

‘Big data’

How innovation in the use of data is enabling banks to deliver more value to their customers



- ‘Big data’ is essentially a synonym for ‘lots of data’, including both greater volumes and new varieties
- ‘Big data’ analytics allows companies to make sense of a complex world, and build models to predict the future
- Up to now, ‘big data’ has primarily been an issue for large companies but more SMEs are beginning to grasp its potential as more affordable analytical tools and technologies become available
- Banks have access to a wide range of meaningful data, which in turn can help customers of all sizes benefit from related insights

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Glossary of terms

‘Big data’: the vast and growing reservoir of information generated by digital business transactions and processes, including new sources of data, such as social media feeds or location information

Analytics: analysing and interpreting ‘big data’ to identify patterns that can be used to design predictive models

Visualisation: the use of computer graphics and animations to represent ‘big data’

Your questions answered

I hear ‘big data’ talked about everywhere – but what is it all about?

‘Big data’ is largely just shorthand for ‘lots of data’. It describes the massive growth in both the volume and variety of digital information in today’s connected world. This is accumulating exponentially: according to IBM, 90% of all the data in the world was created in the last two years.¹

In addition to rising data volumes, the types of data that can be collected and analysed is expanding rapidly too. Much of this is referred to as “unstructured data”, whether call centre recordings of conversations with customers, data extracted from social media channels, or third party data feeds, such as for simple weather information. The reason the “unstructured” bit matters is that many

of these new types of data can’t be stored in traditional databases, requiring new tools and techniques. This challenge is exacerbated by data that is most valuable in real-time, rather than stored for later reference. This speed factor is referred to as data velocity.

Collectively, dealing with the volume, variety, and velocity of data is largely a technical IT issue. The real difficulty for businesses lies in understanding how to analyse and extract insight from all this information. The potential is huge: with ‘big data’ analytics, organisations can make evidence-based decisions about the future, rather than making guesses based on what happened in the past.

A key part of getting this right lies in bringing data to life for business leaders who are not specialists in data analysis. Here, good visualisation and data mapping tools come in to play. This can make a huge difference. To give a simple example, a utility company can spot far more easily where the biggest water leaks lie if this is plotted directly on a map rather than as a long list of leak reports.

Analysing data to find patterns is not new. However, new kinds of data, combined with growing computing power and new analytical tools and skills, together represent a major new phenomenon and opportunity.

¹ GigaOM, Software Group, IBM Institute for Business Value, 2012

What are the banks doing to bring the power of ‘big data’ to their customers?

Data is the lifeblood of banks: vast amounts of data flow through the banking system. RBS’s UK Corporate Banking Division, for example, receives over £1.5 trillion of business transactions every year: that’s a lot of data on the UK economy and millions of individual consumers and businesses.

At RBS, we are progressing ‘big data’ initiatives to improve our performance and allow us to give customers a better service. As a company, ‘big data’ analytics means we can function more efficiently and more effectively. From a financial standpoint, ‘big data’ is impressive. In a few years, organisations integrating high-value, diverse, new

information types and sources into a coherent information management infrastructure will outperform their industry peers financially by more than 20%.²

² Gartner, Information Management in the 21st Century, Regina Casonato, et al, September 2, 2011

Some of our key initiatives include:



Using analytics to understand how customers are using our retail branches. This gives us insights that drive our branch strategy, including location, services and opening hours.



Reducing fraud by using behavioural modelling to detect unusual transactions on customer accounts.



More accurate segmentation of our customer base, which allow our different divisions to design better products and fine-tune their customer services.

We can also grow stronger relationships with our customers by using our expertise and unique information, helping them harness 'big data'. We already sponsor a number of innovative small companies to develop micro and macro business performance indicators. These will give us a faster and more comprehensive view

on movements in the economy, and help us understand what they mean for our UK business customers.

Looking ahead, macroeconomic analytics, such as predicted intra-day UK GDP by sector, will support both bank and customer planning. Areas where this

can benefit the UK include optimal customer working capital management, preventing fraud and better supply chain management, including lowering customer supply chain risk. Here, 'big data' analytics can help customers better understand the risk exposures in today's increasingly complex and far-stretched supply chains.

What does 'big data' mean for privacy?



There have been a lot of stories in the press about data privacy, and it is clear that data-related initiatives require a good strategy to manage this and related governance issues.

With 'big data' analytics the key lies in taking a responsible approach. Customer data is the lifeblood of banking and customer trust has to be at the heart of our business. At RBS, we respect our customer's data and the trust customers place in us.

This means only using the customer's data with their agreement, and in ways that will help them achieve their goals. A respected authority on 'big data' analytics, Tom Davenport of Harvard Business School³, recommends that any 'big data' initiative is advanced with "permission, transparency and delicacy". These are strong principles to follow.

³ At the 'big data' Crossroads, Thomas H Davenport and D.J. Patil, June 2013

Isn't 'big data' just for big companies?

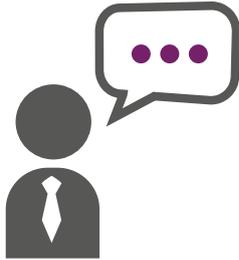


'Big data' analytics is often associated with big companies. The textbook examples usually concern industrial giants like P&G. The size and complexity of these businesses, each of which generate millions of transactions every day, mean that they have been forced to grapple with 'big data' very directly. They can analyse and use this data to optimise all kinds of business processes, from customising their marketing pitches through to improving their global supply chain.

Not all big companies are embracing 'big data' – or moving towards it at the same speed. While some sectors are moving more quickly to exploit 'big data' opportunities (such as utility companies and charities), RBS sees other sectors lagging, especially those industries dominated by large established players.

Clearly, 'big data' is of growing interest for many large companies today. But SMEs have a lot to gain from being able to analyse data more effectively too, in order to improve their decision-making. A number of complementary business trends, such as the availability of outsourced analytics and cloud-based technology tools, are increasingly allowing smaller organisations to gain access to the same processing power and tools needed to exploit the power of 'big data'. This makes it important for companies of all sizes to think about where they need to deliver improved strategic insight; what data they will need to support that; and to explore how a 'big data' solution might help them achieve those goals.

How can RBS help my business get on top of 'big data'?



As 'big data' has become embedded and new niche providers have entered the market, costs have fallen. The rise of cloud computing has removed the barriers to high-volume data processing. However, the gold rush for analytical talent means 'big data' remains prohibitively expensive for many smaller customers.

Here, RBS can help. We aim to provide analytics on a bespoke basis to customers, using our scale to make 'big data' insights more accessible.

Today, we give our Relationship Managers tools to help them understand industry sectors and their client portfolios in more detail. With these insights they are better prepared to discuss customer needs versus specific market factors. For example, using new working capital solutions to support potential opportunities in exporting or helping clients understand how our position as a leading international commercial bank might help them.

RBS perspective



The IT industry regularly produces new buzzwords, much of which is overhyped, but with 'big data' appears to be a clear long-term trend that businesses of all sizes will need to grapple with. Building on this, 'big data' analytics can give organisations the insight they need to make better-informed decisions about how they run their businesses.

'Big data' also gives companies a clear view on the trends and drivers that will shape

their future performance. It's helping them match production to demand more precisely, optimise their supply chains and put in place stronger systems to deal with risk. In a highly globalised and tightly networked economy an event in one corner of the world can rapidly affect firms everywhere else. 'Big data' analytics gives companies the edge by helping them better understand this complex connected world.

Public sector organisations are benefitting too: for example, predictive analytics is helping police in North America and the UK target their resources much more effectively. It's good news for taxpayers

and good news for local communities too. At RBS we believe 'big data' can improve the performance of our customers and be a decisive factor in the strength, agility and competitiveness of the UK economy. By helping us get closer to our customers, and improve our efficiency, 'big data' will also be a critical factor in the performance of RBS. As a major UK and international business bank, we are ideally positioned to give customers insight into the economy derived from 'big data'. We're working to develop new business indicators that will allow our customers, of all sizes, to harness the power of 'big data'.



Where do I go for more information?

www.data.gov.uk

www.gartner.com/technology/topics/big-data.jsp

www.microsoft.com/en-us/sqlserver/solutions-technologies/business-intelligence/big-data.aspx

www.microsoft.com/en-us/server-cloud/data-insights.aspx#fbid=TR0w43TwM0c

<http://blogs.splunk.com/2013/07/15/big-data-and-financial-services-an-emea-perspective/>

www.sas.com/big-data/