

# Internal Capital Adequacy Assessment Process

Saxo Bank Group and Saxo Bank A/S

Third quarter 2016



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# 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 September 2016.

The ICAAP determined solvency need for the Group amounted to DKK 1,950 million equal to 14.3 % of the total risk exposure amount (REA). With a Total Capital of DKK 2,961 million, the Group fulfilled its solvency need with an excess capital of DKK 925 million including the combined buffer requirement of DKK 86 million. The Group's CET1 and Total capital ratios were 16.4 % and 21.7 %, respectively.

The ICAAP determined solvency need for the Bank amounted to DKK 1,596 million equal to 16.0 % of the total REA. With a Total Capital of DKK 2,942 million, the Bank fulfilled its solvency need with an excess capital of DKK 1,284 million including the combined buffer requirement of DKK 63 million. The Bank's CET1 and Total capital ratios were 22.3 % and 29.5 %, respectively.

The ICAAP Q3 2016 Report is a supplement to the Group's Risk Report 2015 and has been approved by the Board of Directors in the Group. The Risk Report contains detailed descriptions of the Group's capital management, the regulatory landscape and more, and is available at [www.saxobank.com/investor-relations](http://www.saxobank.com/investor-relations).

## 2. Capital management

The Group's primary capital management 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 2014, (Guideline number 9026 of 19/01/2015) and the Danish Financial Business Act.

The ICAAP assesses the Group solvency need through three approaches: minimum capital requirement calculation (Pillar I), self-assessed requirement through quantitative framework (Pillar II) and self-assessed requirement through scenario based framework (Pillar II). Pillar III contains the disclosure aspect and is covered by the Group's Risk Report 2015 and this ICAAP Report.

### 2.1 Internal Capital Adequacy Assessment Process

The Group's ICAAP process follows six steps:

- Step 1. Minimum capital requirement (Pillar I)
- Step 2. Self-assessed capital requirement using a quantitative approach (part of Pillar II)
- Step 3. Capital requirement based on the largest amount determined in step 1 and 2 (part of Pillar II)
- Step 4. Self-assessed capital requirement using a scenario based approach (part of Pillar II)
- Step 5. Capital adequacy determination, based on the four previous steps (Pillar II)
- Step 6. Disclosure (Pillar III)

This first step calculates the minimum capital using the Danish implementation of the Capital Requirements Regulation (CRR), Pillar I. The second step is to assess the actual risks to which the Group is exposed and calculate the self-assessed capital charge for each risk category. The third step compares the Pillar I calculated capital requirement with the Pillar II internally assessed for each risk category in order to determine whether additional capital beyond the Pillar I requirement should be set aside. The fourth step consists of different stress and sensitivity tests ensuring that the assessed adequate capital level for the Group is sufficient to withstand unlikely, but not impossible, stress scenarios.

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 2015, available at [www.saxobank.com/investor-relations](http://www.saxobank.com/investor-relations), provides more details on each of the Risk categories.

### 2.3 Self-assessed capital adequacy requirement

The Group's self-assessment of the adequate level of capital needed is conducted based on an internal, quantitative approach. The internal quantitative approach identifies the relevant risk-areas and exposures in the Group and categorises these into the ICAAP risk categories.

The Group utilises buffers and management judgement add-ons, when the models' output are not deemed sufficiently conservative, in order to ensure prudence in the self-assessed capital requirement. Major planned changes to the risk profile of the Group are taken into consideration and, if deemed necessary, a capital requirement add-on is included. The buffers and add-ons are placed in the relevant category, and if the identified risk is not applicable to a specific risk category, it is placed in the "Other" risk category.

The Group utilises severe stresses on regulatory liquidity measures in order to assess potential capital requirements arising from liquidity risk.

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.

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 and Capital Contingency Plan**

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 Directors and the Board of Management.

The result of the ICAAP step four (scenario based approach) is used as input to the capital contingency plan. The financial consequences following the various scenarios and potential management actions are estimated. Should the estimated net financial consequences predict the Bank and/or the Group being below the required ICAAP level, potential management actions are evaluated and initiated.

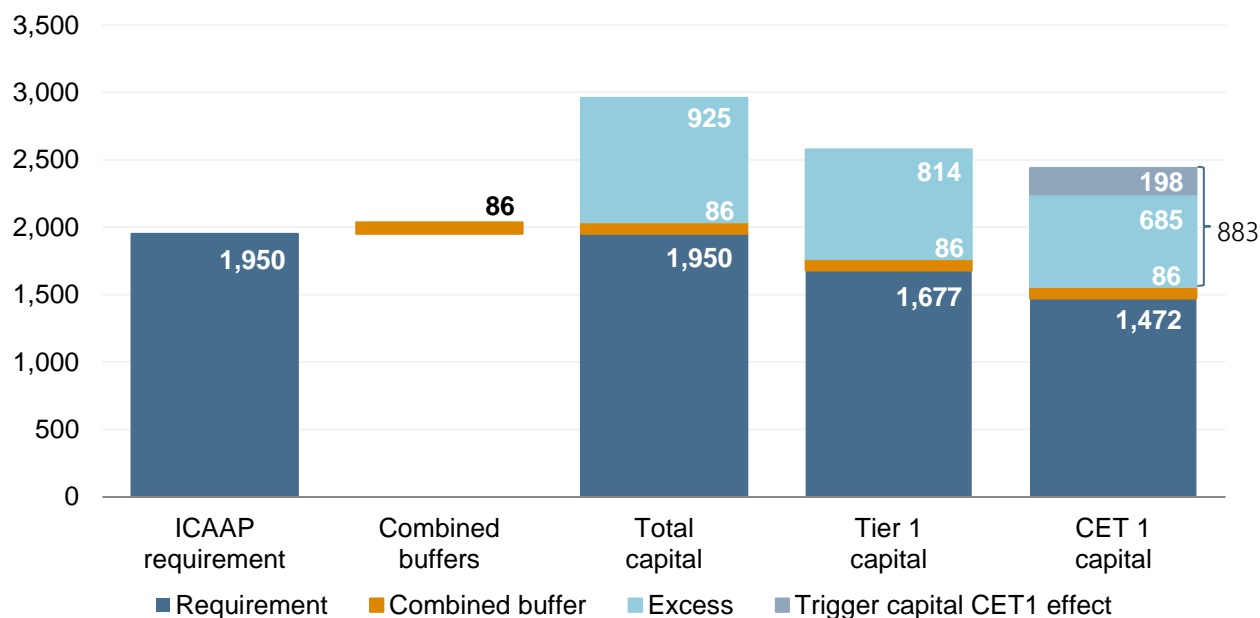
### 3. ICAAP Results Q3 2016

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	5,071	925	6.8%	3,712	691	6.9%
Market risk	3,464	489	3.6%	3,028	471	4.7%
Operational risk	5,137	536	3.9%	3,232	434	4.3%
Total solvency need	13,672	1,950	14.3%	9,973	1,596	16.0%
Combined buffers total		86	0.6%		63	0.6%
Total solvency need and buffer requirement		2,036	14.9%		1,658	16.6%
Capital composition						
Common Equity Tier 1		2,242	16.4%		2,223	22.3%
Tier 1		2,577	18.8%		2,558	25.7%
Total capital		2,961	21.7%		2,942	29.5%
Solvency need buffer						
CET1 excess capital*		883	6.5%		1,242	12.5%
Tier 1 excess capital		814	6.0%		1,099	11.0%
Total excess capital		925	6.8%		1,284	12.9%

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

#### Saxo Bank Group - Capital need and excess capital

DKK millions



The combined buffer consists of the capital conservation buffer of 0.625 % of REA and the countercyclical capital buffer of country-specific buffer-rates.

The ICAAP Q3 2016 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 2015 available at [www.saxobank.com/investor-relations](http://www.saxobank.com/investor-relations).