

## Principles for effective Risk Data Aggregation and Risk Reporting

June 2014

#### The Authors



Jonathan van Malleghem



Frederic Blard

#### **Abstract**

In January 2013, the Basel Committee on Banking Supervision ("BCBS") issued a set of Principles to improve banks' risk management practices, decision-making processes and resolvability. Firms designated as global systemically important banks ("G-SIBs") are required to implement the Principles in full by the beginning of 2016.

Like the BCBS, national regulators believe that the principles can be applied to a wider range of banks. This Practice Note looks into the implementation of the Principles to date not only in G-SIBs but also in medium-sized banks.

#### **Background**

"One of the most significant lessons learned from the global financial crisis that began in 2007 was that banks' information technology ("IT") and data architectures were inadequate to support the broad management of financial risks."  $^{\rm 1}$ 

In response, the Basel Committee—as well as other global regulatory standard setters and national regulators—introduced a range of requirements to strengthen banks' risk data aggregation capabilities and risk reporting practices.

Whilst most banks have projects in place to enhance existing 'reporting chains', the Principles established a high standard and further work is still required to achieve compliance with the exacting BCBS standards by 2016.

"Many banks are facing difficulties in establishing strong data aggregation governance, architecture and processes, which are the initial stage of implementation. Instead they resort to extensive manual workarounds which are likely to impair risk data aggregation and reporting."

Basel Committee on Banking Supervision

December 2013

Within this Practice Note, we present 'handy tips' to overcome some practical challenges. We draw on recent experience in some of the G-SIBs as well as a few large domestic banks with whom we enjoy the privilege of working.

<sup>&</sup>lt;sup>1</sup> Principles for effective risk data aggregation and risk reporting, BCBS, January 2013, page 1.



# Principles for effective Risk Data Aggregation and Risk Reporting

June 2014

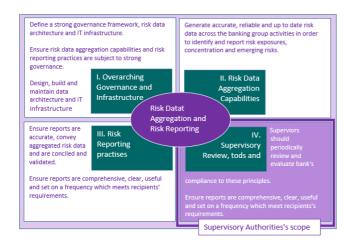
# Introduction to the Principles for Effective Risk Data Aggregation and Risk Reporting

As noted above, the Principles are expected to be implemented by G-SIBs by January 2016. The BCBS also recommends that national supervisors extend their application to domestic systemically important banks ("D-SIBs"). We, at Avantage Reply, believe the Principles will receive wide adoption and will eventually impact most banks in the European Union ("EU").

The principles cover four closely related topics:

- · Overarching governance and infrastructure;
- · Risk data aggregation capabilities;
- · Risk reporting practices; and
- Supervisory review, tools and cooperation.

These are then broken down into a total of 14 principles.



Based on our observations to date, with a pragmatic approach the changes ensuing from the implementation Principles will create value. They lead to improved decision-making information being provided to senior management in a more timely and cost efficient manner. In turn, this improves the decision-making process at Group level and across legal entities.

# G-SIBs' Self-Assessment and Implementation Challenges

Following the issuance of the Principles, the Basel Committee developed a questionnaire (87 questions/requirements for 11 principles), analysed the results and set out several recommendations for 2014 to ensure that banks are able to meet the 2016 deadline. The main results of the exercise are highlighted in the chart below:

#### Self assessment average rating by Principle

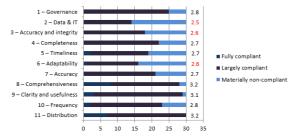


Figure 1: Self Assessment Ratings by Principles (adapted from BCBS, December 2013)

As depicted in Figure 1, the average ratings of principles 1 to 11 ranged from 2.5 to 3.2. The average rating of all 11 principles was 2.8, which indicates that banks' average reported compliance status ranges between largely compliant and materially noncompliant.

It is noted that the three principles with the lowest reported compliance were Principle 2 (data architecture/IT infrastructure), Principle 6 (adaptability) and Principle 3 (accuracy/integrity); hence our focus on those in the following sections.

# Addressing BCBS 239: Avantage Reply's Handy Tips

#### Principle 2: Data Architecture and IT Infrastructure

"A bank should design, build and maintain data architecture and IT infrastructure which fully supports its risk data aggregation capabilities and risk reporting practices not only in normal times but also during times of stress or crisis, while still meeting the other Principles."



## Principles for effective Risk Data Aggregation and Risk Reporting

June 2014

The average rating for this Principle (2.5) was the lowest rating among the 11 principles. Data architecture and IT infrastructure seem to be the most critical and challenging issue for banks.

In our view, Principle 2 is often the crux of the matter. Compliance with the principles and producing reliable and timely risk data and reports can only be achieved with robust data architecture and IT infrastructure.

The data architecture and IT infrastructure should be such that risk data aggregation capabilities and risk reporting practices are sufficiently robust and flexible enough to address their potential needs in normal times and during times of stress/crisis. Banks generally agree that enhancements are still needed regarding their capabilities to address MI requirements 'in normal times'. Most banks concede they experience significant challenges in producing the MI required 'during times of stress'. The Asset Quality Review ("AQR") exercise, led by the European Central Bank and the European Banking Authority ("EBA"), and the ECB stress test exercise provide two recent examples demonstrating the difficulty faced by banks when requested to provide additional adhoc information and data by regulators.

Another example relates to inconsistencies between regulatory reports (e.g., COREP and FINREP) prepared by banks. These reports, which source (inconsistent) data from Risk and Finance systems, remain, in some institutions, an ongoing challenge that can only be avoided with a consistent, clear and complete data architecture and IT infrastructure.

Often, banks have difficulties in harmonising the different reporting chains and ensuring a comprehensive group-wide standardisation of integrated data taxonomies and architecture.

A pre-requisite to meet these requirements is to enhance the transparency (i.e. the bank's understanding) of key risk data elements as they 'flow across the risk architecture'. Once that data inventory and its flows starts to emerge, one can then overlay this view with the appropriate governance & control framework.

We have observed how this 'Handy Tip', albeit conceptually simple, can truly change the understanding of a bank's risk data and IT infrastructure. Through an improved understanding of the 'as-is', governance & control structures will become more effective and the level of alignment and 're-use' can be drastically improved with a leaner and more compliant data landscape as a result.

By collaboratively building an understanding of their data  $\underline{\text{within}}$   $\underline{\text{their Business context}}$ , using tools such as  $Axon^{TM}$ , banks can pave the way towards  $\underline{\text{sustained}}$  compliance with Principle 2.

#### Principle 3: Accuracy and Integrity

"A bank should be able to generate accurate and reliable risk data to meet normal and stress/crisis reporting accuracy requirements. Data should be aggregated on a largely automated basis so as to minimise the probability of errors."

The average rating for this Principle was 2.6, which was the third lowest score among the 11 principles.

Accuracy and integrity are the essence of reporting and banking as a whole. However, the perfect balance between timeliness, cost and accuracy is not easy to find. The principle states that a bank should be able to generate accurate and reliable risk data under normal conditions and under stress.

One of the BCBS's primary recommendations is to minimise the probability of errors by relying on an automated reporting chain. BCBC acknowledges that manual interventions within the reporting chain is warranted where judgement is required. However, regulators are increasingly wary of high levels of dependency on manual processes that pose a challenge to accurate and timely risk data aggregation.

In order to reduce the probability of errors due to manual interventions, first, an assessment of the current situation must be made. Secondly the unnecessary manual interventions must be removed. As a last step, the remaining manual interventions must be documented and automatic controls should be implemented to mitigate operational risk.

A second area of focus should be the different shortcuts or so-called 'defaulting' applied within the reporting chain. Going from the front office systems to the final figures, data undergoes different transformations. These should be clearly documented and banks should re-assess whether these transformations can be avoided. This is particularly important when it comes to ad-hoc risk data reporting (as in the case under stress).

#### Principle 6: Adaptability

"A bank should be able to generate aggregate risk data to meet a broad range of on-demand, ad hoc risk management reporting requests, including requests during stress/crisis situations, requests due to changing internal needs and requests to meet supervisory queries."



## Principles for effective Risk Data Aggregation and Risk Reporting

June 2014

Adaptability is one of the most important challenges faced by large financial institutions. Regulators expect a bank's risk data aggregation capabilities to be flexible and adaptable to meet adhoc data requests as needed, and to assess emerging risks. For example, they expect banks to be able to generate subsets of data based on requested scenarios or resulting from economic events (e.g. as was the case during the recent EBA and ECB exercises).

The main solution to enable such requests is to have a uniform and standardised reporting chain. As discussed above, Principle 2, *Data Architecture and IT Infrastructure*, is the essence of the BCBS's general requirement.

Unfortunately, even if everyone would agree that implementing such a data architecture would be very useful (also for internal requests), the implementation takes time and a three-year timeframe seems very short.

However, until such an architecture is in place, quick wins can be identified. For example, tracing back risk data throughout the chain and integrating the essential data in one user-friendly data warehouse which can provide quick ad-hoc reports based on user requirements (group-wide, business unit view, legal entity view, etc.), proved very useful to a G-SIB when addressing ad-hoc regulatory demands.



## Principles for effective Risk Data Aggregation and Risk Reporting

June 2014

#### Contacts

#### **Avantage Reply (Amsterdam)**

The Atrium | Strawinskylaan 3051 1077 ZX Amsterdam Netherlands

Tel: +31 (0) 20 301 2123 E-mail: avantage@reply.eu

#### **Avantage Reply (Brussels)**

5, rue du Congrès/Congresstraat 1000 Brussels Belgium

Tel: +32 (0) 2 88 00 32 0 E-mail: avantage@reply.eu

#### **Avantage Reply (London)**

38 Grosvenor Gardens London SW1W 0EB United Kingdom

Tel: +44 (0) 207 730 6000 E-mail: avantage@reply.eu

#### **Avantage Reply (Luxembourg)**

46a, avenue J.F. Kennedy 1855 Luxembourg Luxembourg

Tel: +352 26 00 52 64 E-mail: avantage @reply.eu

#### Avantage Reply (Milan)

Via Castellanza, 11 20151 Milano

Italy

Tel: +39 02 535761 E-mail: avantage@reply.it

#### **Avantage Reply (Paris)**

5, rue des Colonnes 75002 Paris France

Tel: 33 (0) 1 71 24 12 25 E-mail: avantage@reply.eu

#### **Avantage Reply (Rome)**

V.le Regina Margherita, 8 00198 Roma

Italy

Tel: +39 06 844341 E-mail: avantage@reply.it

#### **Avantage Reply (Turin)**

Via Cardinale Massaia, 83 10147 Torino

Italy

Tel: +39 011 29101 E-mail: avantage@reply.it

#### **Xuccess Reply (Berlin)**

Mauerstrasse 79 10117 Berlin Germany

Tel: +49 (30) 443 232-80 E-mails: xuccess@reply.de

#### **Xuccess Reply (Frankfurt)**

Hahnstrasse 68-70 60528 Frankfurt am Main

Germany

Tel: +49 (0) 69 669 643-25 E-mail: xuccess@reply.de

#### **Xuccess Reply (Hamburg)**

Brook 1

20457 Hamburg

Germany

Tel: +49 (40) 890 0988-0 E-mail: xuccess@reply.de

#### **Xuccess Reply (Munich)**

Arnulfstrasse 27 80335 München

Germany

Tel: +49 (0) 89 - 411142-0 E-mail: xuccess@reply.de