

# *Internal Capital Adequacy Assessment – third quarter 2018*

Danske Bank Group



<b>Contents</b>	<b>Page</b>
1. Introduction.....	3
2. Process for determining the solvency need.....	4
2.1 The basis for capital management.....	4
2.2 Risk identification.....	4
2.3 Danske Bank's internal assessment of its solvency need.....	5
3. Stress test method and assumptions.....	9
4. Additional information.....	9

## 1. Introduction

The objective of this Internal Capital Adequacy Assessment report is to address the disclosure requirements as stipulated in the Danish Executive Order of 27 March 2014 on Calculation of Risk Exposure, Own Funds and Solvency Need (annex 2) and in the Danish Financial Business Act. The report concerns Danske Bank Group and the legal entities Danske Bank A/S, the sub-group Realkredit Danmark Group and Realkredit Danmark A/S.

This report is a supplement to Danske Bank Group's annual Risk Management report, which contains further details. This document includes

- a description of the process and method for determining the solvency need
- a calculation of the solvency need
- a description of the stress test method and assumptions

Danske Bank Group monitors its risks through the coordinated efforts of credit and risk departments at both Danske Bank A/S and Realkredit Danmark A/S. Realkredit Danmark A/S is a subsidiary of Danske Bank A/S and is included in the report on Danske Bank Group in accordance with the Danish Executive Order on Calculation of Risk Exposure, Own Funds and Solvency Need. The present report, including the description of the process and method used for determining the solvency need, covers the companies mentioned above and is published on the websites of the individual companies.

### Conclusion

At the end of September 2018, Danske Bank Group's solvency need amounted to DKK 89.4 billion, or 12.1% of the total risk exposure amount (REA). With total capital of DKK 154.2 billion and a total capital ratio of 20.9%, the Group had DKK 29.1 billion in excess of the sum of the solvency need and the combined buffer requirement.

## 2. Process for determining the solvency need

### 2.1 The basis for capital management

The main purposes of the Group's capital management are to support the Group's business strategy and to ensure a sufficient level of capital to withstand severe macroeconomic downturns.

Credit institutions assume risks as part of conducting business, and sometimes financial losses occur. The first line of defence against such losses is the individual institution's earnings. In a given year, if the earnings are not sufficient to cover the losses, they are covered by excess capital, that is, the part of the institution's capital that exceeds its solvency need.

The Group's capital management ensures that the Group has sufficient capital to cover the risks associated with its activities. The Group uses advanced approaches for all significant risk types in combination with adjustments based on expert assessments, if necessary.

The Group develops its capital management framework on an ongoing basis, comparing it with international guidelines and best-practice recommendations. The Group monitors national and international measures that may influence its capital position and its capital management framework.

The Group's capital management is based on the Internal Capital Adequacy Assessment Process (ICAAP). As the primary capital management tool, the Group's ICAAP, including the ICAAPs of its subsidiaries, helps provide a clear picture of capital and risks throughout the Group.

The regulatory framework for the Group's capital management is rooted in the Capital Requirements Regulation (CRR) and the Capital Requirements Directive (CRD), which can be divided into three pillars:

- **Pillar I** contains a set of mathematical formulas for the calculation of risk exposure amounts for credit risk, market risk and operational risk. The minimum capital requirement is 8% of the total REA.
- **Pillar II** contains the framework for the contents of the ICAAP, including the identification of a credit institution's risks, the calculation of its solvency need and stress testing. It also includes the Supervisory Review and Evaluation Process (SREP), which is a dialogue between an institution and the relevant financial supervisory authority on the institution's ICAAP.
- **Pillar III** deals with market discipline and sets forth disclosure requirements for risk and capital management.

While Pillar I entails the calculation of risks and the capital requirement on the basis of uniform rules for all credit institutions, the ICAAP under Pillar II takes into account the individual characteristics of a given institution and covers all relevant risk types, including risks not addressed under Pillar I.

As part of the ICAAP, management identifies the risks to which the Group is exposed for the purpose of assessing its risk profile. When the risks have been identified, the Group determines the means by which they will be mitigated. These are usually business procedures, contingency plans and other measures. Finally, the Group determines what risks will be covered by capital. In the ICAAP, the Group determines its solvency need on the basis of internal models and other means, and it conducts stress tests to ensure that it always has sufficient capital to support its chosen business strategy.

### 2.2 Risk identification

The Group is involved in a number of business activities. These activities can be divided roughly into five segments: banking, market, asset management, insurance and group-wide activities. The latter category covers management activities that are not specific to any of the first four business activities but broadly support them all. Each of these activities entails various risks, which fall into the seven main categories of the Group's risk management framework.

Risk identification across activities	Danske Bank Group's risks						
	Credit risk	Market risk	Operational risk	Pension risk	Insurance risk	Business risk	Liquidity risk
Banking activities	√	√	√			√	√
Market activities	√	√	√			√	√
Asset management			√			√	
Insurance (Danica)					√		
Group-wide activities			√	√		√	√

According to Danish legislation, the regulatory framework for Pillar II includes a number of risk items that must be assessed in the ICAAP. The table below shows the relationship between these regulatory items (the rows in the table) and the Group's seven risk categories (the columns in the table) and also lists the regulatory items treated in the Group's stress tests. In addition, the Group assesses the risk of excessive leverage.

FSA executive order Annex 1: Risk items	Danske Bank Group's risks							Stress test
	Credit risk	Market risk	Operational risk	Business risk	Insurance risk	Pension risk	Liquidity risk	
Earnings		√		√	√			√
Credit growth	√							√
Credit risk	√							√
Concentration risk	√	√					√	√
Market risk		√			√	√		√
Interest rate risk outside the trading book		√						√
Liquidity risk							√	√
Operational risk			√		√			√
Gearing	√	√					√	√
Other risks*	√	√	√	√	√	√	√	√

\* including strategy risk, reputational risk, external risk, group risk and settlement risk.

The Risk Management 2017 report, published at the same time as Danske Bank Group's Annual Report 2017, provides detailed information about the individual risk items. The report is available at [danskebank.com/ir](http://danskebank.com/ir).

### 2.3 Danske Bank's internal assessment of its solvency need

The ICAAP under Pillar II entails the Group's calculation of its solvency need. The process is adjusted to address the conditions at the individual credit institution, and it covers all material risks.

An important part of the process of determining the solvency need is to evaluate whether the calculation takes into account all material risks to which the Group is exposed. The Group uses add-ons to the solvency need if the result of the model calculations does not appear to be sufficiently conservative, for example, if the Group believes that there is a need for a more conservative approach than what is indicated by the Pillar I approach. The Group has established a process in which the add-ons are quantified on the basis of input from internal experts. The capital add-ons are additive, although they may overlap one another, and the process thus represents a conservative and careful assessment of the Group's solvency need.

The Group does not set aside capital for liquidity risk but rather mitigates such risk by means of stress test analyses, contingency plans and other measures. The Group recognises that a strong capital position is necessary for maintaining a strong liquidity position.

The Group assesses its solvency need on the basis of internal models and ensures that it uses the proper risk management systems. The ICAAP also includes capital planning to ensure that the Group always has sufficient capital to support its chosen business strategy. Stress testing is an important tool used for capital planning purposes.

The Group complies with approved risk limits and risk monitoring through a defined cycle of reporting to the Board of Directors and the Executive Board on changes in risk objectives. An expanded ICAAP report is submitted to the Board of Directors and the Executive Board for approval once a year, and the members also receive quarterly ICAAP reports as well as quarterly reporting on the compliance with capital and placement requirements. As part of the ICAAP, the Board of Directors evaluates an annual report that describes the Group's risk profile. At quarterly board meetings, Danske Bank's Board of Directors also reviews reporting on the Group's solvency need and capital adequacy.

According to Danish legislation, a credit institution must disclose its solvency need and solvency need ratio. For the Group, this requirement applies to Danske Bank A/S and Realkredit Danmark A/S.

The solvency need is the total capital of the size, type and composition needed to cover the risks to which an institution is exposed.

The Group's solvency need is based on Pillar I but also takes into account risks other than those included under Pillar I, including pension and business risks, as well as specific credit risks in the current economic cycle. The Group assesses on an ongoing basis whether its capital level is sufficiently conservative.

The regulatory framework provides some discretionary leeway for selecting the appropriate method for determining the solvency need. The Group believes that it has adopted a sufficiently conservative approach owing to the following:

- Capital is added to the capital requirement under Pillar I to reflect risks not captured by Pillar I.
- The Group takes the uncertainty of the risk models into account and makes quantitative as well as qualitative adequacy assessments of its capital level on an ongoing basis.

The Group's solvency need can be broken down into capital for the most important risk types.

## Danske Bank Group and Danske Bank A/S

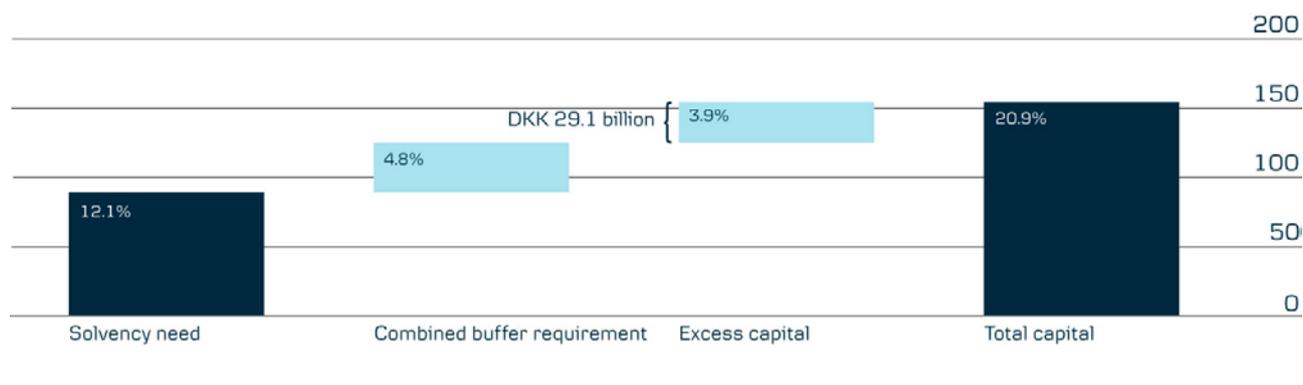
Breakdown of Danske Bank's solvency need	Danske Bank Group		Danske Bank A/S	
	(DKK billions)	(% of total REA)	(DKK billions)	(% of total REA)
At 30 September 2018				
Credit risk	61.5	8.3	54.1	8.4
Market risk	8.8	1.2	8.4	1.3
Operational risk	10.3	1.4	9.3	1.4
Other risks	8.8	1.2	8.8	1.4
<b>Solvency need and solvency need ratio</b>	<b>89.4</b>	<b>12.1</b>	<b>80.6</b>	<b>12.5</b>
Combined buffer requirement	35.7	4.8	31.9	4.9
Solvency need and solvency need ratio (incl. combined buffer requirement)	125.1	16.9	112.5	17.4
- Portion from CET1 capital	90.7	12.3	81.8	12.7
<b>Total capital and total capital ratio</b>	<b>154.2</b>	<b>20.9</b>	<b>155.6</b>	<b>24.1</b>
- Portion from CET1 capital	120.9	16.4	122.3	18.9
<b>Excess capital</b>	<b>29.1</b>	<b>3.9</b>	<b>43.1</b>	<b>6.7</b>
<b>Excess CET1 capital</b>	<b>30.2</b>	<b>4.1</b>	<b>40.5</b>	<b>6.3</b>

At the end of September 2018, Danske Bank Group's solvency need amounted to DKK 89.4 billion, or 12.1% of the total REA. With total capital of DKK 154.2 billion and a total capital ratio of 20.9%, the Group had DKK 29.1 billion in excess of the sum of the solvency need and the combined buffer requirement. The Group had excess CET1 capital of DKK 30.2 billion, or 4.1% of the total REA.

At 8.3%, credit risk represented by far the largest component of the individual risks covered by capital according to Danske Bank Group's determination of its solvency need. Market risk and operational risk combined represented 2.6%. The main component of the "Other risks" category, which represented 1.2% of the total REA, was reputational risk.

## Solvency need and total capital ratio, third quarter 2018

(DKK billions)



## Realkredit Danmark Group and Realkredit Danmark A/S

Breakdown of Realkredit Danmark's solvency need	Realkredit Danmark Group		Realkredit Danmark A/S	
	(DKK billions)	(% of total REA)	(DKK billions)	(% of total REA)
At 30 September 2018				
Credit risk	12.5	8.2	12.5	8.2
Market risk	2.1	1.4	2.1	1.4
Operational risk	0.9	0.6	0.9	0.6
Other risks	0.0	0.0	0.0	0.0
<b>Solvency need and solvency need ratio</b>	<b>15.5</b>	<b>10.2</b>	<b>15.5</b>	<b>10.2</b>
Combined buffer requirement	6.7	4.4	6.6	4.4
Solvency need and solvency need ratio (incl. combined buffer requirement)	22.2	14.6	22.2	14.6
- Portion from CET1 capital	15.4	9.7	15.4	10.1
<b>Total capital and total capital ratio</b>	<b>45.7</b>	<b>30.0</b>	<b>45.7</b>	<b>30.0</b>
<b>- Portion from CET1 capital</b>	<b>45.4</b>	<b>29.8</b>	<b>45.4</b>	<b>29.9</b>
<b>Excess capital</b>	<b>23.5</b>	<b>15.4</b>	<b>23.5</b>	<b>15.5</b>

At the end of September 2018, Realkredit Danmark Group's solvency need amounted to DKK 15.5 billion, or 10.2% of the total REA. With total capital of DKK 45.7 billion and a total capital ratio of 30.0%, Realkredit Danmark Group had DKK 23.5 billion in excess of the sum of the solvency need and the combined buffer requirement.

At 8.2%, credit risk represented by far the largest component of the individual risks covered by capital according to Realkredit Danmark Group's determination of its solvency need. Market risk and operational risk combined represented 1.9%. The main component of the "Other risks" category, which represented less than 0.1% of the total REA, was pension risk.

### 3. Stress test method and assumptions

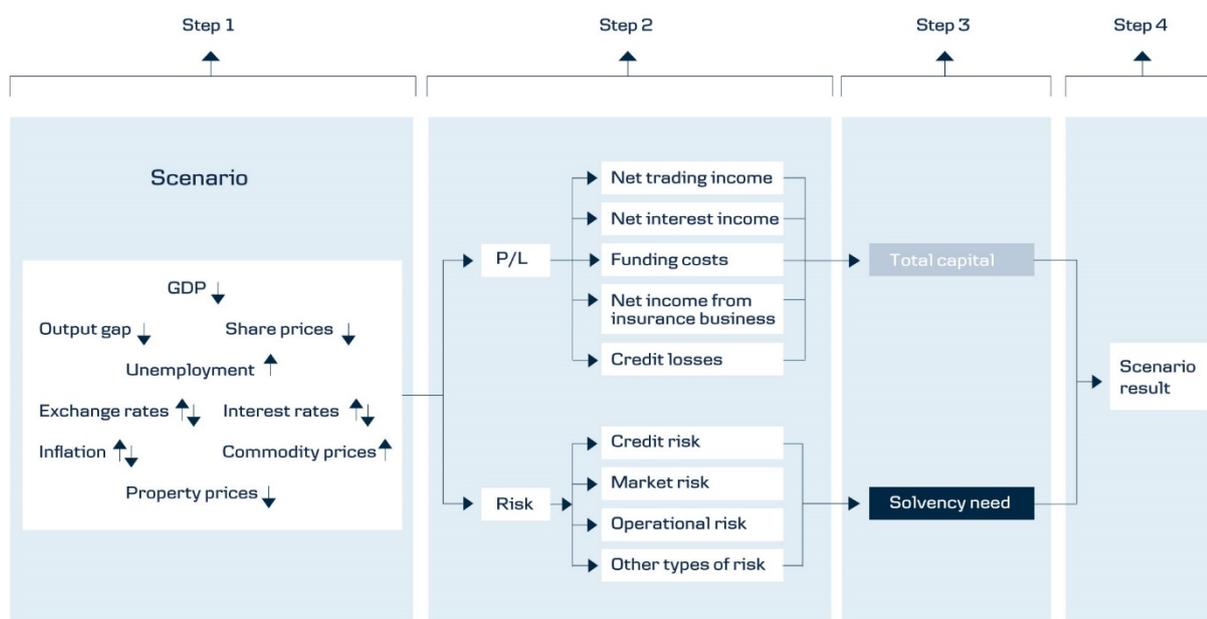
Stress testing is part of the ICAAP and is an important means of analysing the Group's risk profile since it gives management a better understanding of how the Group's portfolios are affected by macroeconomic changes, including any adverse effects on the Group's capital. Stress testing also forms part of the internal capital planning process.

When determining its solvency need, the Group uses recession scenarios in accordance with statutory obligations. In its internal capital planning, the Group uses a number of more severe stress test scenarios.

Since 2005, the Group has conducted quarterly stress tests showing the effects of various economic scenarios over a period of three to five years.

There are four steps in the Group's stress test methodology: (1) choice of scenario; (2) translation of scenario; (3) stress test calculations; and (4) evaluation of results and methodology. The Group evaluates the main scenarios and their relevance on an ongoing basis. The most relevant scenarios in terms of the current economic situation and related risks are analysed at least once a year. New scenarios may be added when necessary. The scenarios are an essential part of the Group's capital planning in the ICAAP.

#### Effect of stress test scenarios on earnings and risk



According to the stress tests, the Group is sufficiently capitalised to withstand the effect of the scenarios applied.

### 4. Additional information

The present report is updated on a quarterly basis and is published together with Danske Bank Group's interim and annual reports. It can be downloaded from Danske Bank's and Realkredit Danmark's websites (at [danskebank.com/ir](http://danskebank.com/ir) and [rd.dk/investor](http://rd.dk/investor), respectively).

The Risk Management 2017 report, published at the same time as Annual Report 2017, contains a detailed description of the Group's risk organisation, capital management, risk profile, exposure and more. The report is available at [danskebank.com/ir](http://danskebank.com/ir).

Danske Bank A/S  
Holmens Kanal 2-12  
DK-1092 København K

Tel. +45 33 44 00 00  
CVR No. 611262 28-København  
[danskebank.com](http://danskebank.com)