

Joachim Nagel: How the Banking Union has transformed banks' IT requirements

Keynote speech by Dr Joachim Nagel, Member of the Executive Board of the Deutsche Bundesbank, at the 20th Handelsblatt Annual Conference on Banking Technology, Frankfurt am Main, 3 December 2014.

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1. Opening remarks

Professor Bott

Ladies and gentlemen

It gives me great pleasure to address this Handelsblatt Annual Conference today.

“All Digital – All Mobile – All Compliant”, the motto of this year’s annual conference on banking technology, points to the major challenges faced by the IT departments of financial institutions.

In my capacity as a member of the Bundesbank’s Executive Board, I am responsible for the Markets and Information Technology Departments. So I am familiar with some of the problems and difficulties associated with a bank’s IT infrastructure. On the one hand, the yardstick by which a bank’s chief information officer (CIO) is measured is the way in which he or she supports the institution’s core business areas by delivering high-quality IT services and products, which should ideally be standardised and streamlined. IT security is coming increasingly into play here. On the other hand, he or she is also expected to demonstrate a high level of agility and innovative ability in the face of stiffer competition, including from enterprises outside the traditional banking sector. Together with all other business units, then, it is important for banks’ IT to reap greater business benefits by implementing joint projects and employing innovative information technology.

It is crucial that we recognise and harness the business relevance of trends in the field of information technology – trends such as mobility, as referred to in the conference’s motto. Big data, “datability”, social media and cloud computing undoubtedly all open up additional major opportunities for banks. Yet at the same time they pose new challenges, especially with respect to IT security.

Today, I would like to shed some light on the third facet of this event’s motto – “All Compliant” – with regard to the European banking union.

The German Corporate Governance Code defines “compliance” as adherence to legal provisions and corporate guidelines, which falls within the responsibility of senior management.¹ Compliance therefore means adhering to and satisfying legal and regulatory requirements. The financial community is now confronted with many new and revised requirements and conditions, particularly as a result of regulation adopted in the course of the financial and sovereign debt crisis. Banks need to demonstrate their “regulatory compliance” with these, which also has a direct impact on their IT.

2. The Banking Union – a response to the financial market crisis

The current financial and sovereign debt crisis has also exposed flaws in the architecture of banking supervision. I would therefore like to highlight four weak points that we have either eliminated or are working towards eliminating on the road to a European banking union.

¹ German Corporate Governance Code as approved by the Code’s Government Commission on 24 June 2014.

1. *Consistent European banking supervision*

Banking supervision at the national level was replaced on 4 November 2014 by direct, ECB-led supervision of the largest European banks.

Under the Single Supervisory Mechanism (SSM), all prudential reporting data from significant banks are now collected by a central authority, with information assessed in a manner that allows cross-border comparisons to be drawn.

2. *Harmonisation of banking supervision*

The establishment of a uniform prudential framework has brought about greater harmonisation of banking oversight in member states, with regulatory arbitrage being prevented by shifting responsibility for banking supervision and resolution to the European level.

3. *Liability cascade in the event of resolution*

One lesson the crisis has taught us is that no bank should be “too big to fail”: if the worst comes to the worst, they must be able to fail. The Single Resolution Mechanism (SRM) defines this usually self-evident liability cascade, according to which shareholders and creditors are first and second in line to absorb any losses. Taxpayers are the last link in this chain of liability.

4. *Capital backing for government bonds*

On the other hand, high levels of sovereign debt can also destabilise the domestic banking sector – I am referring specifically to the zero risk weighting of government bonds. In future, this vicious circle between sovereign and banking risks could be broken by implementing appropriate measures. After all, we have seen that government bonds are not risk-free. That is why the preferential regulatory treatment afforded to government bonds and other exposures to the public sector, in particular, needs to be brought to an end.

The idea behind the banking union is a common financial regulatory framework, known as the Single Rulebook, and rests on two main pillars.

The first pillar is central, joint responsibility for banking supervision under the aegis of the ECB. This has already been put in place in the shape of the SSM.

The second pillar is the SRM, which is responsible for the recovery and resolution of insolvent banks in times of crisis. The SRM is a necessary complement to the SSM and, together, they represent two sides of the same coin: they aim to facilitate the orderly recovery or resolution of institutions in the event of insolvency.

There was also talk of a third pillar in the form of a single deposit guarantee scheme. But this would entail joint, cross-border fiscal responsibility, which is a step that policymakers are not yet prepared to take. The recently revised EU Directive on deposit guarantee schemes did, however, bring about greater harmonisation in European deposit guarantee schemes.

It is now more or less exactly one month since the SSM came into force. On 4 November, the ECB took on the far-reaching supervisory responsibilities assigned to it for credit institutions in the euro area. In the SSM, the ECB and the euro-area national competent authorities work together. The division of tasks between the European and national institutions is based on the distinction between significant and less significant institutions. Specifically, the following institutions are defined as significant:

- banks with total assets of more than €30 billion or more than 20% of national GDP with total assets also in the latter case having to amounting to at least €5 billion;
- banks receiving direct or indirect assistance from the EFSF or the ESM;

- the three most significant credit institutions in an SSM member state.

These are “either/or” criteria. This means that one criterion alone is sufficient to classify the institution as “significant”. For such significant institutions – at present, there are 120 of them with roughly 85% of aggregate total assets across all banks – the ECB is taking on complete supervision.

For the 3,600 “less significant” institutions across Europe these tasks will be performed by the national supervisory authorities. So, about 1,700 German institutions will still be subject to ongoing supervision by the Bundesbank and potential measures by BaFin. Nevertheless, the ECB exercises oversight over the system as a whole. The ECB is to ensure consistent and high-quality supervisory practice in the SSM by setting standards and issuing instructions. The European Banking Authority (EBA) is responsible for the development of regulatory standards for European banks; compliance is a matter for the ECB and the national competent authorities.

European supervision will make a major contribution to

- the integration of the financial markets by means of uniform standards
- the separation of bank and sovereign risks and
- the stability of the financial market.

From an IT perspective, the SSM will introduce new work processes as well as changes in the exchange of information and reporting channels. Via the national competent authorities (NCAs) – in Germany, through the Bundesbank – the ECB will be receiving the reporting data of all banks in the SSM area, irrespective of the significance of the given institution. For significant banks, the Bundesbank will become a supplier of data to the ECB. The data reported by the NCAs are analysed by the ECB and serve as a basis for regulatory decisions about significant institutions.

For non-significant institutions, the national applications will continue to exist, but will be adapted in future to harmonised European specifications.

Supervision of the significant banks will be undertaken by joint supervisory teams (JSTs). A JST is being established for each of these institutions. These teams will be headed by a coordinator who is a member of staff of the ECB. The teams themselves are largely made up of staff from the national competent authorities. In future, the supervisors will have access to the ECB banking supervisory applications via the SSM Information Management System (IMAS).

IMAS will provide the infrastructure to ensure harmonised processes and consistency in the supervision of banking institutions. It is a key element for safeguarding the application of the common methodology and standards by all the JSTs.

The system offers ECB decision-makers and banking supervisors efficient access to operational and analytical data via a stable and user-friendly interface. The first harmonised application in the European regulatory framework is designed for receiving and analysing institutions’ solvency and financial data from all the SSM countries based on the XBRL format² in conformity with the EBA’s technical implementing standards.

3. New requirements for banking infrastructure

The implementation of the new supervisory standards has become the greatest challenge for the financial industry since the Lehman insolvency according to a recent Forrester study. It

² XBRL (eXtensible Business Reporting Language) is a language based on XML used for the preparation of electronic documentation in the field of financial reporting.

finds that, from a corporate viewpoint, compliance with regulatory requirements has the highest priority, with 60% in agreement. This is followed by improved customer services and operational efficiency, which have a lower ranking.³ The direct costs associated with this for the banking industry in Germany as a result of regulation in the period from 2010 to 2015 also represent a challenge, however. According to a study by KPMG, these are projected to total around €9 billion.⁴

Reports in the press recently made frequent mention of a “wave of regulation” inundating the banks’ IT. There was even talk of “excessive regulation” or a “regulatory tsunami”. With all sympathy for the great challenges that the banks are facing, we should not forget why these demands arose. They were due to sometimes glaring errors in developments and to a lack of meaningful possibilities of analysing the data that existed at the banks – both before the crisis and to this very day.

What we have observed from inspections at the banks is that IT at most banks is suffering from data not being collected and maintained in accordance with uniform standards and that there are only limited automated facilities for analysing these data and thus utilising them for a forward-looking risk management. Risk silos exist.

The outcome of this is that the management often finds itself in a situation where decisions have to be made with insufficient knowledge of the facts. This chiefly concerns banks with an international focus, which admittedly find it difficult to coordinate IT spread over a large number of locations. More than for others, however, it is absolutely essential for them to do so in order to hold their own in a volatile economic environment. The whole thing is not just a problem for German banks; according to a study by the Basel Committee, it concerns more or less all international banks. It goes without saying that no “data graveyards” should be created. I think that, together with the financial institutions, we will strike a healthy and, above all, viable balance in the future as well. Furthermore, many of the regulations have not been newly invented; they are already national banking supervision reality.

In Germany, for example, the implementation of section 25 of the Banking Act (Kreditwesengesetz, KWG) and the Minimum Requirements for Risk Management (Mindestanforderungen an das Risikomanagement, MaRisk) means that many of the mentioned requirements are already common practice among supervisors.

Warren Buffett is quoted as saying “Someone is sitting in the shade today because someone planted a tree a long time ago.” As I see it, the IT departments that have consistently and promptly implemented the requirements of earlier inspection practice are well equipped for the future demands of IT.

The new “Principles for effective risk data aggregation and risk reporting” (BCBS 239) adopted by the Basel Committee at the beginning of 2013 will apply initially from 2016 to global systemically important banks (G-SIBs). A bank is deemed to be systemically important in global terms if its insolvency would severely impede the functioning of the global financial system or significant parts thereof, and would also have negative effects on the real economy. The Financial Stability Board (FSB) has classified 30 institutions worldwide as systemically important, including Deutsche Bank as the sole German institution. It is already envisaged that this will be extended to domestic systemically important banks.

Risk information should be complete, correct, consistent and current and made available in a form appropriate to the addressees. This has always been a demand of the supervisory authorities. However, the Basel standards now set out, for the first time, globally coordinated, specific regulatory requirements for the architecture of risk and data management.

³ Forrester: Preliminary Results of 2014 Global Financial Services Architecture Online Survey, August 2014.

⁴ KPMG: Impact of regulatory requirements, December 2013.

The implementation of these provisions should make possible improved management information across all legal entities, an improved quality of strategic planning options and a complete assessment of the risk exposure at the highest consolidated level. Responsibility for this lies with senior management.

The regulatory provisions will lead to a harmonisation of IT infrastructures, flexible and consistent processes in risk management and to enhanced analytical capabilities.

The challenges in implementing these principles are highly ambitious and will require considerable input in terms of human resources and technology. This applies in particular to risk management, finance and information technology. In the medium and long term, however, this will also bring many opportunities. Even at an early stage, it should be possible to assess risks more quickly and more reliably; there will also be a crucial improvement in the quality of the basic elements of management. These changes are therefore also in the interests of the enterprises themselves.

4. Resulting challenges for institutions

The requirements placed on institutions by the SSM have been a catalyst for major changes in the relevant business areas and IT departments, particularly with regard to reporting data.

The expansion of the report contents has led to a marked increase in the volume of data to be submitted. For example, a tenfold rise in volume is expected for harmonised solvency and financial data. Another new aspect is that large institutions' reports of large exposures exceeding €300 million could contain up to 200 MB of data per submission. And I must confess that the European harmonisation of credit reporting is still in its infancy and further requirements are on the cards. Given the sheer scale of affected data, "Big Data" with innovative analytical, visualisation and reporting tools as well as in-memory technology⁵ will gain greater importance in banks' IT, if they haven't done so already.

Up until now, many data were already aggregated by institutions as part of the reporting process and the total figures were submitted to the supervisory authority. It is now increasingly the case that individual data are required, which are then aggregated by banking supervisors. The information and data to be reported by banks are now considerably more granular and serve as a basis for extended analyses in the field of banking supervision.

Institutions need to get used to the idea that regulatory requirements will have to be implemented in a much shorter space of time. Time pressure and the associated planning uncertainty are likely to pose the main problems in this respect. Up until now, there has been a time lag of about one year between the publication of new requirements by the Bundesbank and the first-time submission of data in line with these new requirements. In the wake of the launch of the SSM, the EBA has now reduced this timeframe to 2–3 months. The same applies to completely new areas for which there was previously no systematic collection of data.

The advantages of XBRL as the lingua franca for exchanging financial information is obvious. Data structures based on defined, uniform procedures allow information to be transmitted in a more efficient manner that is less prone to errors, and subsequently processed and evaluated. The complexity of taxonomies and reporting formats and the resulting increased volume of data are just some of the disadvantages compared with the previous, more simple formats. These directly impact on IT, placing greater demands on IT infrastructures, such as processor performance and storage requirements. Banks therefore need to upgrade their capabilities.

⁵ In-memory databases permanently store the entire data pool in the main memory, thereby enabling much faster read-only access than traditional database systems.

The previous interfaces between commercial banks and supervisory authorities have changed. Up to now, incoming reports were only subjected to syntactic checks, with technical verification taking place as a downstream process. At the Bundesbank, for example, Bundesbank staff reported any inconsistencies to the respective institutions. The correction could then be made by the institution in consultation with this member of staff.

Gradually – the process started back on 1 April 2014 with COREP (common solvency ratio reporting) – the submission and correction process will be automated as far as possible, as the SSM continues to take shape.⁶ The reported data will be machine-checked for technical correctness as well as subjected to initial specialist entry checks. At the end of the process, erroneous reports will be automatically rejected. Each individual submission will be subjected to several thousand automated checks. Institutions must expect error messages and be able to deal with not yet standardised contents and formats. Overarching examinations of economic, financial and large exposure data mean that institutions will need to cross-check figures down to the very last detail, even if they stem from different systems.

The timeframe for corrections by institutions is being reduced. This means, inter alia, that banks' internal correction processes need to be made more efficient and consistent, which might require more resources.

I think that the challenges I have presented can be summarised in the following areas of action for banks' IT financial architecture:

- Data governance and data architecture need to be optimised in order to enhance the quality, accuracy and integrity of data.
- Analytical and reporting processes need to facilitate faster decision-making and direct availability of the relevant information.
- Processes and databases for the areas of finance, control and risk need to be harmonised.
- Increased automation of the data exchange processes with the supervisory authorities is required.
- Fast and flexible implementation of supervisory requirements by business units and IT necessitates a modular and flexible architecture and appropriate project management methods.

Banks must ensure that their IT is equipped for this.

Further developments and framework conditions are in the pipeline:

- The SSM is gradually harmonising the banking supervision reporting system at the European level. Thus, new frameworks are continually being developed in a European context.
- The ECB and EBA are setting out requirements in liaison with the national competent authorities. COREP and large exposure reporting have already had to report for the first time in line with European requirements.
- The requirements concerning the scope and contents of reporting have increased significantly, while the response times for new requirements have been slashed. This trend looks set to continue in the future.
- New standards such as BCBS 239 require the relevant institutions to have integrated and automated data processing in place.

⁶ The Europe-wide standardised COREP provides a binding solvency reporting system.

- European harmonisation of credit reporting is presently being discussed (Analytical Credit Dataset – AnaCredit). It will be fundamentally different from the current reporting system. We are expecting regulations which lead to an increased number of metrics, and which additionally have a finer granularity. Furthermore, lower reporting thresholds and increased reporting frequencies are on the cards.

In my opinion, there are two key messages:

1. Banks need to invest in their information technology. The implementation of supervisory requirements will tie up considerable resources and entail costs.
2. Regulatory projects reduce operational risk, permit a better and faster assessment of risks and possible courses of action. This can, in turn, diminish operating costs and offer a crucial competitive edge.

5. Conclusion

Ladies and gentleman

To achieve our common goal of making financial markets more stable, the various bank governance functions – in particular, risk management, reporting and finance – need to be much better integrated than they have been up to now. Overarching data and methodological governance, and the integration of processes and IT systems need to oust the existing silos and monolithic systems. Furthermore, institutions need to be capable of safeguarding flexible and timely reporting for different target groups.

Thus the modernisation of IT systems is one of the big challenges faced by banks. Institutions want to keep their costs for fulfilling new – above all regulatory – requirements to a minimum. To do this, they will have to modernise their IT architecture. The Senior Supervisors Group⁷ emphasised the importance of strong IT governance, bringing together business units and IT, in its 2010 report⁸ This is also a key point for me: IT strategy needs to be embedded in the business strategy. The necessary transformations must not be an end in themselves from an IT perspective, but need to be strategically anchored and founded on business policy. Many regulatory requirements have been necessary precisely because banks' systems are not integrated. Only a holistic cross-business approach can take IT financial architecture to the next strategic level.

Ladies and gentleman

Thank you very much for your attention.

⁷ This body comprises representatives from the supervisory authorities of 10 countries, which are responsible for the world's largest banks.

⁸ "Observations on Developments in Risk Appetite Frameworks and IT Infrastructure", 23 December 2010. The SSG's analyses were carried out to support the Financial Stability Board in its task of addressing weaknesses in the financial system and promoting the stability of the international financial system.