Burkhard Balz: Digital transformation – a central bank perspective

Speech by Mr Burkhard Balz, Member of the Executive Board of the Deutsche Bundesbank, at the 2nd EBF Cloud Banking Conference, Brussels, 9 July 2019.

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1 Introduction

Ladies and gentlemen,

Thank you for giving me the opportunity to speak to you today. Having spent several years in the European Parliament, it is always a pleasure to be back in Brussels.

Wim Mijs and Roberto Viola have already given us some very interesting thoughts on cloud services.

Now I would like to talk from the perspective of a central bank and supervisory authority and in particular, about why digital transformation interests us, and what opportunities and challenges it may have in store for us.

2 Digital transformation, cloud services and the Bundesbank

Ladies and gentlemen,

While no one can predict the future with certainty, we know one thing for sure – digital transformation is here, it's now and it's big. It changes the way we live and work.

In the financial sector, digital transformation has thrown up numerous questions, even leading some to ask whether banks or central banks will still be needed in future.

For instance, some observers have already declared that the days of government-issued currencies are numbered.

Following the hype about crypto-tokens like Bitcoin, "stablecoins" – crypto-tokens or accounts whose value is pegged to existing fiat currencies or a basket of currencies – such as Facebook's Libra have recently dominated the headlines.

I will be brief on this point: crypto-tokens currently do not pose a risk to monetary or financial stability. Yet gaps may occur where they fall outside the scope of regulators' authority or where there is an absence of international standards.

Any wider use of new types of crypto-tokens would therefore warrant close scrutiny. Their technical stability must be evaluated as well as their impact on monetary and financial stability.

Be assured that we will monitor potential risks very closely and in a coordinated fashion, and consider multilateral regulatory responses as needed.

Let us now take a step back and talk more generally about digital transformation and central banks. Why does digital transformation interest us at the Bundesbank?

First, digital transformation has far-reaching effects on the overall economy. It affects economic activity, capacity and inflation.

As a central bank with a mandate to ensure price stability, it is important that we are able to gauge such developments and anticipate possible repercussions.

In addition, digital transformation brings about fundamental changes in working modes and business models of the financial sector.

- Established banks are challenged by new, agile players. Existing value chains are disrupted and redesigned.
- From the perspective of banking supervision and financial stability, in particular, we must keep an eye on these developments and the potential risks they may create. I will address this topic in more detail later on.

Finally, digital transformation has very direct effects on the day-to-day work of central banks. We, too, must become more digital so (that) we can do our job (even) better.

Let me elaborate on this. We at the Bundesbank – much like other central banks, of course – have already been in the process of going digital for a long time.

However, digital transformation has taken on a different dynamic as a result of recent technological breakthroughs in fields such as machine learning, process automation and distributed ledger technology.

We therefore decided to examine more closely the potential and possible applications of these new technologies. We wanted to acquaint ourselves with larger-scale digitalisation concepts early on and at the level of our institution as a whole.

To achieve this, we set up an interdisciplinary committee to promote digitalisation topics at an early stage and across departments. Building on this, we are currently working on a “digital agenda” for the entire Bundesbank.

In this context, we are also discussing the opportunities and challenges related to cloud services.

Cloud service providers offer a wide range of services, supplying storage space or computing power, making developer platforms available or providing software and web applications.

Outsourcing activities and processes by using such services can be an efficient way to benefit from the division of labour. It allows companies to save costs and resources, use synergies, optimise processes and gain access to specialist knowledge.

And central banks may benefit from this, too. The Bundesbank, for instance, already applies cloud services in several areas.

In particular, we are examining how cloud services may help to improve agility, data analysis and research methodologies.

- In economic research, for instance, demands for scalability have become apparent that can hardly be met by using exclusively internal IT resources.
- This is due, amongst other things, to the increasing focus on microdata, which requires the processing of considerably larger volumes of data.

That said, central banks, in particular, must be aware that relying on cloud services brings about new challenges.

- Security concerns remain, especially as most large cloud service providers are located outside the European Union.
- In an increasingly consolidated market with just a few big suppliers of cloud services, “lock-in risks” should not be neglected.
- The matter of how to effectively protect market-critical infrastructures needs to be analysed thoroughly.

- Concerns about data confidentiality must be dealt with.
- And reputational risks must also be kept in mind.

3 Implications for supervision and regulation

Ladies and gentlemen,

I have already mentioned that digital transformation is fundamentally changing the financial sector.

Don't get me wrong here. We are not talking about "evolution", about banking adapting to the wants and needs of a digital generation – we are talking about a true "disruption" that may change the financial sector for good.

Digital transformation is shifting basic economic forces that shape the sector in all respects.

Technology and societal change have fuelled new business models. For example, the rise of platforms has turned existing structures provided by many credit institutions in parallel – like branches, ATMs or product development – from strategic assets into costs.

Conversely, scaling up business has become more important, as marginal costs of providing an already existing digital service to an additional customer may be pretty much zero.

Another shift concerns cooperation: given the speed at which new business models may penetrate markets, cooperation has become even more important, as it helps to react to market developments more quickly.

With large technology firms operating across borders and being strong potential competitors to existing financial institutions, pressure to cooperate has increased even more.

This is just to give you an idea of the current thrust of change. However, digital transformation is not a straightforward story. We do not know where it will lead us.

Technology, society and financial services co-evolve. To this day, we have not seen any dominant pattern.

Instead, digital transformation has even increased differentiation within the sector. In other words, complexity has increased.

And all of this has implications for the Bundesbank in its role as a supervisory and regulatory agency.

Take the boundaries of the financial sector as an example: new enterprises have joined the market which sometimes provide just one of the process steps that make up a banking service (customer onboarding or credit scoring, for instance) or technical support processes (for mobile payments, for example) in partnership with banks.

As a result, the boundaries of the financial sector have become somewhat blurred. And regulators need to address this blurriness.

Let me give you a more concrete idea of this problem by returning to the issue of cloud services.

Banks increasingly outsource activities using cloud services from external providers. This gives rise to new challenges, as I have already mentioned.

From a supervisory perspective, these challenges mean more risks. In order to deal with these risks, someone – first of all – needs to assume responsibility.

In the status quo, the rules are quite clear. External providers that do not themselves perform business subject to the supervisory rules do not fall within the scope of regulation.

It is the supervised institutions that bear full responsibility for any risks arising from cooperation with an external service provider.

Therefore, the institutions themselves must ensure that the risks remain manageable – for instance, by including relevant terms and conditions to this effect in cooperation agreements.

Or by considering from the outset how they can keep their business up and running if the partnership is terminated unexpectedly.

So this sums up the conditions de jure. But are they always appropriate to the economic conditions?

Depending on the individual case, the picture can be quite different. Where credit institutions work with large technology firms, such firms' negotiating power might be so large that institutions have difficulty imposing the conditions needed to make risks manageable.

We also have to make sure that certain tasks are not outsourced simply because we can afford to be more relaxed about dealing with the resulting risks outside the regulated enterprise.

The more the boundaries between sectors become blurred and the more intensively banks work with non-licensed enterprises, the more relevant discussions like this will become.

One could ask whether certain activities of external providers should be supervised. This could indeed help to contain risks to financial services.

However, it is by no means clear how such activity-based supervision could be organised. What's more, that should not relieve banks and other supervised financial institutions of their responsibilities.

Therefore, we are still in the early stages of this debate.

Let me address another consequence of the digital transformation for supervisors.

The sheer complexity of matters becomes challenging. For example, ten years ago, IT-related supervisory standards were fairly manageable.

Nowadays, specialisation within this risk category is playing an increasingly important part.

- Knowledge of IT risks needs to be updated constantly. Information sharing between supervisory authorities across national borders has become a major factor, and knowledge management is becoming a key task in this regard.

This relates to other topics as well. For example, when evaluating a technology-driven business model of a new company involved in financial services, supervisory authorities today often need to combine legal, economic and technical expertise.

In these situations, it is no longer possible for a single person to make a comprehensive assessment.

Supervisory authorities thus need to learn to cope with IT-related content and an agile environment – much like the institutions themselves.

This means that supervisory authorities will have to face up to topics such as maintaining IT skills within their organisation and finding a suitable organisational setup to tackle complex questions that arise in today's financial sector.

So it’s not just about setting the right framework for digital finance. Organisational matters also become crucial to the effective enforcement of our regulatory framework.

4 Conclusion

Ladies and gentlemen,

I promised you to shed some light on digital transformation from the perspective of a central bank.

So please forgive me for concluding with the typical remark of a central banker: “There are opportunities. And there are also risks”.

While harbouring enormous possibilities, digital transformation also poses quite substantial challenges. In particular, it reshapes the financial system in a way we still do not fully comprehend. This throws up new kinds of questions that require new answers.

It is the task of central banks, supervisors, legislators and market participants alike to shape these developments.

Ultimately, digital transformation will be what we make of it.

Thank you.