

# Internal Capital Adequacy Assessment Process

Saxo Bank Group

Q2 2017



# Contents

1.	INTRODUCTION .....	3
2.	CAPITAL ADEQUACY ASSESSMENT .....	4
2.1	INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS .....	4
2.2	BUSINESS ACTIVITIES COVERED BY THE ICAAP .....	4
2.3	INTERNAL ASSESSED CAPITAL REQUIREMENT .....	5
2.4	CAPITAL PLANNING .....	6
3.	ICAAP RESULTS Q2 2017 .....	6

# 1. Introduction

The purpose of the Internal Capital Adequacy Assessment Process (ICAAP) is to determine the adequate level of capital to support Saxo Bank A/S' (hereafter "the Bank") and the Saxo Bank Group's (hereafter "the Group") current and expected future risks from the business strategy. This report is fulfilment of the disclosure requirement as according to the Danish Executive Order of 27 March 2014 on Calculation of Risk Exposures, Own Funds and Solvency Need and the Danish Financial Business Act for both the Bank and the Group.

The result of the ICAAP shown in this report is based on figures as of 30 June 2017.

The ICAAP determined Solvency Need for the Group amounted to DKK 1,876 million equal to 11.5% of the total Risk Exposure Amount (REA) with REA totalling DKK 16,290 million. The Group's Total capital amounted to DKK 3,250 million giving the Group an excess capital of DKK 1,170 million including the combined buffer requirement of DKK 205 million. The Group's CET1 and Total capital ratios were 15.7% and 20.0%, respectively.

The ICAAP determined Solvency Need for the Bank amounted to DKK 1,632 million equal to 12.6% of the total Risk Exposure Amount (REA) with REA totalling DKK 12,928 million. The Bank's Total capital amounted to DKK 3,231 million giving the Bank an excess capital of DKK 1,436 million including the combined buffer requirement of DKK 163 million. The Bank's CET1 and Total capital ratios were 19.7% and 25.0%, respectively.

The ICAAP Q2 2017 Report is a supplement to the Group's Risk Report 2016 and has been approved by the Board of Directors in the Group. The Risk Report contains detailed descriptions of the Group's risk and capital management and is available at [www.home.saxo/about-us/investor-relations](http://www.home.saxo/about-us/investor-relations).

## 2. Capital Adequacy Assessment

The Group's primary capital adequacy assessment tool is the ICAAP; rooted in the Danish implementation of Capital Requirement Directive's (CRD IV), including "ICAAP guideline issued by DFSA" which has applied from December 2015, (Guideline number 11248 of 15/12/2015) and the Danish Financial Business Act.

The ICAAP assesses the Group's Solvency Need through three approaches: minimum capital requirement calculation (Pillar I) using the Danish implementation of the Capital Requirements Regulation (CRR), internal assessment of capital requirement (Pillar II) and capital requirement adequacy testing through internal models and stress testing (Pillar II). Pillar III contains the disclosure aspect and is covered by the Group's Risk Report 2016 and this ICAAP Report.

### 2.1 Internal Capital Adequacy Assessment Process

The Group's ICAAP process follows five steps:

- Step 1. Minimum capital requirement (Pillar I)
- Step 2. Internal assessment of whether additional capital requirements are needed above and over Pillar I using quantitative approaches and/or management judgement (Pillar II)
- Step 3. Capital requirement adequacy testing through internal models, stress testing and scenario analysis; if steps 1-2 are found underestimating risks then step 2 is revisited (Pillar II)
- Step 4. Capital adequacy determination based on the three previous steps (Pillar II)
- Step 5. Disclosure (Pillar III)

A full ICAAP is performed as often as required, but at least once a year and reported to Danish FSA quarterly.

### 2.2 Business activities covered by the ICAAP

The primary business activity of the Group is facilitating online trading in financial instruments. In addition, the Group has retail banking activities. The activities are covered by the ICAAP and further described below.

- Online trading, investment and other investment services within capital markets to private, corporate institutional clients including white label clients. These activities are driven through Saxo Bank A/S and a number of subsidiaries.
- Retail banking services, primarily in Denmark, are offered to retail and small and medium sized corporates through the subsidiary Saxo Privatbank A/S. Saxo Privatbank A/S activities also include professional portfolio management to the same client segments.

The business activities involve different types of risk and concern different risk areas in the ICAAP as shown in the table below.

Activities/Risk categories	Credit Risk	Market Risk	Operational Risk	Business Risk	Liquidity Risk	Leverage Risk
Trading activities	√	√	√	√	√	√
Retail Banking activities	√	√	√	√	√	√

The different risk types the Group is exposed to, have been examined and split into ICAAP risk categories as shown in the table below. Different methods are applied to assess the Group's capital need within each category.

Risk Types/Risk categories	Credit Risk	Market Risk	Operational Risk	Business Risk	Liquidity Risk	Leverage Risk
General	√	√	√	√	√	√
Earnings				√		
Growth				√		
Credit risk	√					
Market risk		√				
Concentration risk	√	√		√		
Group risks	√	√	√	√	√	√
Liquidity risk					√	
Leverage risk						√
Operational risk			√			
Control risk			√			
Business size				√		
Settlement risk	√		√			
Strategic risk				√		
Reputational risk			√	√		
Non-trading interest rate risk		√				
External risk	√		√	√	√	√
Other conditions	√			√		
Stress testing	√	√	√	√	√	

The Risk Report 2016, available at [www.home.saxo/about-us/investor-relations](http://www.home.saxo/about-us/investor-relations), provides more details on each of the Risk categories.

### 2.3 Internal Assessed Capital Requirement

The internal set level of capital needed reflects the Group's assessment of its capital requirement. The purpose of the internal assessment is to identify and incorporate risks not covered by Pillar I or found to not being conservative enough.

Assessment is initiated by identifying the relevant risk-areas and exposures in the Group not covered by the minimum capital requirement. For each identified risk, it is assessed by the Group whether the risk is covered by Pillar I and, if so, whether it is sufficiently conservative. It is based on internal, quantitative approaches and, if relevant, internal expert input and management judgements.

Furthermore, the Group uses a number of combined stress scenarios, joining multiple events across risk categories in the scenario based approach. If the scenario based approach highlights a weakness in the self-assessed capital requirement then the solvency need is increased by an add-on. The scenario based stress tests are developed on the basis of the Group's risk register. One of the combined events entails a close to unlikely chain of events, in order to ensure the utmost degree of stress. Where applicable, the stress test takes insurance coverage into account.

Furthermore, the Group uses stress testing and internal models to test whether the capital requirement is conservative enough and ensuring that the assessed adequate capital level for the Group is sufficient to withstand unlikely, but not impossible, stress scenarios.

A number of stress scenarios have been outlined in the various single risk areas. Furthermore, a stress scenario has been implemented to create a very severe and highly unlikely stress-scenario. Where it is applicable, mitigating measures, like contingency plans and insurance coverage, are applied. The Group also conducts an income sensitivity analysis to ensure that business risks are covered adequately in the budgeted income.

The stress scenarios are updated and reviewed according to changes in the market and economic environment, and at least once a year.

## 2.4 Capital planning

Part of the ICAAP is planning future capital needs in relation to the business environment, growth and strategic plans in the years to come. Potential major changes to the risk profile, and thereby the future changes in capital requirements are estimated. These could be changes in the business strategy or competitive landscape, significant increases in traded volumes, fundamental changes in the market conditions, changes in the internal organisation, material changes in regulatory requirements or introductions of new products. This input is used in the strategic decision-making process by the Board of Management and the Board of Directors.

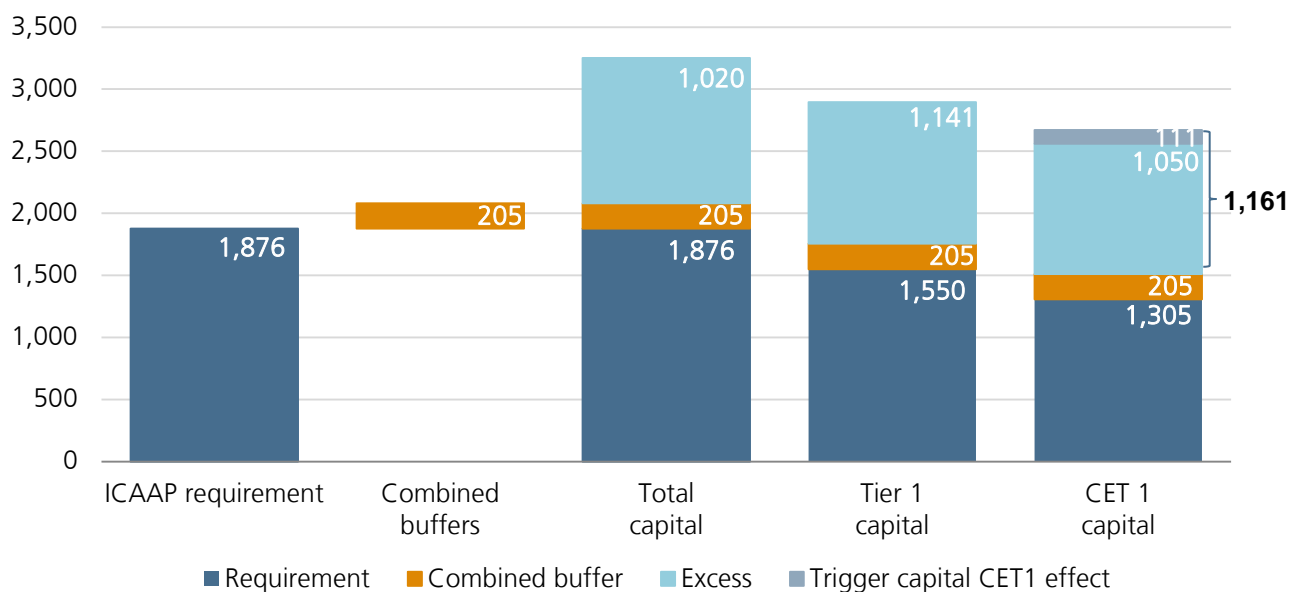
## 3. ICAAP Results Q2 2017

Internal solvency need assessment breakdown						
Risk Type (DKK millions)	Saxo Bank Group			Saxo Bank A/S		
	REA	ICAAP	ICAAP pct. of Total REA	REA	ICAAP	ICAAP pct. of Total REA
Credit risk	6,651	872	5.4%	5,528	753	5.8%
Market risk	4,505	468	2.9%	4,161	444	3.4%
Operational risk	5,133	536	3.3%	3,239	434	3.4%
<b>Total solvency need</b>	<b>16,290</b>	<b>1,876</b>	<b>11.5%</b>	<b>12,928</b>	<b>1,632</b>	<b>12.6%</b>
Combined buffers total		205	1.3%		163	1.3%
<b>Total solvency need and buffer requirement</b>		<b>2,080</b>	<b>12.8%</b>		<b>1,795</b>	<b>13.9%</b>
<b>Capital composition</b>						
Common Equity Tier 1		2,560	15.7%		2,541	19.7%
Tier 1		2,895	17.8%		2,876	22.2%
<b>Total capital</b>		<b>3,250</b>	<b>20.0%</b>		<b>3,231</b>	<b>25.0%</b>
<b>Capital requirement buffer</b>						
CET1 excess capital*		1,161	7.1%		1,428	11.0%
Tier 1 excess capital		1,141	7.0%		1,340	10.4%
<b>Total capital excess capital</b>		<b>1,170</b>	<b>7.2%</b>		<b>1,436</b>	<b>11.1%</b>

\* Including effects of trigger capital used to fulfil Pillar II requirements

## Saxo Bank Group - Capital need and Excess capital

DKK million



The combined buffer consists of the capital conservation buffer of 1.25% of REA and the countercyclical capital buffer of country-specific buffer-rates.

The ICAAP Q2 2017 does not include an additional capital requirement from grandfathered capital instruments that are decaying regulatory.

The current guidelines from Danish FSA allow the Group to use excess trigger capital, (Additional Tier 1 capital with trigger and Tier 2 capital with trigger not used to cover the minimum requirements), to cover a part of the Pillar II add-on requirement. The effect is shown in the graph.

Additional information on the Group's capital management, the regulatory landscape and more, is disclosed in the Risk Report 2016 available at [www.home.saxo/about-us/investor-relations](http://www.home.saxo/about-us/investor-relations).