THE SREP PROCESS
HOW TO DEAL WITH THE CHALLENGES
5 April 2018

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## Agenda 5 April

| 1.  | Introduction Michiel Hopman |
| 2.  | Relevant and recent SREP documents |
| 3.  | SREP and SSM priorities 2018 |
| 4.  | Overall SREP process and challenging keynotes |
| 5.  | SREP and score levels |
| 6.  | Business Model Analysis |
| 7.  | Governance & Institutions-wide controls |
| 8.  | Capital requirements |
| 9.  | ICAAP framework |
| 10. | Liquidity requirements DNB (for LSI’s) |
| 11. | ILAAP framework |
| 12. | Seven Principles ILAAP/ICAAP |
| 13. | Stress testing |
| 14. | Recovery plan |
| 15. | Assistance Hopman Data & Risk Solutions |
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Lecturer VU
PGO Master Risk Management for Financial Institutions
Minor RISK (Bachelor course)
## 2. Relevant and recent SREP documents
Not exhausted

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>SREP GL 2014</td>
</tr>
<tr>
<td>2.</td>
<td>Stress Testing GL 2010 (GL32)</td>
</tr>
<tr>
<td>3.</td>
<td>CP on Guidelines SREP (Oct 2017)</td>
</tr>
<tr>
<td>4.</td>
<td>CP on Guidelines Stress Testing (Oct 2017)</td>
</tr>
<tr>
<td>5.</td>
<td>CP on Guidelines IRRBB non trading (Oct 2017)</td>
</tr>
<tr>
<td>7.</td>
<td>EBA Pillar 2 Roadmap (April 2017)</td>
</tr>
<tr>
<td>8.</td>
<td>SSM Supervisory priorities 2018</td>
</tr>
<tr>
<td>9.</td>
<td>GL ICAAP/ILAAP on information for SREP (feb 2017)</td>
</tr>
<tr>
<td>10.</td>
<td>ECB Guide to ICAAP (March 2018)</td>
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<tr>
<td>11.</td>
<td>ECB Guide to ILAAP (March 2018)</td>
</tr>
<tr>
<td>12.</td>
<td>FAQ Guide to ICAAP/ILAAP (March 2018)</td>
</tr>
</tbody>
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3. SREP and SSM priorities 2018
Stress testing becomes an important tool

<table>
<thead>
<tr>
<th>Business model analysis</th>
<th>Risk Management</th>
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</thead>
<tbody>
<tr>
<td>• Profitability Analysis of the business model</td>
<td>• Improvement ICAAP (refined GL)</td>
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<tr>
<td>• IRRBB stress testing</td>
<td>• Improvement ILAAP (refined GL)</td>
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<tr>
<td>• Assessment of the business environment – key vulnerabilities</td>
<td>• Other regulatory changes:</td>
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<tr>
<td>• Analysis of the forward looking strategy and financial plans:</td>
<td>– Pillar 2 Guidance (stress testing)</td>
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<tr>
<td>– Viability (within one year)</td>
<td>– IFRS 9</td>
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<tr>
<td>– Sustainability (within three years)</td>
<td>– Liquidity/funding measures like Survival period, NSFR and MREL</td>
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<td>– Sustainability over the cycle (more than three years)</td>
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<table>
<thead>
<tr>
<th>Credit Risk</th>
<th>Multiple Risk dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Non Performing Loans ; consistent approach and improving timelines of provisioning and write-offs</td>
<td>• Integrated Stress testing</td>
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<td>• Concentrations exposures</td>
<td>• Brexit preparations</td>
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<tr>
<td>• Collateral management and valuation (e.g. Real Estate)</td>
<td>• IT and Cybercrime</td>
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</tbody>
</table>
### 4.1 Overall SREP Process

On an annual basis (April or September)

#### 1. Input bank
- Risk Management Framework
- ICAAP
- ILAAP
- Stress tests
- Recovery plan
- Update recommendations

#### 2. Assessment DNB
- Prudential check analysis
- DNB specialists
- DNB account team
- Peer group analysis

#### 3. Decision DNB
- Assessment SREP
- SREP panel DNB
- SREP decision capital
- Recommendations

#### 4. Dialog DNB - Bank
- SREP dialog DNB – Bank
- SREP letter with
  - Scorecard
  - SREP decision capital
  - Recommendations
- Annual SREP meeting

Annual
4.2 Challenging Key-notes
Requirements for small banks are broadly the same as large banks

- Structure your Risk Management
- Involvement Senior management
- Make stress testing an integral part of risk management
- Align your risk appetite with all SREP elements
- Aim for a score 2 (3 is too low, 1 is too high)
- Invest in (semi) automated reporting and one data source (alignment COREP/FINREP)
- Make Risk Management part of the business model
- From one photograph on an annual basis to a continuous film
## 4.3 SREP Framework

Source: guidelines SREP (2014)

### The SREP framework

<table>
<thead>
<tr>
<th>A. Categorisation of institutions</th>
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<tbody>
<tr>
<td>B. Monitoring of key indicators</td>
</tr>
<tr>
<td>C. Business Model Analysis</td>
</tr>
<tr>
<td>D. Assessment of internal governance and institution-wide controls</td>
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<tr>
<td>E. Assessment of risks to capital</td>
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<tr>
<td>F. Assessment of risks to liquidity and funding</td>
</tr>
</tbody>
</table>

- **E. Assessment of risks to capital**
  - Assessment of inherent risks and controls
  - Determination of own funds requirements & stress testing
  - Capital adequacy assessment

- **F. Assessment of risks to liquidity and funding**
  - Assessment of inherent risks and controls
  - Determination of liquidity requirements & stress testing
  - Liquidity adequacy assessment

### G. Overall SREP assessment

### H. Supervisory measures

- Quantitative capital measures
- Quantitative liquidity measures
- Other supervisory measures

### I. Early intervention measures
4.4 Alignment SREP Process

Source: CP guidelines
SREP (2017)
5.1 SREP score areas levels

- **Level 1**: Low level of risk to viability of the institution
- **Level 2**: Medium-low level of risk to the viability of the institution
- **Level 3**: Medium-high level of risk to the viability of the institution
- **Level 4**: High level of risk to the viability of the institution
- **Failure**: Resolution strategy comes into force

Source: guidelines SREP (2014)
5.2 SREP score areas

1. Business Model and Strategy

2. Internal governance and institution-wide controls

3. ICAAP
   a) Credit Risk and Counterparty Risk
   b) Market Risk
   c) Operational Risk
   d) IRRBB
   e) Capital Adequacy

4. ILAAP
   a) Liquidity Risk
   b) Funding Risk
   c) Liquidity quantification
   d) Liquidity adequacy

5. Overall SREP

Additional area is stress testing:
➢ Individual risk types stress testing
➢ Integrated stress testing

=> Input for Pillar 2 Guidance (P2G)
5.3 : Link between different levels
Score level 3 is tipping point between CRR/CRD and BRRD

P.10 of CP guidelines SREP
5.4: Overview of scores European banks
Challenges for Business model assessment and Governance & risk management

Source: SSM SREP methodology booklet (2017)
6. Business Model Analysis (BMA)  
Building a forward looking forecast/scenario model

<table>
<thead>
<tr>
<th>Preliminary assessment and peer group analysis</th>
<th>Identification of the areas of focus for BMA</th>
<th>Assessment of the business environment</th>
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<tbody>
<tr>
<td>Quantitative analysis of current business model</td>
<td>Qualitative analysis of current business model</td>
<td>Analysis of the strategy and financial plans</td>
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<tr>
<td>Analysis of the business model viability</td>
<td>Assessment of the sustainability of the institution’s strategy</td>
<td>Identification of key vulnerabilities</td>
</tr>
</tbody>
</table>

1) Summarising the findings, assumptions and argumentation  
2) Build a basis forecast model for the balance sheet and Profit and loss

priority in 2018
7.1 Governance & Institutions-wide controls

Improvement ICAAP/ILAAP one of the priorities in 2018

1) Structuring your Risk Management Framework is key
2) Improvement ICAAP/ILAAP is one of 2018 priorities (refined guidelines)
7.2 Risk Management Framework
Structured framework and aligned risk appetite is key

- ICAAP – ILAAP framework
- Stress testing capabilities and results
- Independent Risk Management function
- Experienced head of risk management
- Risk Measurement and monitoring
- Risk policies and procedures
7.3 Risk Appetite Statement
Alignment with the SREP components

Mission, strategy and culture

Risk Appetite Statement

Expectations & interests of stakeholders
- Shareholders
- Clients
- Financial counterparties
- Employees
- Supervisors
- Supervisory board

Risks
- Credit risk
- Market risk
- Operational risk
- Interest rate risk
- Business risk
- Liquidity risk
- Other risks

Components
- Business Model
- Governance & Control
- Capital
- Liquidity
7.4 Risk Appetite Statement
Slippery slope for different indicators in Indicator framework

[Diagram showing the relationship between Indicator level and Operating level with stages: Business, Stress, Recovery, Resolution, Point of Non-Viability, and Early warning, Stress, Recovery triggers.]
8.1 Capital Requirements
Requirements Baseline scenario

Source: ECB Guidelines ICAAP (March 2018)
8.2 Capital Requirements

Requirements Adverse scenario

Source: ECB Guidelines ICAAP (March 2018)
8.3 Pillar 2 Guidance (P2G)
Based on stress testing results

- Based on outcomes of (supervisory) stress test under assumed adverse scenarios
- Covering at least the expected maximum stress impact
- Floor of 1% (announced by DNB Dec 2016)
- Adjustments for credible management action and ICAAP process
- Offset against Capital Conservation Buffer and Counter Cyclical Capital Buffer
- P2G capital has to meet CET1 own funds
- P2G is not a legal requirement and will not determine MDA
- Breaching P2G will intensify supervisory dialogue with recommendations

Source: EBA Pillar 2 roadmap (April 2017)
9.1 ICAAP framework
Assessment of individual risk types, own funds and forward looking

➢ Credit risk
➢ Market risk
➢ Operational risk

➢ Interest Rate Risk in the Banking Book (IRRBB)
➢ Concentration risk
➢ Strategic risk
➢ Other risk (legal, compliance etc)

➢ Stress testing on capital individual risk types and total capital
➢ Capital Funding plan (forward looking)

Pillar 1 capital requirements
Pillar 2 capital requirements

Source: EBA Pillar 2 roadmap (April 2017)
9.2 ICAAP focus on IRRBB (1)
One of the priorities of SSM/SREP in 2018

- IRRBB framework and Governance (including model review and audit)
- Include Credit spread risk (CSRBB => no definition specified)
- Stricter guidance on option risk (automatic and behavioural)
- Lower bound interest rate from -150 bp (short term) to 0 (30 years +)
- Material currencies to be considered with risk free curve
- Non maturity deposits (sight deposits and savings): maximum average maturity 5 years
- IRRBB Stress testing framework for institution specific stress test and scenarios

Source: CP GL IRRBB 31-10-2017
Measurement IRRBB remains the same methods:
1. Equity at Risk
2. Earnings at Risk

Application and governance becomes stricter:

- Regulatory outlier test: +/- 200 bp parallel shift:
  Delta own funds (CET) >20% => Obligation to inform supervisor

- Calculation of 6 shock scenarios:
  Delta Tier 1 capital > 15% => Obligation to inform supervisor
    - Parallel 200bp; short 250bp; long 100bp

Source: CP GL IRRBB 31-10-2017
10 Liquidity requirements DNB (for LSI’s)

Replacement of 8028 liquidity reporting:

1. **Survival period:**
   - Minimum of 6 month operating requirement under stress
   - Internal stress test with all institution specific vulnerabilities and “dynamic balance sheet”
   - Compliant with EBA GL on Liquidity Stress testing
     (e.g. 3 types: Idiosyncratic; Market-wide and combined)
   - Obligation to inform DNB if Survival period will breach 7 months

2. **Net Stable Funding**
   - Net Stable Funding Ratio > 100%
   - DNB applies EBA GL and review of CRR/CRD
   - Obligation to inform DNB if NSFR will breach 100%

Source: site DNB factsheet juni
## 11 ILAAP framework

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<th>ECB ILAAP self assessment</th>
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### F. Assessment of risks to liquidity and funding

- Assessment of inherent risks and controls
- Determination of liquidity requirements & stress testing
- Liquidity adequacy assessment
12.1 Seven Principles ILAAP/ICAAP
ECB Guidelines for ICAAP/ILAAP (March 2018)

Principle 1 – The management body is responsible for the sound governance of the ICAAP/ILAAP

Principle 2 – The ICAAP/ILAAP is an integral part of the overall management framework

Principle 3 – The ICAAP/ILAAP contributes fundamentally to the continuity of the institution by ensuring its capital/liquidity adequacy from different perspectives

Principle 4 – All material risks are identified and taken into account in the ICAAP/ILAAP
12.2 Seven Principles ILAAP/ICAAP

Principle 5 – The internal capital/liquidity buffers are of high quality and clearly defined; the internal stable sources of funding are clearly defined

Principle 6 – ICAAP/ILAAP risk quantification methodologies are adequate, consistent and independently validated

Principle 7 – Regular stress testing is aimed at ensuring capital/liquidity adequacy in adverse circumstances
13.1 Stress testing
Stress testing becomes more and more relevant in risk management

- Stress testing Framework
- Stress tests for individual risk types
- Scenario thinking
- Sensitivity analysis (ceteris paribus)
- Integrated Stress testing
- Reverse Stress testing
13.2 Stress testing
Key take-aways stress testing

➢ Ensure an adequate governance and involvement of key roles in the bank (including management body)

➢ Good project management, approval process and documentation

➢ Quality of data and IT-sytems, knowledge of modelling (forecast model 3-5 years):
  o Balance sheet
  o Profit&Loss
  o Capital/Liquidity
  o etc

➢ Organise brainstorm sessions for scenario thinking
  *Severe but realistic and conduct narrative:*
  o Basis/Anchor scenario
  o Idiosyncratic
  o Market-wide
  o combined

➢ Ensure alignment between the stress tests (individual, sensitivity and integrated)
14.1 Recovery plan
Overall good, some improvements need to be made (DNB 2017)

*Good development*
- Availability to switch from business as usual to crisis management
- Variety of indicators for signalling a crisis situation

*Improvements:*
- Setting indicators on the right level indicating breach of recovery trigger
- Recovery options are not sufficient substantiated with quantitative models
- Compliant with EBA guidelines
14.2 Recovery plan
Core elements required

➢ Crisis governance, crisis management and clear escalation process

➢ Variety of recovery options => credible, feasible and possibility to execute in a reasonable timeframe

➢ Scenario-analysis for different situations and scenarios for results of recovery options
Support of Hopman Data & Risk Solutions

- Flexible support in expertise and execution
- Support on all SREP activities
- Support on regular risk activities and reporting
- Support on modelling and developing reports
- Support on automation-Robotization reports
- Part time involvement on management level
- Combination of Experts and Business Analysts ensure a cost-efficient way of working

Michiel Hopman
Expert banking

Rutger Lit
Expert modelling

Ectrie/finance students for support as Business analysts

www.hopmandatarisk.nl
Questions?