EUR/USD could drop to 1.10 over the coming quarters. ■

Treasury in 2015: regulation, trepidation and the quest for automation

What does the New Year hold in store for treasurers? A challenging macroeconomic environment and, of course, yet more regulation are most likely going to be the big themes once again. But are there going to be a few surprises too?

By the time treasurers read this, the fireworks will have fizzled out, hangovers will have just about cleared and it will be time to get down, once again, to the serious business that is cash management.

What a gloomy backdrop it is for treasurers as they return from the seasonal festivities though. Six years on from the financial crisis and the global economy, once again, is facing some strong headwinds. The Eurozone appears to be lurching towards a third recession, with falling growth and the risk of falling prices too. Emerging markets like China and Brazil, the main drivers of growth since the crisis, are now slowing down as well.

Add to this a geopolitical environment that looks increasingly uncertain – think Putin, Ukraine and ISIS – and it's not difficult to imagine corporate CFOs and treasurers, ever watchful for signs of heightened volatility in financial markets, heading into the New Year with a slight sense of trepidation.

"I think the macroeconomic issues are the ones that most treasurers will wake up thinking about on 1st January," says Paul Taylor, Regional Sales Head, GTS EMEA at Bank of America Merrill Lynch. "We've heard talk in recent weeks about a cooling in the global economy; we've seen what's happened to the price of oil and what that has done to currencies globally, which in turn has had a knock-on impact on currency valuations. I don't think anybody can ignore what is happening on that level at the moment."

That may be so, but the worries for the treasurer do not end with the uncertainties we are currently seeing in the markets. On the contrary, treasurers are also likely to be concerned about the changes in market policies as central banks struggle to turn the tide, together with the actions of global and regional regulators tasked with ensuring that there is no repeat of the last financial crisis.

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In the negative

A negative deposit rate, introduced by the ECB in July 2013 to provide stimulus to the Eurozone economy and encourage banks to lend more to businesses, is one example. Following the announcement of the new policy most banks decided not to immediately pass on additional costs to their corporate depositors. No bank, naturally, wanted to be the first mover. However, market participants remained convinced that if rates remained negative for long enough, some would eventually have to go down that route.

In recent months, that has indeed begun to happen, with a handful of custodian and commercial European banks applying negative rates. "I think there is some evidence that charging is happening in the market now," says Suzanne Janse van Rensburg, EMEA Head of Liquidity at BofA Merrill. It's not entirely down to monetary policy, however. "I think some banks have been looking at the LCR and the associated cost and taking a view on that," she explains.

This is not, exactly, an unintended consequence. The ultimate objective of negative rates is, after all, to try and force cash back into the economy – substantial sums of which have been sitting on the balance sheets of large corporates – and the policy gives the banking industry little room for manoeuvre in that respect. Is that how corporates view it though?

"In my own experience, when I talk to clients they have been very understanding of that," says Taylor. "I think that this further reinforces the need for dialogue between banks and corporates – we are in constant dialogue with our clients helping them to optimise the way their cash is managed. We do everything we can to support them, looking at where they want to hold the cash, whether it should be on- or off-balance sheet, and we put solutions and structures in place to help them get the best possible return on that cash."

The impact of negative rates is also being felt beyond the banking industry. Sharp inflows could be observed in money market funds (MMFs) shortly after the banks began passing on the costs, which Yaron Ernst, Managing Director of Moody's Managed Investments Group, believes is no coincidence. "I met with several treasurers recently who were very concerned with what that means, and about where they can place their excess liquidity now," says Ernst.

That looks set to be one of the big questions treasurers will need to find an answer to in 2015. European MMFs are, at the time of writing, still able to serve as a positive yielding alternative to bank deposits. The yields on offer are marginal, however, and it may only be a matter of time before MMFs head the same way as some bank deposits.

"Yields are declining," explains Ernst. "Since MMFs are refinancing their assets on a daily or weekly basis – depending on the maturity of their assets – and the assets they are buying into are yielding lower, it is probable that they will turn negative in the next few weeks." The recent inflows, therefore, are likely only to be temporary and, once funds begin to reach or fall below zero, treasurers wishing to avoid erosion of principle will need new options.

But what are the other options? That will largely depend upon the risk appetite of the corporate. Moody's expectation is that we are going to see a growing level of interest in alternative investment products such as separately managed accounts (SMAs), cash ETFs, and ultra-short bond funds in the coming months.

"For SMAs, corporates would have to work upon the relationships with the fund managers to devise personalised funds that match their objectives," says Ernst. Whatever instrument one chooses – SMAs, ultra-short bond funds, or cash ETFs – there are similar trade-offs, he adds. "Either you accept the negative yields in MMFs or you take on slightly longer maturities, more risk, and possibly more fees, but generate higher yields."

> "Since MMFs are refinancing their assets on a daily or weekly basis – depending on the maturity of their assets – and the assets they are buying into are yielding lower, it is probable that they will turn negative in the next few weeks."
>
> Yaron Ernst, Managing Director, Moody's Managed Investments Group

The regulatory 'black hole'

Without taking their eye off what is happening in the market, treasurers will also need to keep up-to-date with all the latest regulatory developments. Compliance is a word many treasurers have learnt to dread in recent years, with the activity taking up an ever bigger share of the department's valuable time and resources. According to Treasury Today's 2014 European Corporate Treasury Benchmarking Study, for nearly half of the treasurers surveyed the amount of time dedicated to compliance and regulations now ranges between 10-30%, a three-fold increase since the financial crisis, some treasurers commented.

However, after two successive years of managing very practical compliance projects such as the Single Euro Payments Area (SEPA) and derivative position reporting under the European Market Infrastructure Regulation (EMIR), the challenges will be different in 2015.

"EMIR was extremely hands-on," says Ruth Wandhöfer, Global Head of Market and Regulatory Strategy at Citi's Trade and Treasury Services division. "The regulation we've got this year is going to be more indirect in the way it impacts treasurers." Monitoring developments in the market and making their voices heard by regulators on issues such as banking regulation will continue to be important, but also challenging."

In the US, corporates might feel the impact of regulation more directly, most notably in the case of the Report of Foreign Bank and Financial Accounts regulation (FBAR). This regulation, brought in to help trace funds that might be used for illicit purposes, will require all US domiciled corporate to file annual electronic reports on any foreign bank account that's average value of or above $10,000. With the compliance deadline for FBAR now set for 30th June 2015, affected corporates will be working hard to ensure they can meet the requirements of the regulation in time. But given that corporates often hold a multitude of bank accounts across multiple jurisdictions this is not, by any means, going to be a straightforward task – at least not in a world still lacking a viable multi-bank eBAM solution.

> "The regulation we've got this year is going to be more indirect in the way it impacts treasurers."
>
> Ruth Wandhöfer, Global Head of Market and Regulatory Strategy, Citi

Seizing the opportunity

Although regulation is often – and understandably – perceived as a challenge by treasurers, we should not forget that some measures, particularly those that fall into the standardisation and harmonisation bracket, can also offer corporates a chance to review and improve upon departmental processes.

Indeed, if Wandhöfer's observation that hands on compliance projects are not going to feature so strongly in 2015 holds true, then now may be the perfect time for treasurers to really focus on seizing the opportunities presented by recently completed projects such as migration to the Single Euro Payments Area (SEPA).

"With every challenge there are always opportunities as well," says Maha El Dimachki, Head of Cash Product Initiatives for RBS Global Transaction Services. For treasurers, taking the time to look at where there could be potential opportunities to change or enhance a process affected by regulation can be enormously beneficial, but that is not always apparent at the start, she explains. "For example, while what was pure regulatory compliance for many corporates initially, has become an opportunity for treasurers to obtain further business benefits. The treasury agenda continues to be about automation, integration and optimisation, and the economic environment in Europe is pushing treasurers further in that direction."

Having finally put to bed their SEPA migration projects in 2014, corporates operating in the Eurozone in 2015 are as a result looking excitedly at a range of new possibilities barely imaginable a few years back. Ideas such as pan-continental collections factories, which nobody had previously attempted before now due to the technical difficulty, are becoming a reality. "Corporates will benefit from improved cash conversion cycles and cash allocation," she adds. "As soon as the SEPA deadline passed, companies were already starting these types of discussions with us."

> Best practice in treasury has always been about greater optimisation, automation and integration.

Almost everyone in the industry agrees that SEPA offers corporate treasuries a chance to review current payment processes. Less discussed, but by no means less significant, are the opportunities presented by IFRS 9. The introduction of the new standard might make it a good time for corporates to "dust off" and review old risk management policies as well as seeking more alignment between risk management and the application of hedge accounting, says Sander Van Tol, Partner at treasury consultants Zanders. Under the old regime, some corporates were discouraged from hedging due to the rigid nature of the standard. Once IFRS 9 begins to be applied, however, corporates might want to look again.

"I feel that a lot of corporates are missing opportunities," Van Tol explains. "They are not hedging certain economic exposures because of the negative accounting effect. Hopefully with IFRS 9 the whole debate about whether to hedge or not will start over again," he adds. "I think it's an excellent opportunity."

Next steps

With all the recent turmoil in financial markets coupled with the unprecedented plethora of new regulation hitting the statute books, the past few years have not, by any means, been an easy ride for corporate treasurers.

But while the year ahead of us will surely prove every bit as challenging for the profession, many believe that the nature of the challenge in 2015 will be very different. If the past several years have been about merely keeping up with the pace of regulatory change and ensuring a minimal level of compliance with the various diktats coming out across different jurisdictions, this year treasurers have a chance to move on to the next step.

This next step should involve seeking out opportunities to exploit within necessary compliance projects – such as SEPA and IFRS 9 – and using these as an incentive to review and improve existing practises, processes and policies.

Those that seize such opportunities will almost certainly be better placed for riding the ongoing economic storm. Best practice in treasury has always been about greater optimisation, automation and integration. In the environment we find ourselves in now, these can no longer be seen as luxuries, however. They must be priorities. ■

Repo cash management: how it works for Microsoft

Olivier de Schaetzen
Director, Head of Product Solutions Global Markets

euroclear
Post-trade made easy

Collateral management specialists, such as Euroclear, have been convincing more and more corporate treasurers to discover the benefits of using repo for cash management.

Generally, repo is a newcomer to the treasury toolbox but it is gaining traction as treasurers begin to feel more comfortable with its flexibility, high level of security and the possibility to pick up some additional yield.

Pre-crisis, cash management was routine for treasurers: they placed their cash with banks, usually unsecured and on a simple deposit basis. However, the reality of bank failure left many treasurers worried about the risk of unsecured loans even to institutions they knew well and had done business with for years. Post-crisis, it is clear that the 'too big to fail' concept is no longer valid.

This has left many treasurers unsure of what was the best strategy for ensuring their cash reserves were safe, secure and, also importantly, maintained cost-effectively.

Cash deposit fees

This latter point has lately become a more pressing issue. The European Central Bank (ECB) has rolled out a number of measures designed to discourage banks from parking cash at the central bank and to encourage them to lend more into the real economy.

For example, back in June 2014, the ECB announced that banks would be charged for depositing cash there and introduced negative interest rates.

It was only a matter of time before the banks passed these additional costs on to their clients and in November 2014, Commerzbank announced it would begin charging fees to large corporate clients holding substantial deposits at the bank.

Commerzbank was the first major bank to introduce such a fee but other banks are expected to follow.

Value-added cash management

The news has further increased interest in cash management alternatives and this is where an International Central Securities Depository (ICSD) offering sophisticated collateral management can step in.

Tripartty repo delivers value-added cash management services to corporate treasurers while ticking all the boxes:

- Safety: repo transactions are safe and fully secured with treasurers retaining total control over the quality of collateral they are willing to receive.
- Ease: using a tripartty agent makes the transaction easy as the agent takes care of all the collateral and margin management.
- Efficiency: cash givers in a repo gain a repo rate fee and have the ability to re-use securities received as collateral.
- Flexibility: collateral takers can choose from a number of eligibility criteria in order to customise the profile of the collateral they will take to reach their yield objective.

For decades, ICSDs have been in the background of the financial sector and have been described as 'plumbing', a necessary utility. This means that while banks and other financial institutions are used to interacting with ICSDs, many in the corporate sector have been unaware of their role in both domestic and international markets.

A safe location

However, ICSDs have become more visible in the post-crisis world and are now seen as yield-generating but risk-averse shelters. At Euroclear, we are seeing substantial growth in our tripartty volumes as the number of users – that is, both cash givers and takers – has increased.

Many of these new clients are attracted to our Collateral Highway ecosystem encompassing a growing network of bank and financial institutions from around the globe, with supranationals, central banks, buy side and corporate participants plus other major infrastructures such as clearing houses and trading platforms.

An ICSD, such as Euroclear, has therefore become an attractive location where investors are able to find a wide range of counterparties who offer collateral in the form of securities that satisfy every level of risk appetite.

Indeed, Euroclear's own data shows how risk appetites have been changing over the last few years. Cash providers have been beginning to seek more yield by relaxing their tough collateral rules without jeopardising safety for their cash placements.

This combination of security and additional yield is not just attracting banks, it is also bringing more corporate treasurers to tripartty repo.

Control and flexibility

Looking at the ratings of securities accepted as collateral, it is clear that collateral takers (cash givers) are increasingly willing to accept a wider range of collateral in repo transactions. An important feature of tripartty repo is the flexibility that the collateral taker has in establishing the criteria of the acceptable collateral.

At Euroclear, our clients can choose from around 200 criteria covering not only the rating of the security but also jurisdiction, industry, currency and concentration limits. This means that a corporate treasury can detail exactly the collateral securities it is willing to take in accordance with the the organisation's risk policy and the yield it wants to achieve. In the following case study, Microsoft explains how they set up the exact repo framework to suit their needs.

Making the GMRA process easier

There is only one global standard contract and so it is important to have a valid GMRA rather than any limited alternatives. As noted by Eric Barka in the case study, however, the GMRA can be daunting for entrants to triparty repo transactions. In some cases, the GMRA's reputation has even deterred corporate treasurers from taking part.

However, Euroclear's RepoAccess service provides an innovative solution for treasurers by arranging a standard GMRA with the banking counterparty (or counterparties) on behalf of the corporate client. This saves the corporate treasurer a great deal in time and legal fees and, of course, enables the transactions to begin quicker.

Once the GMRA is in place, the treasurer is well on his or her way and partnering with a triparty agent makes the process easier and more efficient. Plus cash givers in a triparty repo transaction do not pay a fee. Isn't it time you tried triparty repo?

Microsoft: a client's story

Microsoft was looking for a suitable and very secure liquidity management vehicle for the EUR cash it had pooled as it worked through the latter stages of a recent acquisition. Initially the company invested in EUR-denominated debt and commercial paper taking short-term positions. The acquisition closing date was uncertain and this meant that Microsoft needed to have a great deal of flexibility with regard to the terms. The company did its research and discovered that the majority of the dealers with whom they benchmarked held most of their EUR collateral at Euroclear. A decision was taken to engage Euroclear as triparty agent to carry out all the administrative work for a number of repo transactions.

Staying in control

Retaining control over the collateralisation process was a priority for Microsoft.

"Our research revealed that not many corporates were active in EUR triparty but the solution looked perfect for Microsoft as we wanted to retain complete control of risk mitigation," said Eric Barka, Treasury Manager at Microsoft. "We felt reassured by being able to negotiate highly specific T&Cs including high-quality collateral, such as sovereign and supranational credit quality, plus precise concentration limits and collateral margins."

Microsoft's research showed that triparty repo transactions offered particularly good risk management and acceptable return on the notionals they were placing – ranging from EUR 50 million to 500 million.

Completing the paperwork

As an American company, Microsoft had initially anticipated using the US-based triparty agent it generally used for USD positions but it became clear that the most cost-effective option for EUR transactions would be to work through a European utility. Microsoft was onboarded as a Euroclear client and the company then began the process of preparing Global Repurchase Master Agreements (GMRAs) with three counterparties (banking institutions). The GMRA is the global standard used by the financial industry and has to be arranged between each pair of counterparties.

An important characteristic of triparty repo transactions is the high level control the cash giver (collateral taker) has over the securities it receives. It is able to choose from around 200 options covering asset type, rating, currency, jurisdiction, industry, concentrations etc. The profile of acceptable collateral has to be negotiated and agreed between the counterparties and this forms part of the GMRA. This process was lengthy but Euroclear was on hand to oversee the process and to verify that the counterparty agreements had clearly matching terms. The company underwent testing with the counterparties and was then able to go forward and begin the trades.

Achieving the objective

The Microsoft Capital Markets trading team managed more than EUR 6.5 billion through a number of overnight and term triparty repo transactions and was satisfied with the results achieved.

"It was a priority for us to work in a very secure and fully collateralised environment with flexible settlement dates," said Alex Blackmur, Senior Portfolio Manager. "The chosen solution effectively delivered a safe short-term investment solution that provided liquidity and competitive yields."

Euroclear took care of all the collateral – sourcing the most appropriate securities according to the agreed collateral eligibility criteria. It then carried out any required collateral substitutions and all other collateral management activities including mark-to-market valuations and margin calls. This relieved the counterparties of all the usual administrative burden and Euroclear was able to ensure the counterparties had good visibility throughout the lifecycle of the transactions.

"Euroclear took care of all the collateral allocation and optimisation and offered great support throughout. I have to say I was delighted with the experience," said Mr Barka.


At Bank of America Merrill Lynch, we believe in the value that talented treasurers bring to global business. Being a truly successful treasurer takes courage and determination, simply talking the talk isn't enough. It means stepping outside of your comfort zone and pushing boundaries. It also means taking calculated risks: you miss 100% of the shots you don't take.
An effective treasury team can make the difference between a company that simply survives and one that truly thrives. That's why, for a third successive year, we're delighted to support the Adam Smith Awards, as they recognise best practice and industry innovation.
Jennifer Boussuge, head of Global Transaction Services EMEA
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Treasury Today is delighted to announce that for the third successive year, Bank of America Merrill Lynch is sponsor of the Adam Smith Awards. Adam Smith Awards are universally recognised as the ultimate industry benchmark in treasury excellence. The Adam Smith Awards are unique in their aim to shine the spotlight on corporates that are excelling; that demonstrate cutting-edge thinking and are driving the industry forward. Now entering their eighth year, the Adam Smith Awards have gained increasing momentum and present the perfect opportunity to reflect on and celebrate the remarkable achievements of corporate treasury professionals today.

ENTER FROM 30th JANUARY

Over the last seven years, the competition to win the accolade of an Adam Smith Award has grown, with increasingly innovative nominations being submitted. Open to all corporates, the Adam Smith Awards recognise and reward the success of corporates, regardless of company size, budget and industry sector.

Nominations will open on 30th January and close on 30th April 2015. The short nomination form will be on the Adam Smith Awards pages of the Treasury Today website and should take no more than 15 minutes to complete. There is no limit to the number of entries that can be submitted and a single project can be entered under more than one category. Nominations can be made by any corporate. Banks and service providers can assist their clients in completing the nomination form and may submit nominations on behalf of their corporate clients, with their approval.

Winners will be announced in May and will be invited to attend a celebratory Awards Lunch which takes place in June at Plaisterers' Hall, a highly prestigious venue in the City of London. As well as being presented with a stunning crystal award, the Adam Smith Awards Lunch provides a superb opportunity for networking, and enables winners to significantly raise their profile and that of their team, whilst showcasing their achievements to colleagues, clients, investors and peers.

The Adam Smith Awards recognise excellence in treasury. We look forward to receiving your nominations.

Award categories for 2015

- Treasury Today's Top Treasury Team 2015
- Best Cash Management Solution
- Best Liquidity Management/Short-Term Investing Solution
- Best Working Capital Management/Financial Supply Chain/AP/AR Solution
- First Class Relationship Management
- Best Trade Solution
- Best Card Solution
- Best Financing Solution
- Best Foreign Exchange Solution
- Best Risk Management Solution
- Best in Class Benchmarking
- Harnessing the Power of Technology
- One to Watch
- Best in Class Treasury Solution in the Middle East
- Best in Class Treasury Solution in Africa
- Treasury Today Woman of the Year
- A Rising Star
- Best Corporate Social Responsibility Initiative

In the mix: corporate funding sources

Despite the record cash reserves being held by large corporates, securing the right balance of external funding remains a key concern for most treasurers. But with banks constrained by regulation, and the continuing low-yield environment showing no signs of abating, which is the best option – bank loans or bonds? Or perhaps an alternative to these traditional sources?

Corporates, at least in Europe, are sitting on more cash than they ever have before. In September 2014, companies in the EMEA region held cash reserves of nearly €1 trillion, according to research published by Deloitte. Surely, then, most corporates don't need to worry about their funding mix – that is, how their sources of funding break down into equity, bonds, and bank lending – why don't they just finance projects, acquisitions and growth internally?

However, delve into the figures a bit deeper and you realise it is not quite as simple as that. Deloitte also found that 75% of cash reserves in EMEA are held by just 17% of corporates in the region. And this trend broadly replicates corporate cash concentration worldwide, with approximately a third of companies holding 80% of the world's $3.5 trillion corporate cash reserves.

A key driver of this hoarding is caution. After all, in recent years, many corporates have become wary of finding themselves short of liquidity, so have often refrained from undergoing significant or transformational change. This has led to event-driven financing being subdued.

"Since the financial crisis, companies have generally been more conservative in funding themselves," says Richard King, Head of UK Corporates and Debt Capital Markets at Bank of America Merrill Lynch (BofAML). "They saw what happened during the crisis, with credit markets grinding to a halt, and there has since been an increasing desire among corporates to boost their liquidity, even to the extent where they're sometimes overfunding themselves."

Colm Rainey, Head of UK Debt Capital Markets at Citi, concurs that caution is now the name of the game. "There is definitely a higher degree of caution in the market now," he says. "It is a case of 'once bitten, twice shy', but even those who didn't get bitten in 2007 knew another corporate who did."

Many corporates are expressing this caution in the way they pre-fund maturities. "In cases where companies know they have got bond or loan maturities coming up, they are tending to pre-fund those maturities earlier," says BofAML's King. "In the past they might have waited only 12 months before the maturity, whereas now they're typically going to the markets and funding them a lot earlier."

"No one's getting into trouble with management for being pre-funded, particularly with debt costs as low as they are," adds Citi's Rainey. "This caution is permeating organisations. There is a genuine belief in companies – not only from treasurers, but from the board level down, that it's better to be safe and bear the cost of carry than worry overly about carry and then realise it's blown up in several months' time. This is an organisational change – treasurers are being listened to more carefully than they were in the past."

Monitoring counterparty risk

Amid this mood of caution, counterparty risk monitoring has also come right to the fore. "Pre-financial crisis there were many companies that didn't even think about the counterparty risk on banks – they thought that, within reason, banks were never going to fail as the majority of the big banks were very highly rated," says BofAML's King. "The financial crisis has shown that's something they absolutely have to think about, as most – if not all – of the banking sector has been downgraded since the crisis."

Of course, regulation has also played a part in creating this environment. Since the financial crisis, regulation on banks – such as the capital adequacy measures that are part of Basel III – has begun to transform the way they are structured, and to a certain extent, has impinged on their lending activity as well as the buffers they hold. Barclays, for instance, has twice the amount of capital it had pre-crisis and seven times the liquidity. This regulation has had, and will continue to have, an impact on corporate lending activity, acting as a brake on some of the business the banks were able to provide customers in times gone by.

"The banking industry is facing long-term structural changes through regulatory initiatives," explains Karl Nolson, Head of Debt, Managing Director, Barclays Corporate Banking. "The industry as a whole is certainly benefiting from additional governance as banks are required to put aside significantly more capital for every pound they lend. Therefore, put simply, regulation is likely to act as a floor on loan pricing and an appetite ceiling in terms of the amount of credit that banks will be prepared to provide for customers."

Despite this caution, and the impact of bank regulation on lending, it is not all doom and gloom in the bank lending market. "That's not to say that the loan market is not buoyant – banks are keen to lend and indeed prepared to underwrite large loan transactions – as we have seen on a number of occasions this year. However, the majority of loan demand has come from finance teams taking advantage of the lowest cost of debt for a generation and banks being very keen to lend," says Nolson.

He adds that bank lending should continue to be a key means of providing finance for corporates. "It is important to note that loans still remain a staple source of funding for European businesses: their share of total financing may have fallen since 2008, but volumes have remained far more stable over the past seven years than other types of funding. So, given their inherent flexibility and private nature I expect loans to remain a strategically core funding component for UK and European businesses."

An alternative route

Banks are not the only ones to provide funding to corporates. A big development that has shifted the corporate funding mix in recent years is the emergence of alternative financing. Banks that have historically provided lending to corporates are no longer just competing with other banks or traditional lenders. Peer-to-peer lenders and challenger banks are providing additional liquidity to smaller businesses, while mid-to-large sized corporates are increasingly looking to non-bank lenders, including lenders in the private equity space. Meanwhile, multinational corporates are increasingly turning to private placement funding.

"The common underlying theme for alternative sources of finance is low interest rates causing investors to search for higher returns by entering new or alternative markets," says Barclays's Nolson. "This additional liquidity, or more people investing, is seen in the fall in average Yield-to-Worst for BB-rated high-yield bonds from highs of above 10% in 2011 to current levels of 5% and the volumes of UK non-financial borrowers have risen from $70 billion in 2007 to $101 billion in 2014 to date."

However, despite the growth in alternative financing, capital market financing remains the biggest alternative to bank lending. "Business is benefiting from a more diversified funding mix – borrowers are presented with highly attractive financing options and this has led to less reliance on traditional bank loans," says Nolson. "We can see these trends reflected in corporate capital raising in the UK – for instance, in 2007, loans represented 75% of corporate funding, but since then debt capital market and equity capital market funding have made up an increasing share with 30% and 13% of the capital stack in 2014 respectively, with loans therefore making up 56%." Bonds, therefore, remain crucial for corporates. But could they eclipse bank lending?

Bank to bond shift?

A commonly held view is that corporates in the US are much more reliant on the debt capital markets for their financing than their European counterparts. Indeed, in 2007, around 20% of the corporate funding mix in the US was made up of bonds, compared with just over 10% in the EU (see Charts 1 and 2). However, since then reliance on bonds in both regions has fluctuated, rising in 2009 (to 37% in the US and 43% in the EU), before falling again in 2010 and 2011 (22% and 26% respectively). Interestingly, the debt capital market proportion of the funding mix in the EU has exceeded that in the US for every year since 2011 (in 2014, as of November, the bond percentage was 26% in the US and 38% in Europe).

Besides the challenges in the bank lending market we have already seen, what other drivers are there behind this move into debt capital market financing?

Chart 1: US Funding mix 2007 – 2014

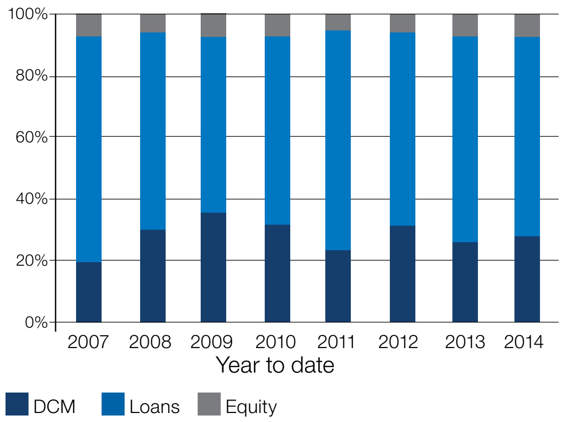
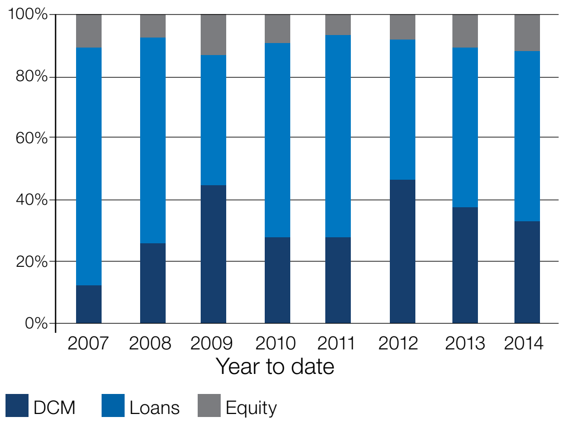


Chart 2: EU Funding mix 2007 – 2014



Source: Dealogic

One is the way the bond market has evolved since 2007. "The bond market has significantly matured over the last few years and this development has made it more flexible and accessible for companies," says BofAML's King. "The Euro Medium Term Note (EMTN) programme, for example, facilitates the raising of relatively small amounts of money at very different tenors with individual investors or a group of investors on a regular basis. This allows companies to be more targeted and flexible in their financing – they don't have to go out and raise €1 billion from the bond market; they can raise €100m or €200m via a private placement. The US private placement market has also come into its own over the past few years – it has become incredibly stable, and remained open throughout the crisis, which is not always the case in the public bond market."

This flexibility helps corporates tailor their funding needs to their specific circumstances, with the competitive pricing and long-dated maturities these markets offer. "Many corporates need a quantum of debt that can no longer be supported by the bank market, or they want the higher flexibility that bond markets give them," says Citi's Rainey. "With pricing where it is at the moment – corporates are thinking if there's ever a time to start financing in bond markets, it's now. Ryanair's debut unsecured Eurobond this year is a good example of this. For an airline to get away with doing a senior unsecured issue was pretty phenomenal, and the 1.875% fixed-rate coupon for €850m of BBB+ debt is impressive."

Besides this evolution of the bond market, the low-yield environment tends to make bond financing more attractive than bank financing in many cases. "Interest rates in Europe in particular are extraordinarily low and will probably remain low for the foreseeable future, and as a result companies can raise funding very cheaply and for very long tenors," says BofAML's King. "Corporates can get 10-20+ year money at very low rates with all-in coupons of 1-4% depending on the credit rating, which is much better than getting shorter-dated money from the bank market, which is generally a five-year market. Bond financing gives you much longer-dated money, allowing you to lock in longer-term rates at very cheap levels, which makes a lot of sense."

This has also boosted the corporate hybrid debt market, which many companies view in the current low-yield environment as a form of 'cheap equity'.

An increase in M&A activity is giving the bond market a boost, too. "Acquisition financing is clearly back en vogue," says Citi's Rainey. "The increasing confidence in the market is impacting on corporate boards, and we have seen something of an M&A frenzy in sectors such as tobacco, pharmaceuticals and telecoms. This is helped by supportive bank groups – generally corporates are incentivised to replace bank debt reasonably promptly with bond debt – and if they don't do so then the cost of the bank bridge gets higher and higher in order to facilitate that encouragement."

"Acquisition financing is capital-friendly for banks given that it's short term and as such there is demonstrably strong willingness to lend into M&A situations. These take-outs are likely to drive bond volumes over the next year," he adds.

In the shorter term, low interest rates are also stimulating the commercial paper (CP) market, which, though flagging previously, reached an 11-month high in the US in November. "In the current low-yield environment, the Group can issue CPs at very low rates," says Brice Zimmerman, Head Treasury Control and Reporting at Novartis. "Also, reflecting the high liquidity in this market, CPs are an attractive source of short-term liquidity that offers a high degree of flexibility as it can be repaid quickly."

Keeping a balance

Despite the increasing popularity of debt capital market financing (at least in Europe), bank loans remain a core part of most corporates' funding mix, and the competition between banks (and others) to lend to corporates is intense. "It's clear that there are a number of banks from across Western Europe, Asia and the US that have been keen to grow their loan books, and as a consequence, the broader loan market has become increasingly competitive. This is seen not only in price or terms, but also in the amounts each bank is prepared to hold in an individual transaction, concludes Barclays's Nolson."

Funding choices are often a case of 'horses for courses'. "Bank financing is still there and is still pretty attractive for the right clients, depending on who they are and what they're doing," says Citi's Rainey. "Companies go to the bond markets for a variety of reasons, but there has not been a huge shift away from bank financing to bond financing. Each has its role to play and both are constructive." ■

Windows of opportunity

George Zinn
Corporate Vice President and Treasurer

Microsoft

George Zinn started his working life on the floor of the Chicago Mercantile Exchange. A few well-timed professional moves later he found himself at the doors of the mighty Microsoft Corporation where he was initially taken on as Financial Analyst. Having ascended the ranks and taken on the mantle of Corporate Vice President and Treasurer, Zinn entered the history books in 2009 by leading Microsoft's AAA-rated $3.75 billion inaugural debt issuance. He talks to Treasury Today about keeping the world's biggest software business in rude financial health – and reveals how one early career dream was an aspiration too far.

Software industry giant, Microsoft Corporation, needs little in the way of introduction except perhaps to note that for the past few years it has also been venturing into the realms of hardware, most visibly with the $7.5 billion on-boarding of Nokia's phone businesses and design team. As a business with truly global exposure, Microsoft has more than 350 subsidiaries in 126 countries, employing in the region of 120,000 people. The cash-rich company, which has an annual turnover in excess of $70 billion, operates a largely centralised treasury based in Washington State.

"I was confused at a young age into thinking that I might become a professional ice hockey player," admits George Zinn, Corporate Vice President and Treasurer, Microsoft Corporation. "That delusion was clarified quickly by my genetic makeup." Whilst Zinn may feel he does not have the extra bulk required to make it big in the world's fastest team game, he clearly has serious stature in the rather more intellectually demanding (and hopefully gentler) world of corporate treasury, and with one of the world's biggest names in software at that. Indeed, the degree of professionalism with which he undertakes his responsibility for investing and managing Microsoft's corporate assets is not lost on the wider financial community, Zinn having in recent times been listed in Treasury & Risk Management magazine's Top 40 Finance Professionals and later making it onto that magazine's 100 Most Influential People in Finance list.

Today, Zinn leads a broad-based team which he describes as being organised "slightly differently" than most treasuries in that it stretches in many directions. The team he leads manages the company's worldwide financial and corporate risk, investment portfolio, strategic portfolio, foreign exchange, corporate and structured project finance, dilution management, cash and liquidity, customer financing and collection activities. "We have a framework that works well to unite us across seemingly disparate functions," he comments.

With the completion early in 2014 of the deal to buy Nokia's phone businesses and design team, Microsoft's treasury now reaches across a dozen locations globally, spanning multiple time-zones. The Nokia deal provided a European treasury centre, in Geneva, joining prior established collections centres in Singapore, Rio de Janeiro, Fort Lauderdale and Dublin. To this has been added teams of "forward deployed people" in emerging territories (for Microsoft) such as China, Brazil and Dubai. In total, its treasury employs around 100 people.

By reaching out across the world as far as it does, cash management, planning and operations teams work with almost 200 banking relationships, over 1,000 bank accounts and multiple currencies. The overall framework is managed along the lines of what is referred to internally as "the lifecycle of the dollar". In this structure, the main hand-offs from collections are to the capital markets and corporate finance teams, the latter providing services around longer-term forecasting and liquidity management.

In reality, the lifecycle approach is about working capital management. It means that the first point of contact for a dollar (or any other currency unit) will be the globally distributed credit and collections teams. The lifecycle process then works not just to aggregate but to ultimately concentrate the company's funds and collections accounts in 20 cash centres.

Together in adversity

As part of this centralised treasury and risk management infrastructure, and given that with a global presence it is ever subject to the vagaries of financial and political upheaval, Microsoft seeks wherever possible to reduce cash balance risk. It does this through a cross-border, multi-company zero-balance account structure, a multi-bank automated balance sweeping programme, and a single payments-on-behalf-of (POBO) centre. Where the POBO structure cannot be used, essential functions such as payroll and accounts payable can operate a 'just-in-time' funding system to keep these elements running without risking excess liquidity in local accounts.

When this structure is allied with information reported via regular risk and multi-function finance team monitoring and discussions of global events, the financial leadership group is in a strong position to act. For example, when financial events took over in Greece and Cyprus recently, and when Egypt's Arab Spring gripped the country, Microsoft's cash exposure was almost zero but it was able, even when the markets were closed, to make payroll and supplier payments where many other businesses could not.

It is clear that overarching the entire operation is the risk management function. In part, the business risk response can be "translated into insurance", says Zinn. "But a subset of our business risk is the financial risk created from our investing activities, and the risk team manages and monitors according to our investment policies too." These policies, he explains, track various limits such as counterparty and collateral posting limits, the types of securities that may be invested in and limits on different concentrations.

Zinn acknowledges that although this broad-based company structure allows for discrete operation of functions, treasury does not, and indeed cannot, operate in isolation. "Like any function, we are dependent on other functions within the company," he states. "I don't really think of us as being under one roof; I think of us as mutually dependent across the company." Zinn's expanded treasury team has, for example, to think of liquidity from an onshore and offshore perspective and is critically dependent upon the tax group; the central planning function that aggregates forecasts from all business units, also checks back with his collections team to see how much has been collected, based on those forecasts. "We're joined at the hip with that team as well, but we're not under our roof."

Share it

The key to all sources of information being accurate and timely may be found in the use of Microsoft's own SharePoint platform. As the name suggests, it can be used to store, organise, share and access information and it does so by integrating intranet, content and document management functions into a single web-based platform. "We found it really helpful for collaboration on implementation projects," comments Zinn. In a recent project with a custodian, he explains that the software was used to enable teams to share securely between two separate corporate domains; in other words, it even works securely across firewalls.

It comes as no surprise that Zinn's team has spent a lot of time thinking about the right technology for its operations. He marks a distinction between broad-based offerings that perform many functions but not everything well, and point solutions that do just one thing well. This, he says "is the fundamental technology trade off" that requires a philosophical choice to be made. "We have a fabric of systems, as opposed to one large workstation, and use our BizTalk server middleware to align everything."

Alignment of technology is of course essential as Microsoft's treasury group aspires to straight through processing where only exceptions require human intervention. BizTalk was used for Microsoft's SWIFT implementation, for example. With multiple banks sending multiple MT940s (statements), Zinn says there was a strong driver to be able to automatically upload them. "The more you can take out manual processes, the more time you have to focus on value-added activities," he muses.

Working for a high-tech firm naturally influences receptiveness to new ideas. Treasury is no exception. "It's just logical. Anything our team can do with our technology to make our lives better we embrace," states Zinn. He explains how he welcomed the arrival of an app on his Windows phone that uses a Microsoft Exchange Active Directory layer to allow secure approval of large-value wire payments. The system uses strong security and authentication processes – "no less than doing it from a desktop" – and 'safe limits' for users with different levels of approval with a workflow that ends with Zinn. "It saves us from running between buildings. We basically eliminated the run around. And if someone is on the road we're no longer hung up – they can use their mobile device."

Working together

The human connection between the Microsoft Treasury team and the various businesses across the group is one he also describes as being in "rude health". This has been based in part on a willingness to go the extra mile; this facility is what helped Microsoft make payroll in Iceland when the systems were 'frozen' and in Egypt during its Arab Spring. "We have worked hard to become a value-added member and as a result other teams include us in their thinking; when you're included earlier on it is easier to react and be helpful in joint solutions."

Whilst treasury is something of a functional linchpin within the group, Zinn does not see that it is necessarily appropriate to be consulted on everything at board level. The fine detail of product strategy, for example, he feels would not benefit from his input. However, treasury has a valuable contribution when considering the funding of project development. "The team can help other functions understand what the constraints could be in certain locations where currency controls are in operation," he suggests. "This is less about whether a project can be funded and more about figuring out how we efficiently get money in or out in a timely fashion and from which entities."

It is obvious that the wherewithal to make the best of a given situation was tested fully for most treasurers as the financial crisis hit. The most inventive players managed to extract long-term operational benefits from the worst of times and Zinn and his team easily slot into this category. "Some tremendous good came out of it for us in that we were viewed as being proactive and highly valued." As an example of pro-activity, treasury enabled sales credit limits to be maintained "by going quickly and early" and offering essentially a pre-paid discount to customers. By ensuring customers were no longer up against credit limits, the sales team were able to keep selling and even driving revenue upwards. Presence and proactivity during the crisis is now being remembered by its commercial partners as economies come out of the worst of it; this is further strengthening ties.

But a lot of regulation was pushed forward as a result of the financial crisis too, with the impact of banking regulations, particularly Basel III, likely to have an indirect impact on corporates. "We're really looking at this and trying to work out how behaviours will change, and being proactive as a result," says Zinn. "Where Dodd-Frank will require centralised clearing and collateral posting, it is clear to me that you can't have that regulation without costs rising," he continues. "It's also well known that banks are not 501(c)(3)s [tax-exempt non-profit organisations] and so those costs ultimately have to be passed on to their customers. If the costs make the activities prohibitively expensive we have to be smart about not just doing something one way because we've always done it that way. It may require us to reconsider processes we have had in place for a long time."

Flexibility is an important quality for a global treasurer. Having led Microsoft's $3.75 billion inaugural debt issuance back in 2009, Zinn views Microsoft's current funding approach as "fairly straightforward". But the differences in taxation between various jurisdictions can, he notes, represent "a very large delta". This is why many companies with overseas cash, including Microsoft, still have domestic borrowing requirements. "If the delta is in double digits, in certain situations you will end up borrowing in the US to fund operations there, but having to figure out ways to be tax efficient." In his role as a fiduciary, he stresses the necessity to pay no more tax than is due, "otherwise you are not performing your duty to your shareholders".

On the investment side, Microsoft's cash-rich status enables it to exploit a diversified portfolio. "Our greatest single financial risk is probably interest rate risk, so diversifying investments where possible makes perfect sense." This has led the Treasury team to be opportunistic in times of strife, where others have had been forced to sell for liquidity reasons during the worst of the financial crisis.

Hard work but worth it

Over the last year, Microsoft's integration of Nokia has occupied a lot of time for Zinn and his colleagues. He stresses the fact that Microsoft did not buy the entire Nokia business and as such this had an impact on treasury. "As a seller, when you try to understand what life looks like after the close date, you will want to maintain your ability to operate. With Nokia, a lot of centralised or shared service functions did not come with the deal, and as a result of that we didn't acquire the treasury group," he explains. "Without interrupting business activity, we have had to figure out how to transition the running of what was formerly a very large part of their business. That has been a lot of work." This is why Microsoft now has a team in Geneva effectively co-locating with the current Nokia team, trying to on-board treasury services as soon as possible.

Zinn is proud to relate that what he really loved about coming to work at Microsoft was the opportunity to broaden his professional experience "in a very enriching way". Looking back at his career, he believes that if he'd stayed in financial services his view would have remained relatively narrow. "When I came to Microsoft I was primarily focused on FX. But I was soon able to broaden my outlook, getting involved in many different activities. For me, diversity of experience is far more fulfilling."

So it is that the evolution of Microsoft from a software firm to now include hardware and services has for Zinn been an exciting progression. "Before, all of our assets were cash. Now, as we have evolved into more of a hardware business, we have these things called inventories!" he jokes. "We've had to figure out not only how to move away from thinking of everything in just cash terms but also how we move towards funding, forecasting and sourcing for things such as parts, logistics and shipping insurance."

As for anyone seeking advice on how to move up the treasury career ladder, Zinn refers to his own progress and what he may have done differently. "I think that I would have gotten broader experiences sooner because it's so much easier at that stage to take those risks and switch roles than it is to do so later in life," he concludes. One thing is certain: with all his experience to date and the esteem in which he is held in the treasury and corporate finance community, ice hockey's loss has clearly been treasury's gain! ■

J.P. Morgan: the most powerful man in America

The first in a new series examining the lives of famous figures that have shaped the financial world, this article documents the rise of John Pierpont Morgan. Although he was born into a well-connected family and was groomed for success from an early age, J.P. Morgan's personality and tenacity were the factors that ultimately ensured his success.

"Congratulations, Mr Carnegie, you are now the richest man in the world," said John Pierpont Morgan, as he shook hands on the deal that would see him take control of Andrew Carnegie's steel empire. The deal, worth $480m, was the biggest in American industrial history and created the world's first billion dollar company, US Steel. Although the transaction made Carnegie the richest man in the world, it also cemented Morgan's position as one of the most powerful men on the planet.

A flying start

Born on 17th April 1837, in Hartford Connecticut, Morgan was the son of Junius Spencer Morgan, a financer and founder of J.S Morgan & Co, a merchant bank based in London and

Vital statistics:

John Pierpont (J.P.) Morgan

Born: 17th April 1837 in Hartford Connecticut, America

Died: 31st March 1913 in Rome, Italy

Children:

Louisa Pierpont Morgan

John Pierpont Morgan, Jr.

Juliet Morgan

Anne Morgan

New York. J.P. Morgan had a privileged upbringing and was groomed by his father at an early age for a career in business. As part of this groundwork, Morgan attended the English High School of Boston, a school renowned for preparing individuals for a career in finance. It was during this time that he began to show great ability and understanding of mathematics.

Unfortunately, his education was interrupted for a year as he was struck with rheumatic fever and he was sent to the Azores for 12 months to recover. But Morgan subsequently returned to the English School and graduated, following his father to London at the age of 17. After moving to England, Morgan was soon sent to study at Bellerive in Switzerland and then on to the University of Göttingen, where he became fluent in French and 'passable' in German.

Upon his return to London, Morgan's father decided that it was time for his son to begin his career in finance – and found him a job as a banking clerk in New York City. Morgan excelled in this role, but had bigger aspirations. As such, he began to master the art of socialising and made a number of influential contacts. With big dreams, Morgan was constantly on the lookout for new opportunities in New York and was beginning to be noticed for his business instincts and attitude. However, after dabbling in some business ventures of his own, which were criticised by the bank where he worked for being too risky, Morgan realised that his vision extended beyond that of the bank.

In 1861 he left to work with his father to raise capital from Europe for American industry to grow. It was a difficult year in America though, with the outbreak of the Civil War. Many American men were called up to fight. Those with wealth, however, could avoid having to fight by paying $300 for a double to take their place. Morgan did precisely that, in order to focus on his career.

And by the age of 33, Morgan was earning more than $75,000 a year and living a very comfortable life, even considering retirement. However, a partnership with banker Anthony Drexel saw Morgan embark on another new venture: Drexel, Morgan & Co. Soon, Morgan became known as a man with great influence and he began attracting attention from the country's most powerful people.

Networks of power

The late 19th century was one of great change in America, sparked by massive industrialisation and facilitated by the building of the railroads: these were the new veins of the country – pumping capital, goods and people coast to coast. The king of the railroads at this time was Cornelius Vanderbilt, a business magnate and one of the richest men in the country. Vanderbilt's son and heir, William H. Vanderbilt was about to give Morgan his big break.

The New York central railway was one of the jewels in Vanderbilt's crown and he wanted to sell 250,000 shares in the company, the largest single block of stock ever offered at the time. Morgan was approached by Vanderbilt to sell these, but the offer wasn't without risk: the value and size of the shares meant that the deal would have to be executed with great skill to avoid causing bedlam in the market. Morgan was just the man for the job, it transpired, as he drew on his experience and knowledge, to successfully sell all the shares using discretion and back channels. Naturally, Morgan charged a high price for this service: a seat on the board at the New York Central railway.

After the Vanderbilt deal, Morgan gained a reputation as a skilled deal-maker and he was called in to settle a dispute between two competing railroad companies, whose rivalry had caused bad business decisions to be made, and cash to haemorrhage. Many of the investors in these companies were clients of Morgan and his father, a collapse was therefore something he could not afford. Calling both owners of the competing railroads to his yacht, Morgan facilitated a deal that not only settled the dispute, but also saw him gain more influence over the companies and the industry.

'Morganisation'

The railroads would be the first industry that underwent 'Morganisation' a process of which became Morgan's trademark. Despite their importance to the US economy, the railroads were in trouble in the late 19th century as overcapacity led to intense competition, which in turn created financial troubles for the railway companies. The 1893 stock market crash saw America enter a deep depression and caused many railroad companies to file for bankruptcy. It was in these troubles that Morgan saw an opportunity.

> In consolidating the industry (and having such overreaching financial control) Morgan was also able to monopolise it, the best way - in his opinion - to stabilise not only the railroad industry but also the American economy as a whole.

Using his company's wealth and influence, Morgan was called on to become an industry consolidator. He obtained a seat on the board of the troubled companies, taking lessons from his deal with Vanderbilt, and made significant changes including: cost cutting, restructuring debts, placing stocks in funds he managed, and also hiring senior executives that were loyal and whom he trusted. Many railroad companies underwent this process including Northern Pacific, the Reading and the Erie. By the end of his career, J.P. Morgan played a vital role in companies that accounted for around one sixth of the total railroad track in the US.

In consolidating the industry (and having such overreaching financial control) Morgan was also able to monopolise it, the best way – in his opinion – to stabilise not only the railroad industry but also the American economy as a whole. The manifestation of this was the creation of Northern Securities, a merger of two of the country's biggest railroads. Averse to competition, Morgan wished to prevent the price wars he had seen cause so much turmoil in the rail industry before. It was an effective tactic and one that stabilised the US economy and allowed the country to move from being a debtor nation to a lending one.

As the railroad network closed in on the Pacific Ocean, nearing its completion in the late 1890s Morgan's attention moved to other industries. He monopolised 70% of the steel industry with the purchase of Carnegie Steel. His bank also purchased Thomson-Houston Electric Company and created General Electric. These deals cemented his place as one of the most powerful individuals in America – and one of the greatest investment bankers of all time.

Investing in politics

With so much power and influence over the financial sector, and the country as a whole, it was only a matter of time before Washington came to Morgan's doorstep. The effects of the 1893 crisis and subsequent depression had seen a number of banks fail, and started a run on gold. As such, the US government's gold supplies were deteriorating rapidly. It was reported that the treasury was losing $2m a day and had a matter of weeks to survive.

Initially, Morgan was kept at arm's length due to his unpopularity among the electorate, however, as the crisis deepened there were few places left for the US government to turn. President Glover Cleveland arranged a meeting with Morgan and proposed a deal that would see the US government sell private government bonds to Morgan and his syndicate in return for $100m of gold. In the end, Cleveland settled for $60m – the run stopped and the economy began to settle. However, as many observers at the time highlighted, it wasn't just the gold now in the coffers that lifted the markets, it was Morgan's position as co-signer. Morgan gained significantly from the deal, although he never revealed his profits.

Split opinions

As Morgan continued to hold stock in numerous companies across various industries, many observers, notably those who were anti-big business, began to tout the idea that he also 'owned America'. His efforts in saving the US economy only strengthened this notion: after all, how could a businessman have the means and the power to save the US government when the President couldn't? Perhaps inadvertently, Morgan gave wealth and greed a face and this saw him develop many enemies.

The political left of America was the staunchest of enemies, continuously attacking Morgan and the undemocratic power he seemingly wielded (at the time, Morgan had helped William McKinley become President). But McKinley's assassination saw the tide turn. Theodore Roosevelt, McKinley's successor, was a man of the people and J.P. Morgan was firmly in his sights. It was Roosevelt's ambition to break up the monopolies, starting with Northern Trust. Morgan fought the ruling in court, however the decision was upheld; a rare defeat for the most powerful man in America.

However in 1907, with a touch of poetic irony, Roosevelt called upon Morgan to rescue the nation again as a financial panic created another gold shortage and a run on the banks. This time, Morgan arranged a number of meetings with Wall Street bankers and facilitated discussions over loans that would be used to bail out the various institutions including their weaker rivals. Morgan was quite likely the only man in America at the time that could have facilitated such a deal. His confidence and position allowing him to use tough negotiation tactics, which famously included locking a number of bankers in his house until terms on a particular loan were agreed, while he sat in another room playing solitaire!

Despite his efforts, public sentiment continued to turn against big business. The Wall Street 'money trusts' began to be investigated by the Senate Committee and Morgan was called to testify. It was during this meeting that Morgan underlined the philosophy that had allowed him to achieve all he had. When asked if commercial credit was based on money or property, Morgan replied: "no Sir the first thing is character, before money or anything else. Money cannot buy it because a man I cannot trust could not get money from me for all the bonds in Christendom." It was a statement that was met with public approval and saw the overall opinion of him soften. Yet this would be the end for Morgan and finance in America would move on without him.

J.P Morgan died in 1913, in Rome, at the age of 75. Following his death, Morgan's son, John Pierpont Junior took over the bank that today remains one of the world's most prominent financial institutions. Outside of finance, J.P Morgan's lifelong passion was art and he was known as one of the world's foremost collectors; at the time of his death, his private collection was valued at $60m. Today, his collection sits in the Pierpont Morgan Library in New York for public viewing.

Lasting legacy

In many ways, it was J.P. Morgan who inspired the architecture of the US economy as it stands today. The fallout of the Senate Committee and subsequent investigations into the power of Wall Street and big business saw the US government implement the Federal Reserve Act. In turn, the Act saw the creation of the new Federal Reserve System and control of the nation's money supply being taken away from Wall Street. The new Federal Reserve was fundamentally set-up to do what Morgan had done twice before (single-handedly): control and protect the nation's economy. Morgan also helped facilitate the transformation of the US economy into the industrial and economic leader it is today.

It goes without saying that J.P. Morgan was a visionary. He knew that, as America grew and companies looked to expand, the financial sector would become the industry that dominated all. He also knew that money wasn't everything – it was about power and influence too. Indeed, Morgan was happy to make his rivals rich if it meant he had the power. And as his deal with Andrew Carnegie was being tied up, Carnegie asked: "I wonder if I could have gotten $100 million more. I probably should have asked for that." And Morgan said, "If you had, you would have gotten it." ■

Famous quotes:

- "If you have to ask you can't afford it."
- "A man always has two reasons for what he does-a good one, and the real one."
- "Go as far as you can see; when you get there, you'll be able to see farther."

When the balloon goes up

If trouble hits, whether it takes the form of a natural disaster, a comprehensive technology failure, a terrorist attack, pandemic illness or a multitude of other horrors, would you know what to do? Treasury Today looks at how to approach business continuity and disaster planning and how key partners can help treasury when the worst happens.

Bad things can and do happen, but rather like insurance, business continuity and disaster recovery (BC/DR) plans are things that most companies hope they will never need to use. Of course, this presupposes that business has a plan of action and that everyone knows what to do when the balloon goes up.

When something does go wrong, it is already too late to start worrying about plans. Naturally, certain industries face specific risks that must be anticipated – a mining company, for example, clearly has to be prepared for an underground collapse, flooding or fire, not just as a preventative measure but also to ensure everyone knows what to do should the worst happen. But how do companies prepare for seemingly random yet potentially disastrous events?

Firstly, it is as well to acknowledge that there is a thin line between preparedness and paranoia when it comes to planning; in most geographies the risk of losing an entire organisation in a biblical flood is surely quite low! But what happens if a major event prevents most or all employees from getting to work? What happens if there is a major power outage or computer connections fail for an extended period? Who takes charge? How will key business partners and clients be informed in such an event? Does everyone affected know what to do and when to do it? It is not difficult to think of events in recent times that fit this description; suddenly a plan seems like a sensible proposition.

The kind of catastrophes (potential or actual) businesses may face are many and varied and include: single or multiple system failure (such as servers, internet, telephone or power outages), the loss of office or workplace accessibility or even total loss of real estate (perhaps a result of a terrorist attack, fire or a natural disaster such as flooding, earthquake or storm). The loss of key staff in an air disaster or during a national or international pandemic is possible. Mass industrial action by operational staff too will shut down a business quickly, but less obvious personnel disruptions may also impact a business; in 2013 not one of the ten employees of a UK recruitment agency based in Liverpool turned up for work the next day following their syndicate's £28m National Lottery win.

What is business continuity and disaster recovery?

A business continuity (BC) plan is a means of enabling companies to help themselves prepare for the worst and to recover and sustain operations during and after an event as quickly and cost-effectively as possible. Essentially, a BC plan is a fully-documented agreement between management and key personnel (with the buy-in of all staff) that is taken in advance and which covers the steps the organisation, and particular individuals, must take to ensure critical operations are protected.

At its most fundamental level, a BC plan may be the difference between survival and failure. But even in purely commercial terms, being prepared limits the possibility of having to call for assistance in a state of desperation (always very expensive) and goes a long way to maintaining or even enhancing client confidence.

For preparedness to be effective, the core of a BC plan must be sufficiently flexible to cover a multitude of unpredictable scenarios, as above, offering sufficient protection against internal impacts across multiple geographies from local to global, as appropriate. But it must also consider the external impact, including the likely effect on key business partners and the ramifications of their failure to operate on your own business and the impact of your failure on theirs. In essence, a BC plan needs to be a living, evolving and regularly tested strategy that will give a business the best chance of survival if the worst happens.

A key part of a BC plan is a series of functionally-specific disaster recovery (DR) plans. These are commonly IT-driven, focusing on recovery of software, hardware and data to at least allow resumption of critical business functions following an event. A BC/DR plan must also consider the effect on each function of the loss of key personnel by providing a contingency plan.

Key elements of BC/DR planning

According to DisasterRecovery.org, an independent organisation that provides guidance and information on disaster recovery, a plan must include the following stages:

- A policy statement, stating the goal of the plan, the reasons for it and the resources required.
- A risk assessment will identify the situations that are most likely to occur.
- A business impact analysis, describing how a catastrophic event may impact the business practically, financially and in other ways. It should also try to identify any preventive steps that can be taken.
- Recovery strategies must explain how and what needs to be recovered and with what priority/speed.
- The plan development stage will require documentation of the plan and implementation of elements as required.
- Plan buy-in and testing is essential to ensure everyone knows and understands what the BC/DR plan is, what to do and when.
- Plan maintenance and testing is important to ensure it is relevant and that it works.

Whilst third-party system vendors should be included in any BC/DR planning process to ensure they have the capacity to deliver when they are needed most, they should not be seen as a 'get out of jail free' card. Asking the right questions of them is an essential part of taking responsibility for DR/BC planning. Key points to raise (and include in any Service Level Agreement) would be:

- How long will it take to recover operations following an event (referred to as the Recovery Time Objective)?
- How much data could potentially be lost (Recovery Point Objective)?
- The reliability (proven up-time) of the platform.

It is one thing having your own house in order, but how do critical system providers such as banks and core technology vendors view the disaster management process?

The core technology vendor

Properly executing, these stages can provide a business with reassurance that it is prepared for the worst. However, a common problem, according to Phil Pettinato, Chief Technology Officer of TMS vendor, Reval, is that within a company there is often no clear ownership of DR. "A lot of business operations people – including treasury – think IT will take care of it," he notes. Whilst this may be the case, those IT people may not always fully understand how critical each business operation is. This suggests a lack of co-ordination which, when creating a plan, is unhelpful at best. "Each business operation is responsible for ensuring it has a clear plan but that does not mean it can build and execute it on its own," states Pettinato.

Of course, a SaaS-based TMS provider such as Reval should have a responsibility to its clients to provide DR as part of the deal, but it is the clients' responsibility to know what to do in the event of a disaster. The same goes for the vendor in consideration of its own operations. Although Reval's own IT function co-ordinates these plans, with guidance from an internal audit operation, ownership is very much accorded to each business unit. This ensures each is able to identify its own critical systems and operations and to put in place and test an effective plan so that everyone knows what to do and when in a co-ordinated manner.

Rather than isolating BC/DR processes, Reval tries wherever possible to bring them into its daily operations. By making them into "a second alternative to operating our business" and by actually using that alternative periodically they become ingrained into the collective consciousness of the staff, explains Pettinato. "Once a month or once a week we will operate using our DR platform; this is tied into the production platform to make sure it is operational." He cites having seen companies build up "impressive DR and BC platforms, test them a couple of times and then forget about them". But it is important to keep those platforms and procedures up to date and make them part of your operations. "If you are using it regularly you will know it works."

The documentation of BC/DR must have a "lead of governance" in that it ensures the business does what it has to do, and that it is to the point in stating what to do in an emergency. "If you keep it simple you will be able to maintain it and operate from it on a regular basis," notes Pettinato. Indeed, he urges companies to take a pragmatic approach to policy building. "If you over-document you will spend too much time managing that documentation."

Reval's practical BC plan for its own business operations (as distinct from its client operations) allows it to operate from a number of different offices and even virtually, with staff able to connect remotely if necessary. It has all of its core infrastructure and systems in professional co-location facilities that offer redundant power supplies, communications links and so on, and it also replicates all of its data in real-time using two different data centres connected but situated in geographically diverse locations.

With many companies globalising their operations, thinking in terms of operating from another location is not unusual. But Pettinato further urges companies embarking on expansion – especially through acquisition – to make sure that all operational locations are prepared for major events and, if possible, to try to leverage those locations in the BC plan context; having operations in the US, Europe and Asia for example gives fail-over options across a wide spread of time zones.

However DR is managed, simply backing up data every day and sending it over the internet to another location may have been okay a few years ago, but in a world of Big Data and complex analytics, losing a day's worth of data is a big deal for many businesses. "Any company that believes it can get away with running a simple daily backup and restoring from that is clearly running a huge risk," comments Pettinato.

Whilst best practices such as real-time replication are gathering momentum in this space, he has one further thought to share. "You need to think about what your backup for your backup plan is too," he warns. "Once you have lost your primary system and you are likely to be on your DR platform for an extended period, you are on your own."

The bank

When disaster strikes, 'keep calm and carry on' would be a suitable adage for treasurers, but it would be hoped that the banks would play their part in keeping the machine moving. Routine operations such as making payments and checking cash positions become a serious challenge when a host-to-host banking platform is unavailable following a major event.

Banks are cognisant of this fact and Cindy Murray, Head of Global Treasury Product Platforms and eChannels, Bank of America Merrill Lynch, says clients in this situation will be advised to use the bank's online banking platform as a means of carrying on in the interim. "If a client cannot send a file to us, they can go online to initiate urgent payments, including payroll," she says. "If a client receives its banking intra-day and prior-day statements host-to-host, we can put those statements, in the same format, online as part of a disaster recovery plan."

Incorporating mobile solutions into DR/BC planning is sensible but requires preparation. Accessing online banking requires the right people to have the security credentials and tokens necessary to function but they also need to know how to execute transactions in an emergency. "We recommend our clients test the process at least annually so that they know how to release manual payments," advises Murray. She adds that it is also essential to have a process in place to avoid duplication of manual payments that may be contained in the original files if those files eventually make it through to the bank via the normal channels.

Whilst inclusion of banking in DR plan is crucial, corporates are curiously quiet when it comes to checking the preparedness of their key partners, notes Paul Taylor, Head of Sales, GTS EMEA, Bank of America Merrill Lynch. There is, he says, "an expectation nowadays that our products will conform to BIS (Bank for International Settlement) principles and stand up to any DR scenario". Rules, such as the minimum acceptable distance between a bank's data centres, exist "to give a level of common comfort" for clients, says Taylor. "But I think it is implicit in what we do that we could demonstrate our capacity to still operate as their bank, that we could still provide services and that we do have plans in place."

The implicit assumption that tier one banks are prepared for the worst has substance. Murray confirms that Bank of America Merrill Lynch runs contingency production systems for each application from a different data centre. The system has the capability and capacity for 'active-active' operation for "mission-critical applications" such as reporting and payments. This means it can take transaction flows into multiple sites enabling real-time synching of databases. In the event of a disaster, there is minimal disruption because the data is already live.

"Banks exist to provide security and must demonstrate that we can function whatever happens," comments Taylor. He believes there is increasing market interest in the sustainability of platforms, business models and processing capabilities. He also notes that the industry is seeing more co-sourcing of technology and more platform investment. "When you look at 9/11, at what happened in Japan in 2011, and at all the different security considerations around the world today, we could not predict these events, but we still have to be able to answer clients' questions."

Gaining acceptance

Whoever is entrusted with BC/DR, internally and externally, it is essential for all concerned to have the required skills to be able to execute the plan in an emergency. As mentioned above, an assessment of suitable third-party providers must be carried prior to engagement, but to ensure readiness of all concerned internally, the plan must become part of company culture. This is the advice of Paul Kirvan, an independent BC consultant, member of the BCI Global Membership Council and TechTarget network contributor. To bring this state about, Kirvan suggests frequent communication to all employees – including briefings to senior management – of current BC/DR activities. This process could be used to demonstrate how the company's programme can add value to their activities, protect their safety and wellbeing and even their jobs. BC/DR training should also be given to all new employees, with regular refreshers for existing employees. He further points out that acceptance by the company as a whole is more likely if senior management have bought into it, adding that formally enshrining BC/DR into policy – by stating that the policy is to be followed by all employees – will further drive acceptance.

However, Kirvan warns that BC/DR programmes may ultimately fail "because the organisation – at all levels – does not adopt and incorporate business continuity as part of its ongoing business processes and methods". So, without across-the-board acceptance of a well thought out and managed BC/DR plan, it seems that companies should expect the worst when the worst happens. ■

Collateral: the $4 trillion question

In the years since the crisis, collateral has become an ever more important risk mitigation tool in global financial markets. In fact, as its role in markets continues to grow, some experts believe that collateral represents nothing less than 'the new cash': a currency equivalent underpinning both the operation of the capital markets and the broader economy. But what will happen when demand for high quality securities collateral begins to spike?

Treasurers who have been worrying that the scramble to meet tougher collateral requirements might price them out of the derivatives market in 2015 can breathe a sigh of relief. The prophesised collateral shortfall is not going to happen – at least not just yet.

Regulatory changes currently being implemented are expected to boost demand for high quality assets such as sovereign debt. Banks, of course, are now busy bolstering their liquidity ratios. Meanwhile, OTC derivatives will soon need to be collateralised and centrally cleared under new rules designed to make the $640 trillion derivatives market less risky.

But for all the anxiety and industry warnings, the amount of collateral available in the market continued to outstrip demand in 2014; a trend which is unlikely to change significantly in the short term. Precisely how much demand for collateral will increase once new clearing requirements for OTC derivatives come into full force is a matter of debate. The only thing that everyone agrees on is that the sums will be very vast indeed. By the estimates of the Bank for International Settlements (BIS), the amount of high quality collateral needed could be as much as $4 trillion, while others – notably the US Treasury – believe the figure is more likely to range between the $800 billion and $2 trillion mark.

Given the size of the various estimates being touted around, industry fears about a potential 'collateral crunch' are perhaps understandable. In early 2014, however, a joint-paper from the International Capital Markets Association (ICMA) and the European Repo Council (ERC) attempted to offer some reassurance. The study maintained that, overall, the supply of collateral would be sufficient to meet the growing demands expected in the wake of regulatory reform and changing market practices.

Figures cited in the report reveal that in the past six years alone the net stock of high quality assets eligible under derivatives regulations has increased by $11.3 trillion. The real question, then, is not whether there is enough collateral in the market, per se, but whether our fragmented market infrastructures can be transformed to allow for the mobilisation and delivery of the appropriate securities to where they are needed, when they are needed. It is this particular target that the securities industry has in its crosshairs right now.

The Collateral Highway

"I would agree with the notion that the challenge has been slightly overstated," says Samit Desai, Principal Consultant at Capco. It is not a question of a shortage, he explains, it is the fact that some of the collateral that will be needed may be effectively silo-ed with investors who are unwilling or perhaps unable to lend. "There are significant pools of unlent fixed-income securities in the market. But how those are accessed is the crux of the issue," says Desai.

Competitive pressures between central counterparties (CCPs) and market infrastructure improvements may also ease some of the strain, he adds: "Competition between CCPs may widen the eligibility criteria, which will make it easier to post different types of collateral. In addition, a reduction in clearing fragmentation and better portfolio optimisation should result in better netting benefits for firms, and therefore the total collateral obligation may reduce."

Olivier de Schaetzen, Head of Product Solutions Global Markets at Europe's largest international central securities depository (ICSD) – Euroclear – agrees that the so-called "collateral crunch" has yet to materialise, but whether or not the astronomical figures quoted by the likes of the BIS and US Treasury are exactly right is immaterial, he points out. The market is already seeing a significantly increased need for collateral, and consequently the industry needs to ensure the appropriate infrastructure is in place to mobilise collateral – often sitting idle – across borders in a quick and efficient way. Without such measures, there is a risk of some market participants being priced out of the derivatives market in the long run, he explains.

Much work has already been done to this end in the past several years. Back in July 2012, Euroclear launched its global "Collateral Highway". The global Collateral Highway, is an open, neutral infrastructure designed to help market participants move securities from wherever they are held in the world to serve as collateral for central bank liquidity, secured funding, and margins for CCPs and bilaterally cleared OTC derivative trades.

"It is a global infrastructure whereby liquidity providers – such as corporates, commercial banks and central banks – or risk mitigators – typically CCPs – can connect to receive securities as collateral from trading counterparties," says de Schaetzen. "Since it is a truly global conduit we need to be able to move the right collateral seamlessly from any domestic markets into the collateral highway to where it is needed."

To achieve that objective, the Collateral Highway uses multiple entry and exit points. The entry points are where collateral can be sourced through Euroclear's central securities depositories and affiliated agent banks in every time zone. Once on the highway, the securities can then be transported to, for example, CCPs for initial margining.

Better together

The job is still ongoing, however. In autumn 2014, Euroclear and The Depository Trust and Clearing Corporation (DTCC), announced the finalisation of a joint venture to create a vast, cross-border pool of collateral. The decision to join forces under a newly created company, DTCC-Euroclear Global Collateral Limited, resulted from discussions that began in 2013 around what could be done to deliver strategic solutions that respond to regulatory requirements and could be used by all market participants. It was ultimately decided that working together and leveraging each other's strengths, not to mention avoiding a duplication of efforts, made a lot of sense.

"We are seeing a real focus on infrastructure now to support all these regulatory changes and this joint-venture is very much

Future collateral requirements[1] for OTC derivatives

Base case, $ trillion

	2012	2013	2015	2018	2020
Incremental collateral need vs 2012 ($ trillion)	–	+0.25	+0.75	+1.4	+1.5
Collateral as % of unencumbered assets (dealers only)	4%	5%	8%	11%	12%

[1]Excludes potential collateral re-use (re-hypothecation), and excludes netting across assets classes.
Source: Oliver Wyman analysis, BCBS/IOSCO QIS

involved in this space," says Mark Jennis, Strategy and Business Development at DTCC and Executive Chairman of DTCC-Euroclear Global Collateral Limited. The joint venture will consist of two principle services. The first of these, called the Margin Transit Utility (MTU) will provide straight through processing of margin calls, from the point of agreeing a margin call through to settlement reporting and record keeping. Secondly, the Collateral Management Utility (CMU), will be piloted, focusing on the efficient mobilisation of collateral held at both depositories. "The CMU is about being able to efficiently identify, mobilise and allocate collateral," says Jennis. "If a client held collateral in both the US and Europe, for example, it could be pledged either to a European clearing house or go in the other direction to a US clearing house."

Through initiatives such as these, much progress has evidently been made to optimise market infrastructure in recent years. This is good news from the treasurer's perspective, of course. Yet some may still be wondering how, precisely, they can get their hands on the high quality assets they now require to hedge, and just how costly that is going to be.

New territory

The truth is that collateral management is relatively unfamiliar territory for most non-financial corporates. It is something which only really began to become relevant in the corporate arena when, following the banking crisis, companies began to involve themselves in the tri-party repo market. It is an area which historically had principally been the domain of large banks, but could now be crucial in helping some corporates meeting their own collateral requirements.

"A lot of corporates awoke from a bad dream after September 2008, discovering that the risk they were taking on cash deposits was actually very significant," says Euroclear's de Schaetzen. As corporates began to accumulate liquidity in the years following the crisis, a shift in investment practices began to take place. Instead of continuing to invest their cash in unsecured term deposits taking on a single name exposure with the bank – at historically low rates, not to mention – some companies began to demand transactions be secured using reverse repos.

This technique enabled those companies to both mitigate the counterparty risk, and almost certainly secure a better return than they would have received through traditional deposits. "It was quite an important development for corporates," says de Schaetzen. "The primary risk remains on the bank, but they now have collateral to cover the exposure and, in the event of a default of the bank, they can, as part of the agreement, sell collateral to recoup their cash investment."

Bilateral repos can, of course, pose significant logistical challenges for treasuries in terms of the administration and risk management, particularly for those lacking experience in the market. Instead of handling all that themselves, many companies have chosen, instead, to go down the tri-party repo route, notes James Symington, Managing Principal at Capco. "The tri party agent will handle a lot of the reporting and risk management of the repos, taking some of that burden off the corporate."

Recycling repos

There is an added, regulatory benefit to the reverse repo, however. The collateral received typically comes in the form of high-quality bonds: the same securities, of course, demanded by CCPs for the purpose of covering derivative exposures. Corporates using the reverse repo may, therefore, find that the collateral acquired in return for their investments can create a pool of quality assets which can then be reused to cover derivatives exposures with the CCPs.

The advantages of recycling collateral in this way for the corporate is that it can substantially reduce funding liquidity requirements, says de Schaetzen. "If the cost of mobilising collateral is high, it could make the cost of hedging prohibitive," says de Schaetzen. "By creating a buffer of collateral with the investment of excess liquidity in reverse repo, the treasurer doesn't need to go into the market and borrow collateral, something which could be costly from their perspective."

Every last drop

How, then, can smaller companies or firms with inadequate collateral get their hands on the high quality assets they need to satisfy their obligations in the new derivatives market? The concept of collateral transformation may provide at least part of the solution. Corporates may naturally be long on other types of securities – equities or corporate bonds, for example – that do not meet the standards stipulated by the CCPs, typically for AA+ rated government debt or above. Lower quality securities like these can be upgraded, however. "The process of collateral transformation is essentially taking ineligible collateral and transforming that to collateral that can be pledged to CCPs," explains Symington.

In other words, it is a service that allows a customer – such as a corporate – that is holding a certain type of asset that they do not want or need, to swap it for the type of asset they do need, and in a way that is both efficient and cost effective. Fees and a slice of the security being exchanged are typically taken by the bank in exchange for the service, and the collateral is delivered in the form of a haircut, essentially a portion of the overall value clipped from the asset. This means that in the event of a default, the creditor should be able to make the value of the securities lent whole.

Collateral damage

The fees around collateral transformation mean that hedging in the new emerging environment is likely to increase in cost somewhat, but that will still be considerably cheaper than buying such securities on the market.

And, as Capco's Desai earlier alluded to, helping market participants make the most of the collateral pools that they have through collateral optimisation should result in the improved circulation of high quality collateral, thereby helping – along with initiatives such as the Collateral Highway – to relieve the demand pressures ahead.

The industry knows that addressing the expected growth in demand is going to be absolutely vital from a systemic perspective. After all, if a collateral crunch were to occur, it won't just be the banks that suffer. Collateral has become such an intrinsic feature of the modern financial system that a scarcity of it would, in fact, put the continuing operation of the markets at risk. And this, it goes without saying, would have serious repercussions for the entire global economy. As the earlier referenced ICMA and ERC report notes, "collateral is becoming the new cash, underpinning the smooth functioning of funding and capital markets, and, in turn, providing the basis for economic growth". ■

Algo trading: for a few dollars more

Algorithmic trading uses a computer programme and advanced mathematical modelling to trade at the optimum time. Typically associated with large institutional investors and professional traders, does it really have a place in treasury?

Whether it is referred to as automated trading, black-box trading or algorithmic trading, the use of computers and mathematical formulae always makes trading more systematic because it takes the human emotional element out of trading activities. If this is a good thing or not is a moot point: since it arrived in the markets around 15 years ago, algo trading is a potential source of increased profit, an efficient risk management tool or a disaster waiting to happen depending on how it is used.

Those already familiar with this topic will perhaps already be thinking of the $440m loss (and near-collapse) in just 30 minutes of US market maker and broker, Knight Capital, caused by a bug in one of its high frequency trading (HFT) algorithms. HFT aims to achieve the lowest possible execution latency (the time that elapses from the moment a signal is sent to its receipt). More than 5000 orders a second can be sent to a trading venue with order and execution report round-trip times of around 100 microseconds (100 millionths of a second) now possible. A poorly tested system is a recipe for disaster.

> The formulae are complex, numerically intensive computations and algo trading systems use them to detect and subtly exploit market movements, according to certain pre-defined thresholds, allowing the trader to manage risk.

Many will certainly know of the most famous HFT 'event': the 'flash crash' of 2010 when the Dow Jones lost more than 1,000 points in a matter of minutes. Again, this was caused by a bug in a system which sent the whole market into freefall before someone literally pulled the plug on it. Given the interconnectivity of the global financial markets, events of this kind are a worry and cast a shadow over algo trading. But HFT is not algo trading – it is simply a strategy that uses an algorithm to trade.

What is algo trading?

Traditional trading is voice trading – picking up the phone and asking for a quote from a panel of banks and locking in a deal. Electronic trading on multi-bank or proprietary platforms does the same thing only (arguably) more efficiently. In each case, once the deal is agreed, the bank takes on the risk that arises in the time between agreeing the price and executing the transaction (the price continues to move as the bank searches for the liquidity to carry out that deal).

Because of the lack of trade anonymity this process carries, a major trade execution (of perhaps $500m upwards) is difficult to price as a single transaction will move the market against the buyer; the bank either has to factor that likely movement into the price or drip-feed the order into the market – but by placing the order over time it will still be subject to market movements (positive and negative) until the whole trade is complete. Either way, the bank takes the risk and the corporate will pay for the price lock-in, one way or another.

What's needed is speed and stealth as a means of getting in and out of the market at the most appropriate point. This is where algorithmic execution comes into play. An algorithm is a mathematical formula for solving a problem. The formulae are complex, numerically intensive computations and algo trading systems use them to detect and subtly exploit market movements, according to certain pre-defined thresholds, allowing the trader to manage risk (or drive profits, depending on the algorithm) without creating any significant 'noise' that would alert the market and potentially affect price.

Builders of algo trading applications may use development platforms such as MatLab (offered by mathematical computing software developer, Mathworks) but some banks – BNP Paribas, for example (see overleaf) – have their own offerings. The algorithms used will typically be based around concepts such as 'neural networking' and 'adaptive neuro-fuzzy inference' which, in essence, allow the systems to learn on the job, adapting what they do according to initial parameters and the real-time movements in the markets (and all will now work across multiple venues).

The key components of an algo trading system

Algorithms: these are required to perform correlation analysis, identify trading opportunities and determine optimal trading launch time. Parameters for the trades are set within the algorithms, such as time, quantity and price. Algorithms also measure the trade execution against benchmarks.

Market data: historic, intraday and real-time data is required for the system to analyse trends. This may be drawn from multiple sources including market data feeds and in-house spreadsheets.

Order management: as well as predicting the optimal order, the system also manages and processes all the orders it makes.

Connectivity: algorithms should be connected to liquidity pools such as exchanges and inter-dealer brokers to further monitor market conditions.

Integration: a system should be fully integrated with back office and trading systems to maximise efficiency and ensure compliance.

Most important of all is an understanding that the more complex the algorithm, the more stringent the back-testing and re-calibration should be. Development of an algorithm must be iterative in order for it to function in a dynamic market; adaptive technologies can do this on the fly.

Algo trading strategies

The dynamic nature of the markets means the process of defining a strategy (or strategies) for using an algo must also be iterative; test and refine are the watchwords. There are a number of trading strategies used in algo trading, each favouring a different outcome or scenario. The algos that fulfil these approaches tend to have descriptive names such as Stealth, Sniper and Guerilla.

> "Our initial thought was to make this function an addition to Chameleon but the two algos serve two different needs. We want to make it easier for our clients to understand by making our algos less parameter-heavy."
>
> Asif Razaq, Global Head of FX Algo Execution, BNP Paribas

The simplest and most common strategies follow trends in moving averages, channel breakouts, price level movements and other related technical indicators. These strategies do not involve predictive analytics or price forecasting to trade but instead require a specified trend or market event to take place. Another useful strategy is time weighted average price (TWAP) which breaks a large order into smaller slices, feeding these into the market over a certain period so as not to cause any 'noise' that might influence the trading activity of others and thus price (known as 'iceberging'). When it became possible to piece together those small trades to find out if a large market player is behind, stealth trading algos were created. Others approaches include the aforementioned HFT, as well as market sentiment, arbitrage and mean reversion models.

Who uses it and why?

Algo trading is used in various forms of trading and investment by short-term traders and sell-side players such as market makers and speculators for whom speed is of the essence.

Mid- to long-term investors and institutional buy-side firms (such as pension funds, mutual funds and insurance companies) who trade in large values can also play because the 'slicing and dicing' of a single deal (breaking a large value into multiple smaller values) allows them to enter the markets without negatively influencing prices. Systematic traders – those who follows trends or trade currency pairs, for example (including corporates) – may benefit from the efficiencies of automated trading and the liquidity-searching function of an algo.

Algo trading offers a number of potential benefits. With the right (well-tested) algorithm, trades can usually be executed at the best possible prices. An automated system may provide well-timed, immediate and accurate trade order placement, having made simultaneous automated checks on multiple market conditions. A system will also remove the possibility of human error and can provide the trader with anonymity if this should be desired (perhaps as a prelude to a major M&A deal).

The downside

There are well-understood technical risks for users (and for the market if things go that badly). For example, system failure, network connectivity errors, time-lags between trade orders and execution and the chaos that imperfect/poorly tested algorithms can cause. But there are operational disadvantages too. It means paying brokerage fees to banks, but more worryingly – for FX trades, for example – it can expose the trader to market swings during the execution period (whereas with the traditional models the bank takes the risk). Modern algos are increasingly able to slice up and massage deals into the markets (and it needs to be multiple markets) with minimal noise, speeding up and slowing down trades according to market movements, but the risk is still with the trader not the bank.

Is it really for treasurers?

Despite potential benefits, algo trading is not something that has seen a great deal of corporate demand, quite possibly because of the reputation of HFT. Corporates will argue that they do not typically trade and bet against very small market movements; they hedge specific transactional requirements, and there are more appropriate approaches they can use because most do not run their treasury department as a profit centre.

Indeed, part of the treasurer's role is to minimise the effects of adverse market changes on their core business; engaging in any kind of trading related to their underlying business exposures is either frowned upon or expressly forbidden by policy. As such, corporations typically do not trade, they hedge; even the minority of corporates that do run trading desks tend to operate within conservative boundaries. Algo trading's reputation may be a sticking point in this case and in FX trading, unless very large deals are sought, the pricing advantages of algo trading are likely to be minimal anyway.

However, where large trades are required, BNP Paribas believes it has tapped into a new wave of interest with a "third generation" of algos that might answer the needs of the treasury community.

Anatomy of an FX algo

Algos for the FX market arrived about seven years ago, introduced by Credit Suisse, which drew inspiration from its successful equities trading platform. The first generation systems that followed allowed traders to buy a certain value over a specific time. They did a reasonable job but also left a heavy footprint in the market; when an algo is 'discovered' it is open to manipulation by the HFT community. Around five years' ago, generation two appeared, allowing slightly more random executions to try to avoid detection. These products also offered a mechanism to consume liquidity across the fragmented FX market, aggregating deals across the 30 or so liquidity venues that were available. For the earlier iterations at least, trades still left too much of a signature for the HFT players to spot and exploit.

On average, the second generation algos probably still outperformed voice and electronic trading in the FX space and more banks were entering the fray, offering a bewildering range of passive and active algos to try to meet their clients' differing execution strategies. When sourcing the right product, three or four banks multiplied by five or six algorithms equated to client confusion. But even when knowledgably selecting an algorithm, the algo chosen would typically function in the same way regardless of what was happening in the market; an aggressive system remained aggressive even in a quiet market.

> "Where you have a large trade or a difficult currency pair, algos are a perfect choice."
>
> Asif Razaq

With simplification of choice in mind, BNP Paribas' Cortex iX FX algorithmic execution product is the "third generation" of algo system, says its creator, Asif Razaq, the bank's Global Head of FX Algo Execution. It was launched two years ago with a choice of just two algorithms: Chameleon and Viper. Chameleon has a more leisurely approach to the market whereas Viper is aimed at traders that need a quick and aggressive execution. A third offering, Iguana, has since been introduced for those wanting to trade over a particular time frame.

Creature features

In building Chameleon, Razaq has created a product that best suits clients that have time to work their order into the market, and which goes a long way to avoid detection. "No two Chameleon executions are the same," he states. "As a random function of what the market is doing it becomes difficult for the high frequency traders to detect a pattern."

Chameleon starts with the client's strategy and proceeds by analysing multiple sources of market data which it uses to re-calibrate its execution strategy in real-time. The algorithm effectively dictates how each order will be executed so that when the markets move, Chameleon moves accordingly, speeding up or slowing down but always remaining in line with strategy. For traders that feel the market has reached a point where it will favour them if they move quickly, a 'Rapid Fill' button can temporarily put the algorithm into the more aggressive 'Viper' mode, to be switched off when the client chooses.

Indeed, Viper shares many of Chameleon's functions but is geared to operate in a very tight time schedule (seconds as opposed to minutes). The third algorithm, Iguana, takes the flexibility of Chameleon but additionally allows clients to set a specific time-frame instead of letting the system dictate. "Our initial thought was to make this function an addition to Chameleon but the two algos serve two different needs," explains Razaq. "We want to make it easier for our clients to understand by making our algos less parameter-heavy."

The thinking

Rather than feeding orders into a 'black box' and waiting, Razaq says clients are able to control the execution strategies themselves. "We wanted to create a simple interface and also have a feedback loop where information is delivered while the algo is trading; if it sees something happening in the market it will relay that back to the client so they can change, slow down, speed up, pause or even end the execution."

Bearing in mind that this form of trading is for large values only, in practice, the client will issue instructions to purchase a specific currency, driving the algorithm to slice up that deal, minimising market impact by reaching out across every venue. It will then aim for the best spread at the time. The caveat remains that whilst the system is executing, the user is taking on market risk. But, says Razaq, if the algorithm is good enough to capture a significant price improvement over the risk transfer price (the price attained via voice trading or normal electronic trading) then the user will gain overall on a major single trade.

A post-trade report is generated for the client, giving a real-time view of how the algo performed against various market scenarios. With a detailed breakdown of every execution and trade ticket, the system also provides an auditable record of all trading, especially useful for evidence of compliance with corporate 'best execution' policy.

Uptake

"We estimate that about 20% of the FX market is now trading via algo products," says Razaq. "It is a growing space and the biggest growing client sector for adopting this technology is the corporate sector; they are looking for alternate ways to hedge and execute and there are now palatable products that they can use." Typically corporates will be using an algo for an M&A deal or a dividend payment or anything of significant size. BNP Paribas' offerings purposefully allow client anonymity (even within the bank) by trading only under the bank's name. This is important, explains Razaq, because a major corporate suddenly making a large volume of currency transactions could alert the market to an activity (such as an M&A deal) which it may wish to temporarily keep under wraps.

However, he acknowledges that smaller deals, certainly less than a couple of million dollars, will see very little benefit from the algo trade execution process. "Algos only really thrive with large orders; with voice or electronic platform trades the spreads on small orders will be so tight there is no need for the corporates to take on extra market risk. Where you have a large trade or a difficult currency pair, algos are a perfect choice." ■

INSIGHT AND ANALYSIS

Cryptocurrencies

With the recent rise of the volatile and decentralised Bitcoin, cryptocurrencies have become headline news and – for some – seem to be the future of finance. But do they really have the potential to create such seismic shifts? In this article, Treasury Today analyses what cryptocurrencies are, explains how they work, and evaluates their possible application within corporate treasury and the wider financial industry.

TECHNOLOGY

Treasury in the cloud

The advent of cloud technology has changed many aspects of our personal and business lives. It is also beginning to change how the treasury function operates. We take a close look at cloud technology, not only outlining the options that are available for corporates looking to move to the cloud, but also looking at the evolution of cloud and future developments in the space.

CAREER PROSPECTS

Training and qualifications

At a time when the role of treasurer has taken on a new level of importance, up-to-the-minute technical knowledge is vital. So where should treasurers concentrate their efforts when it comes to training and qualifications? Also, is technical knowledge really the be-all and end-all for those looking to climb the career ladder, or do soft skills count for a lot too?

We always speak to a number of industry figures for background research on our articles. Among them this month:

Olivier de Schaetzen, Head of Product Solutions Global Markets, Euroclear; **Samit Desai**, Principal Consultant, Capco; **Maha El Dimachki**, Managing Director of Global Transaction Product Services, RBS; **Yaron Ernst**, Managing Director, Moody's Managed Investments Group; **Suzanne Janse van Rensburg**, EMEA Head of Liquidity, Investments and MTLS, Bank of America Merrill Lynch; **Mark Jennis**, Strategy and Business Development, DTCC; **Richard King**, Head of UK Corporates and Debt Capital Markets, Bank of America Merrill Lynch; **Paul Kirvan**, Independent BC Consultant; **Cindy Murray**, Head of Global Treasury Product Platforms and eChannels, Bank of America Merrill Lynch; **Karl Nolson**, Head of Debt, Managing Director, Barclays Corporate Banking; **Phil Pettinato**, Chief Technology Officer, Reval; **Colm Rainey**, Head of UK Debt Capital Markets, Citi; **Asif Razaq**, Global Head of FX Algo Execution, BNP Paribas; **Venkatesh Somanathan**, Asia Pacific Head of Trade Finance Product Management, Global Transaction Banking, Deutsche Bank; **Matthew Stammers**, European Marketing Director, Taulia; **James Symington**, Managing Principal, Capco; **Paul Taylor**, Regional Sales Head, GTS EMEA, Bank of America Merrill Lynch; **Sander Van Tol**, Partner, Zanders; **Ruth Wandhöfer**, Global Head of Market and Regulatory Strategy, Citi; **George Zinn**, Corporate Vice President and Treasurer, Microsoft.

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