Andreas Dombret: Digital natives? The future of banking in an era of digitalisation

Speech by Dr Andreas Dombret, Member of the Executive Board of the Deutsche Bundesbank, at the "Unlock the Block" Hackathon, hosted by the University of Cape Town, Cape Town, 24 January 2018.

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1. Introduction

Ladies and gentlemen

It is a pleasure to be here in Cape Town and also to speak at a hackathon. Central bankers in general and banking supervisors in particular rarely get an opportunity to address such a technically adept audience. Still, to those of you who are participating in the event and who received their first day of blockchain training today, I would like to say that the following session is going to be quite a non-technical one – even though we at the Bundesbank have done our own research on the promising blockchain technology and are always eager to discuss insights with experts such as you here today in this room. We even launched a blockchain project of our own in cooperation with the Deutsche Börse, the stock exchange in Frankfurt in 2016.

Today, I would like to make the most of you and today's audience, by considering a wider question: why exactly is it so difficult for many banks to fully embrace the many opportunities presented by the digital era and become successful? Numerous issues have already been addressed at length, such as the role of IT legacy, the question whether banks are frequently "too big to innovate", and even the "economics of QWERTY", an argument about path dependence.

I would like to focus on a different subject, namely the role of "digital natives" and their conflicts with conventional bankers. How does this relate to successful banking in the digital era?

2. "Digital natives" and "digital illiterates" – a clash of cultures

When I say "digital natives", I am not just referring to those born since 1980, as some have defined the term[1], but to people with a certain attitude towards the digital world.

I consider most folks here in this room to be digital natives – at least by profession or by choice. And I expect you won't still be mulling over whether a blockchain could generally be useful or not. To digital natives, the upside is perfectly clear. Digital natives are focused on the opportunities of the digital age. Everything that is imaginable is worth considering.

But the financial industry is by no means inhabited exclusively by digital natives. At the other end of the scale are those who take quite a dim view of most digital innovations. And there are others who might generally be considered "digital friendly" but have never actually crossed paths with programming code or network plans. I guess this is true for the vast majority of people – I would count myself to this cluster. This entire group might be labelled "digital illiterates".

The problem with both groups is that when they interact, there are bound to be frictions. For example, you often hear IT staff complaining about fuzzy communication with non-specialists.

Conversely, experienced bankers might also have a hard time with digital innovators, simply because the latter lack an understanding of banking.

So the question is this: if digital natives are from Mars, and old-style bankers are from Venus –

will they get along? Or could the future of banking in an era of digitalisation possibly belong to just one group?

My short answer is this: they don't get along naturally – but they will need to.

Let us go through some observations about the clash between these two cultures. For that purpose, I believe it helps to see things from each group's viewpoint.

3. How digital illiteracy might hamper financial institutions

Let me begin with the perspective of digital natives as I have defined them. And I will concentrate on three predispositions of non-specialists which, to my mind, are most substantial for financial institutions.

1. IT matters are oversimplified
2. IT risks are underrated
3. Digital opportunities are underestimated

You may have witnessed some of these biases yourselves. Let me give examples of each of them from my experience of banking supervision.

Oversimplifying IT matters is a common attitude outside IT divisions.

If you ask managers about their interaction with the IT department, something you might hear them say, time and again, is this: "What they should be doing is finding an easy solution for every problem right away! What they are actually doing is burning money!"

All of us who haven't worked in an IT department, let us be honest: we all have thought that way already.

From the perspective of the IT division, the same interaction would often be characterised as a failure due to "digital illiteracy". IT experts are already grateful to encounter non-specialists with enough imagination to grasp what can be done with code, computers and networks. But when non-specialists actually ask for digital solutions, they frequently fail because they oversimplify the job of IT specialists. For example, they fail to accurately specify the goal and the desired properties of an application. Partly because they don't speak the right language and regard the actual solutions as a black box; partly because they simply don't bother.

Unfortunately, incoherent concepts at the outset frequently lead to dirty fixes and workarounds, both of which turn out to be costly and inconvenient in the long run. And, frustratingly for IT experts, it makes them look incompetent in the end.

Also, co-workers are often not sufficiently aware of the various other challenges which IT departments face in their day-to-day work. Just think of the need to make a software application stable, secure and efficient, to make it adaptable to changes of purpose or to changes in the "outside world", and to make it useable for the "dumbest assumable user". These are regular trade-offs. They require strategic decisions. But in this regard, top management needs to understand the trade-offs first.

This leads to another, overarching issue: scarce resources. Top management is often reluctant to allocate sufficient resources to an IT project. This is quite a common finding in our supervisory inspections. That puts long-lasting solutions out of reach. While this may often be due to "short termism" (as IT projects often pay out only in the mid- or long term), it can also be caused by underestimating their value.

Let me now turn to a second bias of top management, namely underrating IT and cyber risks. Nowadays, a large majority of households and enterprises will have experienced cyberattacks for themselves. But even though awareness of potential threats has risen in previous years, it is still the case that, far too often, incidents are interpreted as a stroke of fate, as mere bad luck. To be fair, having reliable defence mechanisms is indeed challenging for many applications and larger IT systems because threats constantly evolve. And so does technology, opening up new loopholes all the time – just take the weaknesses in computer processors which came to light just recently.

Still, the likelihood of a successful cyberattack can be significantly reduced by measures that are well-known – at least in ITdepartments. So in theory, companies should know ways to ensure proper management of their IT and cyber risks. But of course, they need support from top management to be effective, because defence does not end at the user interface. So all in all, digital illiteracy in the top management of a financial institution like a bank can impede the effectiveness of its IT department significantly. Our banking supervisors have observed this pattern quite often. IT experts often even welcome the critical remarks we make in inspections – because it helps them initiate changes toward more reliable IT solutions, rather than workarounds and hot fixes.

4. Why the future of finance and banking is still unwritten

Ladies and gentlemen, the cultural clash between "nerds" and non-specialists in banks goes beyond everyday operational topics. It shows up in strategies as well. This means that views about the priority of digitalisation are to some extent rooted in one's own digital biography.

While bank management teams these days are often busy stabilising their firms in the face of challenges such as the market environment and changes in regulation, those who think and live digitally are pushing for further strategic realignments. Their proposition is that, in the digital age, banks can either vanquish or vanish.

And of course, there is a good case for being prepared for change. Financial practices are definitely evolving – and it's a one-way street. We are seeing change in every segment of banking, from instant payments to mobile banking and robo advice. Some institutions offer their services solely on smartphones. In countries like South Africa, especially, bricks-and-mortar banks are increasingly being replaced by smartphone banking. And one important component of change concerns customers: some institutions underestimated what users want and how quickly they can adapt. Fifteen years ago, most customers would probably still have stood patiently in line to receive local services. Today, digitally savvy users will probably get annoyed if an online service is temporarily not available for just a minute or two.

Furthermore, there are good reasons to believe that this evolution will continue, because technological transformation and customer habits are co-evolving. And even though some innovation hypes have now entered the "trough of disillusionment", there is no reason for banks to turn a blind eye to further advances in banking. In the short term, progress may be overemphasised, but in the long term, changes are often underestimated.

So there are indeed many questions facing the banking industry that still need to be answered: how will digitalisation impact on bank earnings? How much profit will be siphoned off by new markets entrants? And how many institutions with similar services are needed in a digital financial economy?

These questions are unsettling ones, and there might still be some bank managers who, fearful of the future, prefer to assume that banks are still special and that the market forces of the digital era do not apply.

But, on the other hand, does that imply in any way that banks are outdated? And do digital natives actually offer a concrete and compelling way forward?

I would like to spend the second part of my talk discussing biases and fallacies on the part of digital natives. In other words, while I do support the general projection of ongoing change in the financial sector, it would be wrong to be blinded by the spirit of optimism among digital natives.

First of all, digital natives need to be wary of getting overconfident about the evolution of digital banking.

There are several reasons to remain cautious. Even if the digitalisation of finance is irreversible, technologies are constantly evolving in as yet unknown directions – some are refined, others are discarded. Good arguments why digital innovations will triumph will remain theoretical as long as most people simply don't use these innovations. For example, smartphones came onto the market back in the 1990s, but they were largely ignored back then. So it's sometimes the case that technical innovations are ahead of their time. We should judge technology not by its innovativeness, but by its probability to penetrate the market.

There is another source of digital overconfidence that I would like to mention. This concerns the association of the digital era with entirely new and self-contained "laws". One trailblazer of that movement was the "Declaration of the Independence of Cyberspace" in 1996,[2] which suggested that the virtual world could be governed by forces other than those in the real world. This vision has informed the way digital natives see themselves to this day. For example, many new market entrants were thrilled at designing super-efficient and convenient services that could outperform banks in any dimension.

But as of today, new market entrants have discovered that even in a digital era, good products are assembled through hard work. And the digital world doesn't offer services at no cost. Regarding bitcoin, this became clear to a wider audience when the huge electricity costs went public. Also, there is no free lunch. There are trade-offs like the one that concerns convenience versus security. In Germany, for example, various smartphone payment apps were hacked because the two-factor authentication principle was considered too inconvenient for fast-moving customers.

So even if anything is possible in a digital world, there are still costs and trade-offs involved. Digital natives have to learn to accept those limits and trade-offs. They need to learn not to be blinded by theoretical ideas and mere digital ideology. Proof of work is what counts in the end.

5. Why digital natives may themselves be prone to fallacies

And there is a second observation about digital natives colonising the financial sector. They are prone to both misconceiving and underestimating the existing financial system.

Let me address the issue of misconceptions. Lately, amidst the widespread media attention paid to bitcoin and other crypto currencies, there has been a great deal of confusion about what exactly crypto currencies are. As a central banker following the news, it's easy for me to see that part of the puzzle is the fact that conventional money systems aren't widely understood to begin with. But if people cannot elaborate on the difference between different kinds of currencies and other financial instruments, digital innovations can even become dangerous.

This brings me to my most important point. However convenient and innovative digital evolution in the financial sector will be – financial institutions, as defined by the law, continue to play an eminent role for society. Customers entrust banks with their savings, firms need financial services they can rely on, the economy at large requires credit. Being part of the backbone of the

broader economy, banks need to ensure a reliable, trustworthy and sustainable flow of financial services.

So banks are indeed still special in a way. And this is why they also still require special treatment in the digital age.

For example, banks in Germany can outsource IT services and infrastructure, but they cannot shrug off their accountability towards customers in any way. So if a credit institution wants to move contents to an external cloud provider, it has to demonstrate that it is still able to manage all the risks involved in its services.

Thus, those who claim that the end of banks is near will face the following comeback: banks are still special, and for good reason.

6. So how to deal with the clash of cultures?

As I said before, the digital era of banking is irreversible – but how should banks deal with that? In my talk, my question was more specific: how to deal with the clash of cultures between digital natives and digital illiterates in financial companies? Are "traditionalists" merely standing in the way of better finance? Or, inversely, is finance too exceptional to be advanced by IT experts?

I strongly believe that the future of banking is not about eradicating one of these two cultures, as they are both essential for success.

From my previous observations, there are – at least – three lessons to be learned:

1) Learn to appreciate the work of one another

While there are many reasons to press ahead with digital banking, banks continue to serve a special role in the economy. Therefore, the digital era does not do away with the need for experienced bankers. In Germany, most fintechs and incumbent banks have put their confrontational policies to one side and are now striving to reap mutual benefits. Prescriptions on how to do banking will still be necessary in the future.

2) Acknowledge that communicative frictions will occur naturally and target them

Banks and other companies should not resort to highly standardised interactions, where misunderstandings are bound to happen, but go the extra mile. "Agile" projects, as they are known, are one way of achieving more effective interaction. In parallel, it is possible to foster mutual understanding. At the Bundesbank, we launched an internal, company-wide awareness project on cyber risks, which was framed as a tour through the "cyber jungle". Of course some staff members poked fun at this scenario. But if mockery is the first step towards deeper awareness and greater understanding, that is fine with me.

3) Lastly, banks have to foster the presence of digital natives in their top management

German banking supervisors have acted accordingly and made it easier for digital specialists without an explicit banking and credit business background to become board members at banks.

All in all, whether you consider yourself a digital native or the very opposite, a digital illiterate, in the digital era of banking, there are some uneasy truths to face up to. The future of banking should be more about acknowledging the differences and aligning them as smoothly as possible. Players who achieve that are also likely to be among the most successful in their business.

Thank you for your attention

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[1] See John Palfrey and Urs Gasser: Born Digital: Understanding the First Generation of Digital Natives (2008).

[2] John Perry Barlow (1996), A Declaration of the Independence of Cyberspace". Online available (19-01-2018): www.eff.org/cyberspace-independence