



**Basel 3 Pillar 3  
and NBS decree 16/2014**  
Disclosure as at 30 September 2016

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## 1. Introduction

The purpose of the Third pillar of Basel 3, "market discipline", is to complement the minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2), by encouraging market discipline through the development of a set of disclosure requirements that will allow market participants to assess key pieces of information on the scope of application, regulatory capital, risk exposures, risk assessment processes, and therefore the capital adequacy of the institution. Such disclosures have particular relevance under the new framework introduced by Basel 3, where reliance on internal methodologies gives banks more discretion in assessing capital requirements.

The procedures to be adopted by Slovak banks or banking groups when disclosing information (referred to in brief as Pillar 3) to the public have been laid down by the National Bank of Slovakia Decree 16/2014 as well as the Bank of Italy in its Circular 263 of 27 December 2006 "New regulations for the prudential supervision of banks". This disclosure has therefore been prepared in compliance with the provisions of the abovementioned and the subsequent changes made to the regulatory framework.

This document includes the disclosures set by the Regulation (EU) no. 575/2013 of the European Parliament and of the Council. All capital adequacy calculations reflect the new regulation.

All amounts, unless otherwise indicated, are presented in thousands of euro ('€'). Negative values are presented in brackets.

Disclosures that do not contain any information because they do not apply to the VUB Group are not published.

The VUB Group publishes this disclosure (Basel 3 Pillar 3) and subsequent updates on its Internet site at the address [www.vub.sk](http://www.vub.sk).

## 2. General requirements

### 2.1 Information about VUB Group

Všeobecná úverová banka, a.s. ('the Bank' or 'VUB') provides retail and commercial banking services. The Bank is domiciled in the Slovak Republic with its registered office at Mlynské nivy 1, 829 90 Bratislava 25 and has the identification number (IČO) 313 20 155.

The consolidated financial statements comprise the Bank and its subsidiaries (together referred to as 'the VUB Group' or 'the Group') and the Group's interest in associates and joint ventures (please refer to section 3 for detailed description of companies included in the consolidation).

#### Organization Chart of the bank<sup>1</sup>

##### Supervisory Board

- 0110 Internal Audit

##### Management Board

##### Governance Centre CEO

- 0170 PR and Marketing Communication
- 0190 HR & Organization
- 220 VUB CR Prague Branch
- 03 Corporate and SME
  - 0330 Small and Medium Enterprises
  - 0340 Multinational Clients
  - 0360 Domestic Corporates & Institutional Client
  - 0370 Financial Institutions and Sales
  - 0310 Corporate Banking products
- 04 Retail
  - 0410 CRM & Client analysis
  - 0420 Small Business
  - 0430 Customer Satisfaction
  - 0460 Affluent clients
  - 0440 Mass clients
  - 0450 Network Management
  - 0470 Channel Integration
  - 0480 Private Banking

##### Governance Centre CEO Deputy

- 0130 Security & BCM
- 0150 AML
- 0160 Compliance
- 0180 Legal
- 05 Chief financial officer
  - 0560 Research
  - 0520 Accounting
  - 0580 Treasury and ALM
  - 0540 Procurement
  - 0550 Planning and Control
  - 0570 Internal Services & Facility management
- 06 Chief operating officer
  - 0610 IT Governance
  - 0640 Demand Management
  - 0620 IT Development
  - 0630 IT Operations
  - 0650 Back office & Payments
  - 0680 Change Management
- 07 Risk Management
  - 0720 Internal Validation and Controls
  - 0730 Enterprise Risk Management
  - 0740 Corporate and Retail Underwriting
  - 0770 Recovery
  - 0790 Policy and Methodology

<sup>1</sup> NBS decree 16/2014, §1, section 1a)

**Headcount**

Total number of employees:	3,401
thereof Managers:	508
Members of the Management Board:	7

**Date of registration in the Companies Register<sup>2</sup>**

1.1.1990 - Registration in the Public Companies Register  
1.4.1992 - Registration in the Companies Register

**Bank license issued**

1.1.1990 – for VUB, Inc.

**Commencement date of the execution of licensed banking activities**

1.1.1990

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<sup>2</sup> NBS decree 16/2014, §1, section 1b)

**List of business activities according to the bank license<sup>3</sup>**

*In compliance with § 2 of the Banking Act No 483/2001, the bank, except of acceptance of deposits and provision of loans, may carry on the following banking activities;*

1. provision of payment services and settlement;
2. investments in securities on Bank's behalf, provision of the investment services, activities and supporting business
3. trading on the bank's own account:
  - a) with money market financial instruments in EUR and foreign currency, with gold, including exchange operations;
  - b) with capital market financial instruments in EUR and foreign currency;
  - c) in precious metal coins, commemorative bank notes and coins, bank note sheets and circulating coin sets;
4. management of client's receivable on the client's account, including related advisory services;
5. financial leasing;
6. provision of guarantees, opening and validation of Letters of Credit;
7. providing advisory services in commercial matters;
8. issuance of securities, participation in issuance of securities, and provision of related services;
9. financial mediation services;
10. things deposit;
11. lease of safe deposit boxes;
12. provision of banking information;
13. special mortgage business under Section § 67 art. 1 of the Banking Act;
14. depositary duty pursuant to specific regulations;
15. managing banknotes and coins;
16. issuing and administration of electronic money.

In compliance with § 79a section 1 and in connection with § 6 section 1 and 2 of the Act No. 566/2001 Coll. On securities and investment services provision of the investment services, activities and ancillary services to the following extent:

- (i) reception and transmission of client's order regarding one or several financial instruments related to financial instruments:
  - a) transferable securities;
  - b) Money Market instruments;
  - c) fund shares or securities issued by foreign collective investment undertakings;
  - d) options, futures, swaps, forwards and other derivatives related to securities, currencies, interest rates or incomes, or other derivatives instruments, financial indices or financial rates, that may be settled upon delivery or in cash;
  - e) options, swaps and forwards related to commodities, that must be settled in cash or may be settled in cash based on the option of one of the counterparties; it is not applicable if the settlement is due to a default or another event resulted in agreement termination;
  - f) options and swaps related to commodities, that may be settled in cash, if traded in a controlled market or in multilateral trading system;
  - g) options, swaps and forwards related to authorizations to issues, inflation rates, that must be settled in cash or may be settled in cash at the option of one of the parties (it is not applicable if the settlement is due to a default or another event resulted in agreement termination),
- (ii) execution of client's instruction related to financial instrument on his/her account:
  - a) transferable securities;
  - b) Money Market instruments;
  - c) fund shares or securities issued by foreign collective investment undertakings
  - d) options, futures, swaps, forwards and other derivatives related to securities, currencies, interest rates or incomes, or other derivatives instruments, financial indices or financial rates, that may be settled upon delivery or in cash;
  - e) options, swaps and forwards related to commodities, that must be settled in cash or may be settled in cash based on the option of one of the counterparties; it is not applicable if the settlement is due to a default or another event resulted in agreement termination;
  - f) options, and swaps related to commodities, that may be settled in cash, if traded in a controlled market or in multilateral trading system;
  - g) options, swaps and forwards related to authorizations to issues, inflation rates, that must be settled in cash or may be settled in cash at the option of one of the parties (it is not applicable if the settlement is due to a default or another event resulted in agreement termination),
- (iii) trading on Bank's account related to financial instruments:

<sup>3</sup> NBS decree 16/2014, §1, section 1c)

- a) transferable securities;
  - b) Money Market instruments;
  - c) fund shares or securities issued by foreign collective investment undertakings;
  - d) options, futures, swaps, forwards and other derivatives related to securities, currencies, interest rates or incomes, or other derivatives instruments, financial indices or financial rates, that may be settled upon delivery or in cash;
  - e) options, swaps and forwards related to commodities, that must be settled in cash or may be settled in cash based on the option of one of the counterparties; it is not applicable if the settlement is due to a default or another event resulted in agreement termination;
  - f) options and swaps related to commodities, that may be settled in cash, if traded in a controlled market or in multilateral trading system;
  - g) options, swaps and forwards related to authorizations to issues, inflation rates, that must be settled in cash or may be settled in cash at the option of one of the parties (it is not applicable if the settlement is due to a default or another event resulted in agreement termination);
- (iv) portfolio management related to financial instruments:
- a) transferable securities;
  - b) Money Market instruments;
  - c) fund shares or securities issued by foreign collective investment undertakings;
  - d) options, futures, swaps, forwards and other derivatives related to securities, currencies, interest rates or incomes, or other derivative instruments, financial indices or financial measures that may be settled upon delivery or in cash;
- (v) investment Counselling related to financial instruments:
- a) transferable securities;
  - b) Money Market instruments;
  - c) fund shares or securities issued by foreign collective investment undertakings;
- (vi) underwriting and placing of financial instruments based on firm commitment related to financial instruments:
- a) transferable securities,
  - b) fund shares or securities issued by foreign collective investment undertakings,
- (vii) placing of financial instruments without firm commitment related to financial instruments:
- a) transferable securities,
  - b) Money Market instruments,
  - c) fund shares or securities issued by foreign collective investment undertakings,
- (viii) safekeeping and management of financial instruments procured on client's account, including custody management, and related services, primarily management of funds and financial collaterals related to financial instruments:
- a) transferable securities,
  - b) Money Market instruments,
  - c) fund shares or securities issued by foreign collective investment undertakings,
- (ix) granting the borrowings and loans to investor and arranging performance of deal involving one or several financial instruments, if the Lender or the Creditor is engaged in the deal;
- (x) counselling related to capital structures and business strategy and providing advisory and services associated with company's merger, amalgamation, change, split or purchase;
- (xi) executing deals with Foreign Currency, if related to investment services;
- (xii) performing investment survey and financial analysis or other form of recommendation related to deals with financial instruments;
- (xiii) services associated with financial instruments' underwriting;
- (xiv) reception and transmission of client orders in relation to one or more financial instruments, execution of orders on behalf of clients, and dealing on own account, related to the underlying of the derivatives – forwards relating to emission allowances that must be settled in cash or may be settled at the option of one of the parties (otherwise than by reason of insolvency or other termination event) where these are connected to the provision of investment or ancillary services concerning abovementioned derivatives.

*Banking Supervision Decree No-169/2001 dated 9.2.2001*

- generation and distribution of heat, and distribution of electricity to the extent of the VÚB application

*Banking Supervision Decree No-192/2000 dated 11.2.2000*

- activities related to lease and management of real estate and non-residential premises to the extent of the VÚB application

*Banking Supervision Decree No-2057/2002 dated 3.1.2003*

- printing and enveloping of invoices, bank account statements, and distribution of letters to the bank's subsidiaries and clients through Slovak Post Office;
- procurement of services related to projects, information technologies, acquisition of computer equipment, applications, data processing, and services related to IT security on behalf of the bank's subsidiaries;
- arrangements in respect of certification of electronic signatures and issuance of PKI keys as an integral part of electronic banking services ensuring secure and incontestable data interchange between the bank and its client;
- bookkeeping on behalf of the bank's subsidiaries and subsidiaries thereof;
- provision of administrative support for the sale of products and provision of expert support and management of selected intermediaries concurrently monitoring and evaluating their obligations within the scope of the authorized banking activity – financial intermediation (Article 2 (2) (h) of the Act on Banks);
- provision of advisory services for activities in the field of administrative support, risk management, and treasury within the scope of the authorized banking activity - provision of business advisory services (Article 2 (2) (h) of the Act on Banks)

*Banking Supervision Decree No-UBD-1174/2003 dated 5.8.2003*

- preparation of financial and administrative agenda as well as personnel and salary related agenda for the subsidiaries

*Banking Supervision Decree No- OPK-11106-2/2009 dated 19.8.2009*

- mediation of entering into a license agreement on use of computer product VUB CryptoPlus by and between MONET+, a. s. and clients of VUB, a.s.

*Banking Supervision Decree No- OPK-7365-2/2009 dated 19.6.2009*

- keeping books of all mutual funds of the subsidiary VÚB Asset Management, správ. spol., a.s.

*Banking Supervision Decree No- UDK-057/2006/PAGP dated 21.8.2006*

- intermediation of the insurance as an insurance agent

*Banking Supervision Decree No ODT-5789/2014-3 dated 19.8.2014*, which amends the Decree No. UDK-057/2006/PAGP by extending it for providing of loans and providing of consumer loans.

**List of licensed but not conducted business activities<sup>4</sup>**

VUB Bank does not provide investment advisory services and portfolio management services.

**List of business activities conduct of which has been restricted, suspended or cancelled by the relevant authority<sup>5</sup>**

Non-performed activities have not been kept in Bank in the 3<sup>rd</sup> quarter 2016.

**Quotation of the statement section of the lawful decision imposing a corrective measure during the calendar quarter<sup>6</sup>**

Non-performed activities have not been kept in Bank in the 3<sup>rd</sup> quarter 2016.

**Quotation of the statement section of the lawful decision imposing a penalty during the calendar quarter<sup>7</sup>**

Non-performed activities have not been kept in Bank in the 3<sup>rd</sup> quarter 2016.

The regularly updated individual and consolidated financial information about the bank<sup>8</sup> can be found on the following web page: <https://www.vub.sk/en/financial-indicators/information-about-bank-activities/>

<sup>4</sup> NBS decree 16/2014, §1, section 1d)

<sup>5</sup> NBS decree 16/2014, §1, section 1e)

<sup>6</sup> NBS decree 16/2014, §1, section 1f)

<sup>7</sup> NBS decree 16/2014, §1, section 1g)

<sup>8</sup> NBS decree 16/2014 §1, section 2 a-b)



**Aggregate amount of exposures classified in groups for VUB Bank as at 30 September 2016<sup>9</sup>**

<b>Group defined in §1, sec.2</b>			<b>EUR thousand</b>
<b>Standard</b>	1. States and Central Banks	AFS	1,085,429
	1. States and Central Banks	Securities HTM	524,270
	1. States and Central Banks	Securities FVTPL	150,193
	2. Institutions	AFS	283,738
	2. Institutions	Securities FVTPL	437
	2. Institutions	Institutions	99,607
	3. Corporate clients	Purchased receivables	20,234
	3. Corporate clients	Specialized	630,173
	3. Corporate clients	Corporate clients	3,161,581
	4. Retail	Commercial loans	126,667
	4. Retail	Consumer loans	807,987
	4. Retail	Credit cards	158,417
	4. Retail	Mortgages	4,288,125
	4. Retail	Overdrafts	116,178
	5. Other	AFS	7,639
	5. Other	Other	66,631
	6. Municipalities	Municipalities	141,646
		<b><u>11,668,952</u></b>	
<b>Overdue not impaired</b>	3. Corporate clients	Purchased receivables	34
	3. Corporate clients	Specialized	1,589
	3. Corporate clients	Corporate clients	12,874
	4. Retail	Commercial loans	2,504
	4. Retail	Consumer loans	50,141
	4. Retail	Credit cards	16,167
	4. Retail	Mortgages	121,267
	4. Retail	Overdrafts	18,289
	5. Other	Other	789
	6. Municipalities	Municipalities	2
		<b><u>223,656</u></b>	
<b>Non-performing</b>	3. Corporate clients	Specialized	75,780
	3. Corporate clients	Corporate clients	85,304
	4. Retail	Commercial loans	11,447
	4. Retail	Consumer loans	73,284
	4. Retail	Credit cards	39,454
	4. Retail	Mortgages	106,666
	4. Retail	Overdrafts	18,810
	5. Other	AFS	574
	5. Other	Other	6,303
6. Municipalities	Municipalities	2	
		<b><u>417,624</u></b>	

The table above represents exposures of VUB Bank only.

<sup>9</sup> NBS decree 16/2014 §1, section 2c-e)

**Difference between assets and liabilities according to the estimated maturity<sup>10</sup>**

	EUR thousand			Total
	Less than 12 months	Over 12 months	Not specified	
Assets	1,588,508	1,610,298	9,929,658	13,128,464
Liabilities	(1,771,969)	(1,718,418)	(9,638,077)	(13,128,464)
Net liquidity position	(183,461)	(108,120)	291,581	-

**Information on ten major bank shareholders who possess at least a 5% share in the registered capital of a bank, and on the amount of their shares in the registered capital of a bank and in the voting rights in a bank<sup>11</sup>**

a) natural person: none

b) natural person – entrepreneur: none

c) legal person:

1. name (trade name)	Intesa Sanpaolo Holding International S. A.
2. legal form and registered office	a joint – stock company, Luxembourg
3. identification and matriculation number	0001000779; B 44318
4. principal business activity	acquisition of capital participations
5. share in the bank's registered capital	97.03%
6. share in the bank's voting rights	97.03%

d) municipality or higher territorial unit: none

e) National Property Fund of the Slovak Republic: does not hold minimum of 5% share

f) state authority: none

**Information on other shareholders not given on previous pages and on the amount of their shares in the registered capital of a bank<sup>12</sup>**

a) number of bank shareholders	29,258
b) total share in the bank's registered capital	2.97%
c) share in the voting rights in the bank	2.97%

**2.2 Qualitative disclosure<sup>13</sup>**
**Introduction**

The VUB group as a member of Intesa Sanpaolo Group attaches great importance to risk management and control as conditions to ensure reliable and sustainable value creation in a context of controlled risk, protect the Group's financial strength and reputation, and permit a transparent representation of the risk profile of its portfolios.

The risk management strategy aims to achieve a complete and consistent overview of risks, given both the macroeconomic scenario and the Group's risk profile, as well as to foster a culture of risk-awareness.

This is shown in the great efforts made in recent years to obtain the validation by the Supervisory Authorities of the Internal Models for market risks and operational risk, and the recent recognition of the use of internal ratings for the calculation of the requirement to cover credit risk in the Corporate segment and residential mortgages segment: on this point see the paragraph dedicated to the Basel 2 Project, which describes the phases of the rollout plan for the internal models for credit risk.

The definition of operating limits related to market risk indicators, the use of risk measurement instruments in granting and monitoring loans and controlling operational risk and the use of capital at risk measures for management reporting and assessment of capital adequacy within the Group represent fundamental milestones in the operational application of the strategic and management guidelines defined by the Supervisory Board and the Management Board throughout the Bank's decision-making chain, down to the single operating units and to the single desk.

The policies relating to the acceptance of risks are defined by the Supervisory Board and the Management Board with support from specific operating Committees, the most important of which are the Credit Risk Committee,

<sup>10</sup> NBS decree 16/2014 §1, section 2f)

<sup>11</sup> NBS decree 16/2014 §1, section 5a-b)

<sup>12</sup> NBS decree 16/2014 §1, section 6a-c)

<sup>13</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

Assets & Liabilities Committee and Operational Risk Committee, and from the Chief Risk Officer reporting directly to the Chief Executive Officer Deputy.

Assessments of each single type of risk for the Group are integrated in a summary amount – the economic capital – defined as the maximum “unexpected” loss the Group might incur over a year. This is a key measure for determining the Group’s financial structure and its risk tolerance, and guiding operations, ensuring the balance between risks assumed and shareholder return. It is estimated on the basis of the current situation and also as a forecast, based on the budget assumptions and projected economic scenario under normal and stress conditions. The assessment of capital is presented on quarterly basis to the Supervisory and Management Board.

The Group sets out these general principles in policies, limits and criteria applied to the various risk categories and business areas with specific risk tolerance sub-thresholds, in an intricate framework of governance, control limits and procedures.

Risk coverage, given the nature in consideration of the nature, frequency and potential impact of the risk, is based on the constant balance between mitigation/hedging actions, control procedures/processes and finally capital protection measures.

Intesa Sanpaolo is in charge of overall direction, management and control of risks. Group companies that generate credit and/or financial risks are assigned autonomy limits and each has its own control structure.

For the purposes described above, Intesa Sanpaolo uses a wide-ranging set of tools and techniques for risk assessment and management, described in detail in this document.

VUB Bank applied, reflecting high-level framework and principles defined by parent company, the same operational model for its subsidiaries, where in main VUB Group subsidiaries some of these functions are performed on the basis of an outsourcing / SLA contract, by Bank’s risk control functions, which periodically report to the Supervisory and Management Board, and Audit Committee.

### **Basel 2 Project (credit risk)**

Long prior to their merger, the Intesa and Sanpaolo IMI groups had made the strategic choice of adhering to the more advanced approaches of Basel II, which provide for recognition by Supervisory Authorities of internal measurement and risk control systems for the calculation of capital absorption. In particular, significant group projects were put into motion for the realisation of investments in models, organisation and IT infrastructures.

The Intesa Sanpaolo Group considers the Basel II project as absolutely strategic, and has set as its basic objectives not only the fast adoption of the advanced approaches so as to adopt the regulatory most risk sensitive framework, but also, and above all, the realisation of new important and innovative instruments in support of the business.

In order to reach these objectives, the Intesa Sanpaolo Group launched the “Basel II Project” in 2007 (hereinafter the “Project”), with the approval of the Management Board and of the Supervisory Board.

The “Project” brought ISP Group to apply for the FIRB Corporate Approach for the “first application perimeter”<sup>14</sup> on 18 November 2008. Bank of Italy granted the authorization on 19 March 2009.

IRB project was officially launched in VUB in November 2008, with the aim to enhance the existing framework and prepare the Bank for the application in 2009 in order to benefit from a reduction of regulatory requirements<sup>15</sup>.

VUB intends to apply the Basel 2 Internal rating model (so called Basel 2 IRB) approach to the following Group entities that are:

- VUB Bank
- VUB Leasing
- CFH Consumer Finance Holding

The adoption of Basel 2 framework is planned as a phased approach that is an internal rating model will be developed for each significant asset class over time in a period between 2009 and 2016.

VUB has already developed internal rating models for its Corporate clients, Retail mortgage, Retail Other and Small business; a formal request has been sent to Banca d’Italia for the approval of the corporate and residential retail model for regulatory capital calculation purposes. The remaining segments followed/will follow according to the roll-out plan; some segments which are not material from risk point of view and are not strategic for the Bank will be treated according to PPU (Permanent Partial Use) approach that is Standardised Approach will continue to apply.

<sup>14</sup> I.e.: Intesa Sanpaolo, Banco di Napoli, Cassa dei Risparmi in Bologna, Cassa di Risparmio del Veneto, Cassa di Risparmio di Venezia, Cassa di Risparmio del Friuli Venezia Giulia, Cassa dei Risparmi di Forlì e della Romagna, Banca dell’Adriatico, Banca di Trento e Bolzano, Banca Infrastrutture Innovazione e Sviluppo, Mediocredito Italiano, Banca CIS, Leasint e Mediofactoring.

<sup>15</sup> One year of use test requirements instead of three years use test requirements

Activities performed in years 2008-2012 have seen the utilization of approximately 10,000 men days and have impacted on around 40% of existing departments of the Bank; activities have been focusing on the improvement of overall infrastructure and control environment (IT applications, Data Quality, formalization of Rating Governance and Validation principles).

The IRB project is bringing to the Bank a few significant changes, specifically:

- i) Internal rating models for
  - Corporate clients (turnover above 50 million Euro)
  - SME clients (turnover between 1 and 50 million Euro)
  - Specialized Lending (Project Finance, Object Finance and Real Estate)
  - Non-banking financial institutions
  - Municipalities
  - Residential & Non-residential mortgage portfolio
  - Retail Other portfolio
  - Small business portfolio
- ii) Utilization of a.m. internal rating models in all credit risk related processes (origination, underwriting, pricing, provisioning, monitoring, portfolio management, etc.),
- iii) Calculation of capital requirements for regulatory purposes (RWA Risk Weighted Assets) based on internal rating model.<sup>16</sup>

This is within a broader context which should see VUB progressively adopting internal rating models for most of its asset classes, in line with ISP guideline and methodologies (Phase roll out plan).

VUB Corporate internal rating models were approved by Banca d'Italia on 23 December 2010; the Italian regulator authorized Intesa Sanpaolo Group to report the Corporate portfolio of VUB – thus including Corporate and SME clients and Specialized Lending (Real Estate and Project Finance) – using the FIRB approach (Foundation Internal Rating Based) for regulatory capital calculation purposes.

National Bank of Slovakia approved the utilization of following Corporate rating models on local basis, as of 2 February 2011:

- Group model for Corporate clients (above 50 million euro turnover), calibrated to Slovak environment,
- Group models for Specialised Lending: Real Estate Development and Project Finance,
- Local model internally developed for SME clients (turnover between 1 and 50 million euro).

VUB residential mortgage internal rating model was approved by Banca d'Italia on 9 July 2012; the Italian regulator has authorized Intesa Sanpaolo Group to report the residential mortgage portfolio of VUB – using the PD and LGD for regulatory capital calculation purposes.

National Bank of Slovakia approved the utilization of following residential mortgage rating models on local basis, as of 31 July 2012.

After complex review and localization of models for Specialised Lending exposures, National Bank of Slovakia approved the utilization of the regulatory slotting:

- Local Slotting model (hereinafter SPV model) for Object Finance and Specialized Lending assets, which do not meet criteria to be processed either by Real Estate or by Project Finance model, was approved on 9 July 2013,
- Local Slotting model for Real Estate Development (hereinafter RED model) was approved on 20 August 2013.

With the aim to apply locally developed models for all relevant sub-classes of Specialised Lending to better reflect Slovak market conditions and to fulfil the conditions stated in the NBS prior decision, the bank was obliged to adjust the SPV model and decided to extend its perimeter by Project Finance clients as well. The bank was granted the permission to use the adjusted SPV model for regulatory purposes on 26 March 2015. As a consequence, the bank applies two locally developed models for Specialised Lending (SPV model and RED model) instead of the preceding three models (SPV model, RED model and Group Project Finance model).

In December 2013 the bank applied for the authorization to use the Advanced IRB approach for regulatory purposes for exposure classes Small Business, Corporate and SME and was granted the permission on 18 June 2014 by the joint decision of Banca d'Italia and NBS.

Short model description and control systems in place are available in the paragraph "Scope of application and characteristics of the risk measurement and reporting system".

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<sup>16</sup> Based on approval from NBS

### **The internal control system**

The VUB Group, to ensure a sound and prudent management, combines business profitability with an attentive risk-acceptance activity and an operating conduct based on fairness.

Therefore, the VUB Group, in line with legal and supervisory regulations in force, has adopted an internal control system capable of identifying, measuring and continuously monitoring the risks typical of its business activities.

VUB Group's internal control system is built around a set of rules, procedures and organisational structures aimed at ensuring compliance with VUB Group strategies and the achievement of the following objectives:

- the effectiveness and efficiency of VUB Group processes;
- the safeguard of asset value and protection from losses;
- reliability and integrity of accounting and management information;
- transaction compliance with the law, supervisory regulations as well as policies, plans, procedures and internal regulations.

The internal control system is characterised by a documentary infrastructure (regulatory framework) that provides organised and systematic access to the guidelines, procedures, organisational structures, and risks and controls within the business, also incorporating the provisions of the Law, together with the instructions of the Supervisory Authorities, VUB Group policies and Intesa Sanpaolo expectations.

The regulatory framework consists of "Governance Documents" that oversee the operation of the Bank (Articles of Association, Code of Ethics, Policies, Guidelines, Function charts of the Organisational Structures, Organisational Models, etc.) and of more strictly operational regulations that govern business processes, individual operations and the associated controls.

More specifically, the Company rules set out organisational solutions that:

- ensure sufficient separation between the business, operational and control functions and prevent situations of conflict of interest in the assignment of responsibilities;
- are capable of adequately identifying, measuring and monitoring the main risks assumed in the various operational segments;
- enable the recording, with an adequate level of detail, of every operational event and, in particular, of every transaction, ensuring their correct allocation over time;
- guarantee reliable information systems and suitable reporting procedures for the various managerial levels assigned the functions of governance and control;
- ensure the prompt notification to the appropriate levels within the business and the swift handling of any anomalies found by the business units and the control functions.

The VUB Group's organisational solutions also enable the uniform and formalised identification of responsibilities. At Corporate Governance level, VUB Group has adopted a dual governance model, in which the functions of control and strategic management, performed by the Supervisory Board, are separated from the management of the Company's business, which is exercised by the Management Board in accordance with the provisions of the applicable laws.

The Supervisory Board has established the Audit Committee that helps supervising the internal control system, risk management and the accounting and IT systems. The Audit Committee performs the duties and tasks stipulated in the Accounting Act.

From a more strictly operational perspective the Bank has identified the following macro types of control:

- line controls, aimed at ensuring the correct application of day-to-day activities and single transactions. Normally, such controls are carried out by the productive structures (business or support) or incorporated in IT procedures or executed as part of back office activities;
- risk management controls, which are aimed at contributing to the definition of risk management methodologies, at verifying the respect of limits assigned to the various operating functions and at controlling the consistency of operations of single productive structures with assigned risk-return targets. These are not normally carried out by the productive structures;
- compliance controls, made up of policies and procedures which identify, assess, check and manage the risk of non-compliance with laws, Supervisory authority measures or self-regulating codes, as well as any other rule which may apply to the Group;
- internal auditing, aimed at identifying anomalous trends, violations of procedures and regulations, as well as assessing the overall functioning of the internal control system. It is performed by different structures which are independent from productive structures.

The internal control system is periodically reviewed and adapted in relation to business development and the reference context. As a consequence, VUB Group's control structure is in compliance with the instructions issued by the Supervisory Authorities. Indeed, alongside an intricate system of line controls involving all the function heads and personnel, an independent Risk Management Division has been established specifically dedicated to controls related to the control of risk management (including, the Underwriting Department, Methodology, Credit Quality Monitoring,

and Internal Validation in accordance with Basel 2). The management of compliance controls (Compliance Department); the Legal Affairs Department report to the Deputy CEO, aside of business units.

There is also a dedicated Internal Audit and Control Department, which reports directly to the Supervisory Board, and is also functionally linked to the Audit Committee.

### **The Compliance Department**

The governance of compliance risk is of strategic importance to the VUB Bank as it considers compliance with the regulations and fairness in business to be fundamental to the conduct of banking operations, which by nature is founded on trust.

The Compliance Department of VUB was created in 2005 and is directly under Deputy CEO. It has autonomous position with respect to risk management and compliance check; the position of Compliance Department is separated from Internal Audit and Control Unit of the Bank. Concurrently, however the activities of Compliance are subject to controls of Internal Audit and Control Unit of the Bank.

During the second half of the year 2009, the Compliance Department has started to implement a project designed to set out the Group Compliance Model, based on ISP Guidelines. These Guidelines identify the responsibilities and macro processes for compliance, aimed at minimizing the risk of non-compliance through a joint effort of all the company functions. The Compliance Department is responsible, in particular, for overseeing the guidelines, policies and methodologies relating to the management of compliance risk. The Compliance Department, through the coordination of other corporate functions, is also responsible for the identification and assessment of the risks of non-compliance, the proposal of the functional and organizational measures for their mitigation, the pre-assessment of the compliance of innovative projects, operations and new products and services, the provision of advice and assistance to the governing bodies and the business units in all areas with a significant risk of non-compliance, the monitoring, together with the Internal Auditing Department, of ongoing compliance, and the diffusion of a corporate culture founded on principles of honesty, fairness and respect of the spirit and letter and the spirit of the rules.

The activities carried out during the year are concentrated on the regulatory areas considered to be the most significant in terms of compliance risk. In particular:

- with reference to the area of investment and payment services, these activities involved the governance of the process of compliance with the MiFID and PSD legislation, from the implementation of the governance and organizational measures required by the implementing regulations issued by the Supervisory Authorities, through the setting up of policies, processes and procedures and the establishment of the necessary training initiatives. The compliance activities also involved implementation of intragroup rules in area of consumer protection, investor protection and distribution of OTC derivatives as well as the clearing of new products and services, the management of conflicts of interest and the monitoring of customer activity for the prevention of market abuse;
- support was provided to the business structures for the proper management of reporting transparency and more generally in relation to the regulations for consumer protection.

### **The Internal Audit and Control Department**

With regard to Internal Auditing activities, the Internal Audit and Control Department is responsible for ensuring the ongoing and independent surveillance of the regular progress of the VUB Group's operations and processes for the purpose of preventing or identifying any anomalous or risky behaviour or situation, assessing the functionality of the overall internal control system and its adequacy in ensuring: (i) the effectiveness and efficiency of company processes, (ii) the safeguarding of asset value and loss protection, (iii) the reliability and completeness of accounting and management information, and (iv) the compliance of transactions with the policies set out by the VUB Group's administrative bodies and internal, external regulations and the Bank's Supervisors' expectations.

Furthermore, it provides consulting to the Bank Management and other units, also through monitoring participation in projects, for the purpose of improving the effectiveness of the control processes, risk management and organisational governance.

The Internal Audit and Control Department uses personnel with the appropriate professional skills and experience.

The Internal Audit and Control Department has a structure and a control model which is organised to cover in efficient way all risks covered by the Internal Audit and Control Department. The Audit was also affected by the international economic-financial situation, leading to increased focus on credit risk and liquidity risk.

Direct surveillance was carried out in particular through:

- the control of the operational processes of network and central structures, with verifications, also through on-site controls: (i) of the functionality of line controls, of the respect of internal and external regulations, (ii) of the reliability of operational structures and delegation mechanisms, (iii) of the correctness of available information in

- the various activities and of their adequate use with free and independent access to functions, data and documentation and (iv) application of adequate tools and methodologies;
- the supervision, via remote control integrated by on-site visits, of the credit origination and management process, verifying its adequacy with respect to the risk control system and the functioning of measurement mechanisms in place;
  - the monitoring of the process for the measurement, management and control of the VUB Group's exposure to market, counterparty, operational and credit risks, periodically reviewing the internal validation of the models and the ICAAP process developed for Basel 3 and NBS regulations related to Prudential reporting;
  - the valuation of adequacy and effectiveness of information technology system development and management processes, to ensure their reliability, security and functionality;
  - the control, also via on-site visits, of the processes related to financial operations and the adequacy of related risks control systems;
  - the control of compliance with the behavioural rules and of the correctness of procedures adopted on investment services as well as compliance with regulations in force with respect to the separation of the assets of customers;
  - the verification of the operations performed by foreign branch and subsidiaries, with attendance of internal auditors both local and from the Bank Head Office.

During the year the Internal Audit and Control Department also ensured the monitoring of all the main integration projects paying particular attention to control mechanisms in the Bank's models and processes and, in general, to the efficiency and the effectiveness of the control system established within the VUB Group.

Indirect supervision was conducted via direction and functional coordination of the Auditing structures in subsidiaries, for the purpose of ensuring control consistency and adequate attention to the different types of risks. Direct on-site reviews were also conducted.

In conducting its duties, the Internal Audit and Control Department used methodologies for the preliminary analysis of risks in the various areas. Based on detailed risks assessment made and on the consequent priorities, the Internal Audit and Control Department prepared and submitted the Annual Audit Plan for prior examination by the Audit Committee, Internal Auditing Department of Intesa Sanpaolo, the Management Board and subsequently to the Supervisory Board for approval. Based on this Plan the Internal Audit and Control Department conducted its activities during the year, completing the scheduled audits.

Any weaknesses have been systematically notified to the relevant Departments and Management for prompt remedy actions which are monitored by follow-up activities.

The valuations of the internal control system deriving from the individual checks, as well as assessment of the residual risk of the audited process, have been periodically presented to the Audit Committee, to the Management Board and to the Supervisory Board which request detailed updates also on the state of solutions under way to mitigate weak critical points; furthermore, the most significant events have been promptly signalled to them, not only to the Audit Committee and also to Internal Auditing Department of Intesa Sanpaolo.

### **2.3 Risk Management in VUB Group**

Fundamental principles of Risk Management in VUB Group were formalized and circulated among all interested parties in Risk Management Strategy.

The Strategy sets out the organizational context of the Group, defining the hierarchy of risk management related documentation, risk management philosophy, culture, values and operating style.

Furthermore, the Policy sets the framework for setting Group risk objectives and risk appetite, actual and target risk structure and basic structure of Risk Management in VUB Group.

Key Risk Management principles (described in more detail in respective Policy), in VUB Group, are as follows:

- conflict of interests
- best-practice approach
- prudence
- going concern
- expertise
- new product handling
- parent company guidance.

Reflecting key elements, defined and described in Risk Management Strategy, the Bank has set-up and formalized the Internal Capital Adequacy Assessment Process. Process deployed aims at identification, measurement and management of all risks, the Bank is exposed to, including pro-active management of the available financial resources, to cover Bank's actual and future capital needs.

## 2.4 Credit risk

### **Risk management strategies and processes**

The VUB Group has defined the organizational framework, principles and processes for measuring, managing and controlling credit risk.

The basic principles of credit risk management are defined in Risk Management Strategy and are then worked out in detail in credit policies and procedures. The VUB Group basic principles are aimed at:

- Portfolio diversification at a segment, single obligor/group of obligors, product, industrial sector and tenor level, which is considered as an approach mitigating the concentration risk,
- Efficient underwriting process focused on detail creditworthiness analysis of each borrower/group of borrowers,
- Efficient portfolio monitoring and portfolio management including the monitoring of early warning signals,
- Clear definition of client lifecycle in loan management and triggers for entering each stage of lifecycle (Performing, Early Warning Signals, Watchlisted, Recovery).

### **Structure and Organization of the risk management function**

The organizational framework is designed this way that rigorous segregation of function and responsibilities is assured.

On the high level the following bodies are involved in Credit risk management:

- Supervisory Board
- Management Board
- Credit Risk Committee

and on operational level Corporate Credit Committee, Recovery and New Product Committee.

The Supervisory Board and Management Board are the principal statutory governance bodies of VUB Group. Supervisory Board of VUB Bank guarantees the functionality, efficiency and effectiveness of the risk management and controls system, which is constantly checked by Internal Audit.

From strategic point of view most of the functions in credit risk management area was delegated by Management Board to Credit Risk Committee. The objective of Credit Risk Committee is setting of Credit Risk policies for VUB Group in line with the risk appetite defined per customer, per segment and per product and also reviewing and making decision on matters concerning the rating governance.

Credit Risk Committee also set the rules for portfolio diversification (ex ante defined concentration limits) on the level of segment, product and industrial sector. All portfolio limits are monitored and reported to Credit Risk Committee on monthly basis.

From operational point of view some of the functions in credit risk management area were delegated by Management Board to Corporate Credit Committee, Recovery and New Product Committee. Objectives of above-mentioned Committees, as well as competencies and functioning are described in respective Committee Charters.

The execution of the credit risk management activities (according to approved strategies and principles) is responsibility of Risk Management Division as a Control Unit through which all Risk Management activities are coordinated. Risk Management Division is headed by Chief Risk Officer, the member of the Management Board and is organizationally separated from the business divisions.

From Risk Management division the following departments are primarily involved in credit risk management:

- Policy and Methodology – responsible for the rating system design, including the development and maintenance of the rating models and designing the detail risk policies (including risk mitigation policy) and procedures in compliance with approved principles and strategies. It is responsible for calculation of provisions as well,
- Credit Risk Management – responsible for the loan granting, competencies and responsibilities are defined in the Competence code,
- Asset Quality Management – responsible for the monitoring of portfolio, including monitoring of early warning signals, monitoring of ratings and overrides,
- Enterprise Risk Management – responsible for performance of validation activities and calculation of risk weighted assets,
- Recovery (Collection) – responsible for non-performing loans management, execution of collection strategies in early and late stage of collection process and dealing with watchlisted clients.

### **Scope of application and characteristics of the risk measurement and reporting system**

VUB in cooperation with its Parent company, Intesa Sanpaolo has developed a set of instruments which ensure the analytical control over the quality of the loans to clients and financial institutions, and loans subject to country risk.

Risk measurement uses rating models which are differentiated according to the obligor's segment (Large Corporate, Real Estate, Project Finance, Object Finance, Small and Medium Enterprises, Small Business, Retail). Internal rating



models make it possible to summarise the credit quality of the counterparty in a measurement, the rating which reflects the probability of default over a period of one year. In case of advanced IRB approach also the loss given default (LGD) is estimated. Regulatory slotting models are not anchored to any PD expectations. Slotting category reflects credit quality of the counterparty as it is directly associated with a particular risk weight and expected loss in line with the Regulation EU No 575/2013.

Approved internal rating models present the following characteristics:

- **Corporate Credit Model:** the model, estimated through a shadow rating approach as the number of defaults on this segment is not sufficient to develop a default model, is composed by a quantitative module, which incorporates balance sheet data, and a qualitative module (a questionnaire), which covers two analysis areas (sector and market area and specific debtor characteristic area). Output of quantitative module and of each of the two parts of the qualitative module is a score; the three scores are simultaneously integrated through a logistic regression;
- **SME Credit Model:** the model has been developed using VUB internal data through logistic regression. The model is composed by the following modules:
  - Application rating composed by Soft Fact score, covering the basic characteristics of the economic subject, and Financial score, covering the financial profile of the economic subject, further divided into single and double entry bookkeeping,
  - Behavioural rating, covering the account and loan behaviour of the client,
  - Computed Rating (Pre-computed Rating), which is the result of the integration between application and behavioural scores with application of predefined automatic rules,
  - Final rating, which is the final result after application of override and/or expert rules;
- **SB Credit Model:** the model has been developed using VUB internal data through logistic regression. The model is composed by the following modules:
  - Application rating composed by Soft Fact score, covering the basic characteristics of the economic subject, and Financial score, covering the financial profile of the economic subject, further divided into single and double entry bookkeeping,
  - Behavioural rating, covering the account and loan behaviour of the client,
  - Behavioural transactional rating, which is used instead of behavioural rating in case when client does not have behavioural rating yet, but client has a current account for a quite enough period,
  - Computed Rating (Pre-computed Rating), which is the result of the integration between application and behavioural (behavioural transactional) scores,
  - Final rating, which is the final result after application of override and/or expert rules;
- **Retail Mortgages:** In July 2012 the Advanced IRB approach for segment of Retail residential mortgages was approved. The PD model has been recalibrated and fine-tuned in 2H of 2012. The model takes into consideration both client and contract parameters. It consists of application module being applied already during the initial approval process. The client's behaviour on the other products is reflected, too. Subsequently also regular assessment of client's behaviour on corresponding mortgage product is applied – i.e. behavioural information of mortgage product is integrated.

Approved internal LGD models present the following characteristics:

- **LGD model for segments Corporate and SME:** model is common for both segments. It is based on the real cash-flows on the client's credit products in the default period of the client. Model was developed in the first half of 2013. Its usage for the needs of the advanced IRB approach was approved from 30 June 2014. The last recalibration has been deployed into the production in May 2015.
- **LGD model for SB segment:** it is based on the real cash-flows on the client's credit products in the default period of the client. Model was developed in the first half of 2013. Its usage for the needs of the advanced IRB approach was approved from 30 June 2014. The last recalibration has been deployed into the production in May 2015.
- **LGD model for Retail residential mortgages:** it is based on the real cash-flows in the default period of the mortgage. Its usage for the needs of the advanced IRB approach was approved in July 2012. The last recalibration of the model was done in September 2012.

Approved regulatory slotting models present the following characteristics:

- **RED model:** Real Estate model, which follows an expert based approach. Development of the slotting function is in line with the regulatory requirements (including all areas to be covered by slotting – i.e. financial strength, transaction and/or asset characteristics, strength of the sponsor and developer, security package). The model is composed by:
  - Slotting questionnaire, which results in the assignment of preliminary slotting category Strong/Good/Satisfactory/Weak,
  - Set of automatic rules, overrides, which are applied to obtain the final slotting categories;

- SPV model: Model for Project Finance and Object Finance and for Specialized Lending assets, which do not meet criteria to be processed by RED model, follows an expert based approach. Development of the slotting function is in line with the regulatory requirements (including all areas to be covered by slotting – i.e. financial strength, political and legal environment, transaction and/or asset characteristics, strength of the sponsor and developer, security package). The model is composed by:
  - Slotting questionnaire, which results in the assignment of preliminary slotting category Strong/Good/Satisfactory/Weak,
  - Set of automatic rules, overrides, which are applied to obtain the final slotting categories.

The adoption of internal rating models has implied, among others, the review of the entire controls and governance structure.

In particular a new Rating Governance policy has been introduced through the revised Credit Risk Charter which establishes the guidelines for measurement, control and management of credit risk by defining the legal framework, main responsibilities, policies and methodologies that support the credit risk management process of VUB Group.

This document intend to formalize the macro processes for the implementation, management and control of internal credit risk measurement systems for the calculation of capital requirements as defined by the Parent Company and the relevant regulation from NBS and Basel.

For Financial institutions (non-banks) and Municipalities the standardized approach is currently applied.

For Sovereigns, Central banks and Institutions, the take-over of Parent company model is planned.

The rating model for other Retail – rest of products (consumer loans, credit cards and overdrafts) was developed at the turn of 2013 and 2014. The new model consists of application and behavioural information.

The attribution of rating is centralized and fully automated for SME, Small Business and Retail portfolio. Rating is based on quantitative and qualitative data inputted into system by Relationship manager.

For Large Corporates the rating assignment is centralized in Credit Risk Management department with splitted responsibility for rating assignment and rating validation. Internal guideline defines the competencies; in some cases the technical opinion of Parent Company is needed.

Furthermore the rating system includes the behavioural score which is automatically calculated on monthly basis, which is one of the parameter of portfolio monitoring. It interacts with the processes of portfolio management and together with other indicators allows timely assessment of client worsening and performance of remedial action.

The whole loan portfolio is subject to the regular review carried out on the level of counterparty or on the portfolio/product level.

#### **Policies for hedging and mitigating risk**

The standard tools and techniques are used for credit risk mitigation. Bank does not use debt securitization, credit default swaps or insurance of loan portfolio.

The tools and techniques for credit risk mitigation are summarized in Collateral policy which is an integral and indispensable part of the credit risk management and credit risk mitigation for VUB Group. Collateral is used primarily to provide the bank with the means for repayment of an exposure in the event of default by the borrower.

However, collateral management has a wider meaning than the simple taking of collateral in order to secure the repayment of the bank's exposures. This includes the following:

- The establishment and maintenance of collateral policy comprising types of collateral taken by the Bank, the legal documentation used by the bank to secure its right to this collateral in the event of a default and the valuation of this collateral at origination. These aspects of collateral management are addressed in this policy document;
- The relevant and proper identification and registration of collateral to secure the bank's right to collateral in the event of default by the borrower;
- The regular monitoring and re-valuation of collateral held by the bank during the life of the exposure;
- The analysis, monitoring and review of realization rates achieved by Recovery Department activities in order to assess the effectiveness of the collateral policy as a risk mitigant, i.e. that the impact of the policy reduces the net credit loss suffered by the bank as a result of its lending activities across all segments and products.

The principal objective of Collateral policy is to clearly set up rules for a common and standard set of collateral types used by the bank in its lending activities. The rules, as the minimum, describe and state:

- Conditions for legal enforceability;
- Conditions for the process of valuation and the maximum values accepted by the Bank at origination for the certain types of collaterals; and
- Conditions for the process of revaluation.

## 2.5 Market risks – trading book

### **Risk management strategies and processes**

The allocation of capital for trading activities is set by the ALCO, through the attribution of operating limits in terms of VaR and SVaR. The allocation of these limits is at VUB trading book level as it represents the only portion of the VUB Group's market risks (subsidiaries and Prague branch represent the banking book).

The ALCO monitors the risks of trading book on a monthly basis, with particular reference to the absorption of the VaR limits, and recommends any corrective actions. The situation is also regularly examined by the parent company Intesa Sanpaolo risk management.

### **Structure and organisation of the associated risk management function**

The Chief Risk Officer is responsible, at Group level, for setting out the system of operating limits, the capital allocation system, and the system of binding policies and procedures. These activities are coordinated with parent company Intesa Sanpaolo, which discusses the guidelines for the management of market risks.

As part of its functions, the Enterprise Risk Management Department is responsible for the:

- definition, development and calculation of the risk indicators: Value at Risk, Stressed Value at Risk, sensitivity and greeks, level measures, stress tests and scenario analyses;
- monitoring of operating limits;
- establishment of the parameters and rules for the revaluation of assets subject to mark-to-market and fair value at Group level, as well as their direct revaluation when this cannot be obtained from instruments available to the business units;
- comparison of theoretical and actual P&L with the risk indicators and in particular with the VaR (so-called backtesting).

### **Scope of application and characteristics of the risk measurement and reporting system**

The activities for the quantification of trading risks are based on daily and period estimates of sensitivity of the trading portfolios of VUB to adverse market movements of the following risk factors:

- interest rates;
- equity and market indexes;
- foreign exchange rates;
- implied volatilities;
- spreads in credit default swaps;
- spreads in issued bonds.

The risk indicators used may be divided into four main types:

- Value at Risk (VaR), which represents the backbone of the whole risk management system due to its characteristics of uniformity, consistency and transparency in relation to both economic capital and the operations; SVaR value is supplementing variable to standard VaR value, whose main purpose is cover periods with significant volatility outside the scope of standard VaR dataset;
- sensitivity and greeks, which are the essential accompaniment to the VaR indicators due to their ability to capture the sensibility and the direction of the existing financial trading positions in relation to the various individual risk factors;
- level measures (such as notional and Mark to Market), which are a useful aid to the above indicators as an immediately applicable solution;
- stress tests and scenario analyses that enable the completion of the analysis of the overall risk profile, capturing changes in predetermined assumptions relating to the evolution of the underlying risk factors, also simulating anomalous market conditions (opening of the basis risks, worst case).

The reporting system is continuously updated in order to take into account the evolution of the operations, the organisational structures and the analytical methods and tools available.

### **Policies for hedging and mitigating risk**

In VUB, monthly ALCO meetings are held during which the main risk factors of the portfolios are discussed. The monitoring and discussions take place on the basis of a series of reports by the Enterprise Risk Management Department based on standard quantitative indicators (VaR, SVaR, greeks, and issuer risk) and stress indicators (what if analysis, stress tests on particular macroeconomic scenarios/risk factors). This set of information represents an effective means for deciding policies for the hedging and mitigating of risk, as it enables the provision of detailed recommendations to the trading rooms on the risk profile of the books, and the identification of any idiosyncratic risks and concentrations, and the suggestion of methods for the hedging of exposures considered to be a potential source of future deteriorations in the value of the portfolios.

### **Strategies and processes for the ongoing assessment of their effectiveness**

At operational level, the daily information (VaR, SVaR, sensitivities, level measures, control of assigned limits) is provided by Market Risk sub-department to all business units and senior management. Based on that, risk indicators are discussed between risk and business units and if necessary corrective actions must be performed.

## **2.6 Market risks – banking book**

### **Risk management strategies and processes**

Market risk originated by the banking book arises primarily in the VUB, and partly in subsidiaries like CFH and VUB Leasing in both cases it relates mainly to interest rate risk.

Specifically, in managing interest rate risk in the banking book, the VUB Group seeks to maximize profitability, by adopting operating methods consistent with the general stability of the financial results over the long term. ALCO is responsible for the assessment of the overall risk profile of the Group.

The foreign exchange risk in banking book refers to the exposures deriving from the commercial operations and strategic investment decisions of VUB. The main sources of foreign exchange risk consist of foreign currency loans and deposits held by corporate and retail customers, purchases of securities, equity investments and other financial instruments in foreign currencies, and conversion into domestic currency of assets, liabilities. The foreign exchange risk in banking book is closed and transferred on daily basis to trading book. Foreign exchange risk in subsidiaries is kept at very low level as a result of VUB Group strategy to keep their assets and liabilities in foreign currencies at minimum level.

### **Structure and organisation of the associated risk management function**

Within the VUB Group, the market risks of the Banking Book and the Liquidity risk (discussed below) are overseen by Enterprise Risk Management Department and department Asset and Liability Management, which are responsible for:

- setting out the criteria and methods for the measurement and management of the financial risks of the banking book (interest rate, foreign exchange, and liquidity);
- proposing the system of operational limits and the guidelines for the management of financial risks for the subsidiaries;
- measuring the financial risks of the banking book;
- analysing the overall financial risk profile of the Group's banking book, proposing any corrective measures;
- managing the assessment and measurement of the effectiveness of the hedging relationships (hedge accounting) required by the IAS/IFRS regulations.

### **Scope of application and characteristics of the risk measurement and reporting system**

Two types of measurement have been adopted for the measurement of the financial risks generated by the banking book.

Shift sensitivity analysis quantifies the change in value of a financial portfolio resulting from adverse movements in the main risk factors (interest rate).

Sensitivity of the interest margin is measured by quantifying the impact on net interest income of a parallel and instantaneous shock in the interest rate curve, over a period of 12 months.

The calculations are applied on both VUB and individually on its subsidiaries.

### **Policies for hedging and mitigating risk**

Hedging of interest rate risk is aimed (i) at protecting the banking book from variations in the fair value of loans and deposits due to movements in the interest rate curve, or (ii) at reducing the volatility of future cash flows related to a particular asset/liability.

The main types of derivative contracts used are interest rate swaps (IRS), cross-currency swaps (CCS) and FRAs contracts.

Hedging activities performed by the bank are recorded using various hedge accounting methods. A first method refers to the fair value hedge of assets and liabilities specifically identified (microhedging), mainly bonds issued or acquired by the Bank.

Another hedging method used is the cash flow hedge which has the purpose of stabilising interest flow on variable rate funding.

The Enterprise Risk Management Department is in charge of measuring the effectiveness of interest rate risk hedges for the purpose of hedge accounting, in compliance with international accounting standards.

Foreign exchange risk deriving from operating positions in foreign currency in the banking book is systematically transferred to VUB trading book, for the purpose of guaranteeing the elimination of such risk.

Foreign exchange risk in subsidiaries is mitigated by the practice of raising funds in the same currency as assets.

## 2.7 Liquidity risk

Liquidity risk is defined as the risk that the bank is not able to meet its payment obligations when they fall due (funding liquidity risk). Normally, the bank is able to cover cash outflows with cash inflows, highly liquid assets and its ability to obtain credit. With regard to the highly liquid assets in particular, there may be strains in the market that make them difficult (or even impossible) to sell or be used as collateral in exchange for funds. From this perspective, the bank's liquidity risk is closely tied to the market liquidity conditions (market liquidity risk).

The Guidelines for Liquidity Risk Management adopted by the VUB Group outline the set of principles, methods, regulations and control processes required to prevent the occurrence of a liquidity crisis and call for the Group to develop prudential approaches to liquidity management, making it possible to maintain the overall risk profile at extremely low levels.

The basic principles underpinning the Liquidity Policy of the VUB Group are:

- the existence of an operating structure that works within set limits and of a control structure that is independent from the operating structure;
- a prudential approach to the estimation of the cash inflow and outflow projections for all the balance sheet and off-balance sheet items, especially those without a contractual maturity (or with a maturity date that is not significant);
- assessment of the impact of various scenarios, including stress testing scenarios, on the cash inflows and outflows over time;
- maintenance of an adequate level of unencumbered highly liquid assets, capable of enabling ordinary operations, also on an intraday basis, and overcoming the initial stages of a shock involving the Group's liquidity or system liquidity.

VUB directly manages its own liquidity and coordinates its management at VUB Group level, ensures the adoption of adequate control techniques and procedures, and provides complete and accurate information to ALCO and the Statutory Bodies.

The departments of the bank that are in charge of ensuring the correct application of the Guidelines are the Treasury Department, responsible for short term liquidity management, the BSM department, responsible for medium and long term liquidity management and the Enterprise Risk Management Department, responsible for monitoring indicators and verifying the observation of limits.

These Guidelines are broken down into three macro areas: "Short term Liquidity Policy", "Structural Liquidity Policy" and "Contingency Liquidity Plan".

The short term Liquidity Policy includes the set of parameters, limits and observation thresholds that enable the measurement, both under normal market conditions and under conditions of stress, of the liquidity risk exposure over the short term, setting the maximum amount of risk to be assumed and ensuring the utmost prudence in its management.

The structural Liquidity Policy of the VUB Group incorporates the set of measures and limits designed to control and manage the risks deriving from the mismatch of the medium to long-term maturities of the assets and liabilities, essential for the strategic planning of liquidity management. This involves the adoption of internal limits for the transformation of maturity dates aimed at preventing the medium to long-term operations from giving rise to excessive imbalances to be financed in the short term.

Together with the short term and structural Liquidity Policy, the Guidelines provide for the management methods of a potential liquidity crisis, defined as a situation of difficulty or inability of the Bank to meet its cash commitments falling due, without implementing procedures and/or employing instruments that, due to their intensity or manner of use, do not qualify as ordinary administration.

The Contingency Liquidity Plan, by setting itself the objectives of safeguarding the Group's capital and, at the same time, guaranteeing the continuity of operations under conditions of extreme liquidity emergency, ensures the identification of the pre-warning signals and their ongoing monitoring, the definition of procedures to be implemented in situations of liquidity stress, the immediate lines of action, and the intervention measures for the resolution of emergencies. The pre-warning indexes, aimed at spotting the signs of a potential liquidity strain, both systemic and specific, are continuously recorded and reported to the departments responsible for the management and monitoring of liquidity.

The liquidity position of the bank and the subsidiaries is regularly presented by Enterprise Risk Management Department and discussed during the ALCO meetings.

## 2.8 Operational risk

### **Operational risk management strategies and processes**

The VUB Group, in coordination with Intesa Sanpaolo, has defined the overall operational risk management framework by setting up a Group policy and organizational process for measuring, managing and controlling operational risk.

The control of operational risk was attributed to the Group Operational Risk Committee, which identified risk management policies and submits for approval and verification to Management Board of VUB Bank. Supervisory and Management Board of VUB Bank guarantees the functionality, efficiency and effectiveness of the risk management and controls system.

The Group Operational Risk Committee (made up of the heads of the areas of the governance centre and of the business areas more involved in operational risk management), has the task of periodically verifying reviewing the Group's overall operational risk profile, authorising and defining any corrective actions, coordinating and monitoring the effectiveness of the main mitigation activities and approving the operational risk management transfer strategies.

### **Organizational structure of the associated risk management function**

For some time, the Group has had a centralized function within the Risk Management Division for the management of the Group's operational risks. This function is responsible, in coordination with parent company, for the definition, implementation and monitoring of the methodological and organizational framework, as well as for the measurement of the risk profile, the verification of mitigation effectiveness and reporting to Top Management.

In compliance with current requirements the prevailing regulations, the individual organizational units participated in the process and each of them was assigned the responsibility are responsible for the identification, assessment, management and mitigation of its operational risks. Specific offices functions and departments have been identified within these organizational units to be responsible for the Operational Risk Management processes of their unit (collection and structured census of information relating to operational events, scenario analyses and assessment of the level of risk associated with the business environment). The Risk Management Division carries out second level monitoring of these activities.

### **Scope of application and characteristics of the risk measurement and reporting system**

Upon request of the parent company, VUB Bank as part of the Group request has received in February 2010, from relevant Supervisory authorities, approval for usage and thus adopted the Advanced Measurement Approach (AMA), for Operational Risk management and measurement.

Upon request of the parent company, VUB Bank as part of the Group request has received in June 2013, from relevant Supervisory authorities, approval for usage and thus adopted the Advanced Measurement Approach (AMA), for Operational Risk management and measurement for Consumer Finance Holding and VUB Leasing subsidiaries. Part of the decision has been approval of the insurance effect inclusion, as well as approval of new allocation mechanism, which led to fulfilment of a regulatory condition for approval of diversification usage.

As such, VUB Group uses combination of Advanced Measurement Approach (for VUB Bank and Prague branch, VUB Leasing and Consumer Finance Holding), and Standardized (VUB Factoring).

For the use of the AMA, the Bank has set up, in addition to the corporate governance mechanisms required by the Supervisory regulations, an effective system for the management of operational risk certified by the process of annual self-assessment carried out by the Bank and VUB Group Companies that fall within the scope of AMA and TSA. This self-assessment is verified by the internal auditing department and submitted to the Management Board for the annual certification of compliance with the requirements established by the regulation.

Under the AMA approach, the capital requirement is calculated by internal model, which combines all elements stipulated in Supervisory regulation, allowing to measure the exposure in a more risk sensitive way. Monitoring of operational risks is performed by an integrated reporting system, which provides management with the information necessary for the management and/or mitigation of the operational risk.

### **Policies for hedging and mitigating risk**

The VUB Group, in coordination with parent company, has set up activated a traditional operational risk transfer policy (insurance) aimed at with the objective of mitigating the impact of any unexpected losses. The AMA calculation does include the benefit from this transfer of operational risk through insurance policies, which contributes to reducing the risk capital calculated through the internal models.

## 2.9 Other risks

In addition to the risks discussed above, the following other risks are identified and monitored by the Group.

### **Strategic risk**

The VUB Group defines current or prospective strategic risk as the risk associated with potential decrease in profits or capital due to changes in the operating context, misguided company decisions, inadequate implementation of decisions, and an inability to react sufficiently to changes in the competitive scenario.

The Group's response to strategic risk is represented first and foremost by policies and procedures that call for the most important decisions to be deferred to the Supervisory Board and the Management Board, supported by a current and forward-looking assessment of risks and capital adequacy. The high degree to which strategic decisions are made at the central level, with the involvement of the top corporate governance bodies and the support of various company functions, ensures that strategic risk is mitigated. An analysis of the definition of strategic risk leads to the observation that this risk is associated with two distinct fundamental components:

- a component associated with the possible impact of misguided company decisions and an inability to react sufficiently to changes in the competitive scenario. This component does not require capital, but is one of the risks mitigated by the ways in which, and the levels at which, strategic decisions are reached, where all significant decisions are always supported by ad hoc activities aimed at identifying and measuring the risks implicit in the initiative;
- the second component is more directly related to business risk; in other words, it is associated with the risk of a potential decrease in profits as a result of the inadequate implementation of decisions and changes in the operating context. This component is handled not only by using systems for regulating company management, but also via specific internal capital, determined according to the Variable Margin Volatility (VMV) approach, which expresses the risk arising from the business mix of the Group and its business units.

Strategic risk is also assessed as part of stress tests based on a multiple-factor model that describes the relations between changes in the economic scenario and the business mix resulting from planning hypotheses.

### **Reputational risk**

The VUB Group attaches great importance to reputational risk, namely the current and prospective risk of a decrease in profits or capital due to a negative perception of the Bank's image by customers, counterparties, shareholders, investors and supervisory authorities.

The Group has adopted and published a Code of Ethics that sets out the basic values to which it intends to commit itself and enunciates the principles of conduct for dealings with all stakeholders (customers, employees, suppliers, shareholders, the environment and, more generally, the community) with more ambitious objectives than those required just to comply with the law. On the subject of customer relations, it should be recalled that the Group has set up a systematic dialogue process. It has also issued voluntary conduct policies (environmental policy and arms industry policy) and adopted international principles aimed at pursuing respect for the environment and human rights.

The Group also provides effective governance for compliance risk as a prerequisite for mitigating reputational risk.

There has been a particular focus on financial advisory services for customers, for which the MiFID Directive was taken as an opportunity to update the entire marketing process and associated controls.

Accordingly, the Group has reinforced its longstanding general arrangement, which calls for the adoption of processes supported by quantitative methods for managing the risk associated with customers' investments in accordance with a broad interpretation of the law with the aim of safeguarding customers' interests and the Group's reputation.

This has allowed assessments of adequacy during the process of structuring products and rendering advisory service to be supported by objective assessments that contemplate the true nature of the risks borne by customers when they undertake derivative transactions or subscribe for financial investments.

More in particular, the marketing of financial products is also governed by specific advance risk assessment policies from the standpoint of both the Bank (along with risks, such as credit, financial and operational risks, that directly affect the owner) and the customer (sustainability in terms of risk to return ratio, flexibility, concentration, consistency with objectives and risk tolerance profiles, and knowledge and awareness of the products and services offered).

### **Risk on owned real-estate assets**

The Risk on owned real-estate assets may be defined as the risk associated with the possibility of suffering financial losses due to an unfavourable change in the value of such assets and is thus included in the category of banking book financial risks. Real estate management is highly centralised and represents an investment that is largely intended for use in company operations.

### 3. Scope of application

#### Legal entity controlling VÚB, a.s.<sup>17</sup>

Trade name	% share	Registered office	Company ID No.
Intesa Sanpaolo Holding International S.A.	97.03	35 Boulevard du Prince Henri, L-1724, Luxembourg, Luxembourg	B 44318

#### Legal entities controlled by the shareholder controlling VÚB, a.s. (The Group of Intesa Sanpaolo Holding International S.A. Luxembourg)

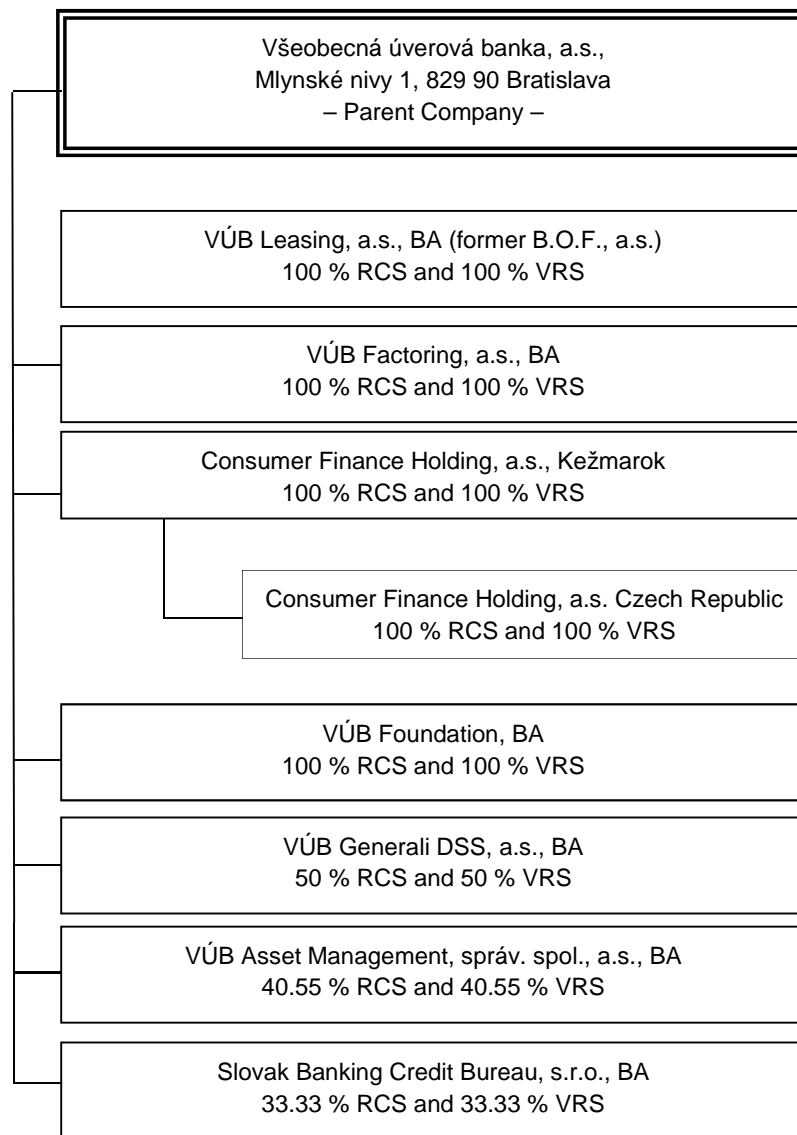
Trade name	% share	Registered office	Company ID No.
Central-European International Bank Ltd (CIB BANK LTD)	67.69	Medve utca, 4-14 H 1027 Budapest, Hungary	01-10-041-004
Intesa Sanpaolo Bank Luxembourg	99.57	19-21 Boulevard du Prince Henri, L-1724 Luxembourg, (Luxembourg)	B 13859
Banca Intesa ad Beograd	84.79	Milentija Popovica 7b, 11070 Beograd, Serbia and Montenegro	7759231
Privredna Banka Zagreb d.d.	97.47	Rackoga 6, HR-10000 Zagreb, Croatia	MBS 080002817
Banca Intesa (Russia)	53.02	Bld, 2, Petroverigski per, Moscow, 101000 Russian Federation	7708022300
Intesa Sanpaolo Servitia S.A.	100.00	12, Avenue de la Liberté, L-1930 Luxembourg, Luxembourg	B 14241
Intesa Sanpaolo Card D.o.o	53.46	Latovska 23, 10000 Zagreb Croatia	MBS (080693976)
Exelia S.r.l	100.00	Regione Brasov STR. Ionescu Crum N°1, Corp C2, Tower 2, Et.1.,Brasov,Romania	J08/821/2009
Intesa Sanpaolo Immobilière S.A	100.00	9, rue Goethe, L-1637 Luxembourg Luxembourg	B 55753
Intesa Sanpaolo Real Estate S.A	100.00	8, Avenue de la Liberté, L-1930 Luxembourg Luxembourg	B 62762
Intesa Sanpaolo House Immo S.A	100.00	12, Avenue de la Liberté, L-1930 Luxembourg Luxembourg	B 154021

#### Legal entity controlling Intesa Holding Sanpaolo International S.A. Luxembourg

Trade name	% share	Registered office	Company ID No.
Intesa Sanpaolo S.p.A.	100.00	Piazza San Carlo 156, 10121 Torino, Italy	799960158

<sup>17</sup> NBS decree 16/2014 §1, section 7



**Chart of consolidated VUB Group**


RCS = Registered Capital Stake  
 VRS = Voting Right Share

**Share of VUB Bank on the equity and voting rights of the individual members of the consolidated group headed by VUB Bank**

<b>Business Name</b>	<b>Registered Office</b>	<b>Registered Capital Stake of VUB</b>	<b>Voting Rights Share of VUB</b>	<b>Core Business</b>
VÚB Factoring, a.s. IČO: 31 345 310	Mlynské nivy 1, Bratislava	100%	100%	Factoring and forfeiting
Consumer Finance Holding, a.s. IČO: 35 923 130	Hlavné nám. 12, Kežmarok	100%	100%	Non-banking Credit Provision
Nadácia VÚB IČO: 30 856 043	Mlynské nivy 1, Bratislava	100%	100%	Public Beneficial Activity
VÚB Leasing, a.s. IČO: 31 318 045	Mlynské nivy 1, Bratislava	100%	100%	Financial and operating leasing
VÚB Generali DSS, a.s. IČO: 35 903 058	Mlynské nivy 1, Bratislava	50%	50%	Pension fund management
VÚB Asset Management, správ. spol., a.s. IČO: 35 786 272	Mlynské nivy 1, Bratislava	40.55%	40.55%	Collective investments
Slovak Banking Credit Bureau, s.r.o. IČO: 35 869 810	Malý trh 2/A, Bratislava	33.33%	33.33%	Automated data processing

All companies operate predominantly in the Slovak Republic.

**Basis of consolidation for accounting and prudential purposes<sup>18</sup>**

The principals and methods of consolidation used for accounting and prudential purposes are equal.

	Principal business activity	Share in %	Consolidated fully (line-by-line)	Consolidated proportionally	Added to RWA
<b>Subsidiaries</b>					
Consumer Finance Holding, a.s.	Consumer finance	100	X		X
VÚB Leasing, a. s.	Finance leases	100	X		X
VÚB Factoring, a.s.	Factoring of receivables	100	X		X
<b>Associates</b>					
VÚB Asset Management, správ. spol., a.s.	Asset management	40.55		X	X
Slovak Banking Credit Bureau, s.r.o.	Credit database administration	33.3		X	X
<b>Joint ventures</b>					
VÚB Generali DSS, a.s.	Pension fund administration	50		X	X
<b>Available-for-sale portfolio</b>					
RVS, a.s.	Services	8.01			X
S.W.I.F.T.	Payment settlement	0.01			X
Visa Inc.	Payment technologies	0.00			X
ISP shares	Banking services	0.01			X

<sup>18</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

#### 4. Regulatory capital structure<sup>19</sup>

##### 4.1 Qualitative disclosure

Since 1 January 2014, new Regulation (EU) no. 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation(EU) no. 648/2012 is valid and VUB Group calculates Capital according to this regulation.

Regulatory capital includes items forming the value of Core Tier 1 capital (ordinary share capital, share premium, retained earnings, legal reserve fund) and items decreasing the value of Core Tier 1 (intangible assets, goodwill and banks own shares). Furthermore, according to the CRR 575/2013 and National discretions proclaimed by national regulator, VUB Group is obliged to include the value of Tier 1 by the positive and negative revaluation differences arising from the derivative liabilities. Negative Revaluation of AFS portfolio and derivative liabilities decrease Tier 1 capital.

IRB Excess of provisions over expected losses eligible is included in Tier 2 capital. As for capital buffers, the bank follows the requirements specified by the Bank Law.

Share capital	EUR thousand
Authorised, issued and fully paid:	
89 ordinary shares of € 3,319,391.89 each, not traded	295,426
4,078,108 ordinary shares of € 33.2 each, publicly traded	<u>135,393</u>
	<u><u>430,819</u></u>

The VUB Bank's regulatory capital position at 30 September 2016 was as follows:

	EUR thousand
<b>Tier 1 capital</b>	
Share capital	430,819
Share premium	13,719
Retained earnings without net profit for the period	635,291
Other reserves	87,493
Profit or loss eligible	(10,230)
Revaluation of available-for-sale financial assets	6,596
Fair value gains and losses arising from the Bank's own credit risk related to derivative liabilities	(849)
Less intangible assets	<u>(55,949)</u>
	<u>1,106,890</u>
<b>Tier 2 capital</b>	
IRB excess of provisions over expected losses eligible	<u>12,559</u>
<b>Total regulatory capital</b>	<u><u>1,119,449</u></u>

<sup>19</sup> Regulation (EU) no. 575/2013, article 437

## 4.2 Quantitative disclosure

### Regulatory capital structure

The structure of the regulatory capital of the VUB Bank as at 30 September 2016 is summarised in the table below:

	<b>EUR thousand</b>
A. Tier 1 capital before the application of prudential filters	1,106,890
B. Tier 1 capital prudential filters	-
B.1 Positive IAS/IFRS prudential filters (+)	-
B.2 Negative IAS/IFRS prudential filters (-)	-
C. Tier 1 before items to be deducted (A+B)	1,106,890
D. Items to be deducted from Tier 1	-
E. Total Tier 1 capital (C-D)	<u>1,106,890</u>
F. Tier 2 capital before the application of prudential filters	-
G. Tier 2 capital prudential filters	12,559
G.1 Positive IAS/IFRS prudential filters (+)	12,559
G.2 Negative IAS/IFRS prudential filters (-)	-
H. Tier 2 before items to be deducted (F+G)	12,559
I. Items to be deducted from Tier 2	-
L. Total Tier 2 capital (H-I)	<u>12,559</u>
M. Items to be deducted from total Tier 1 and Tier 2 capital	-
N. Regulatory capital (E+L-M)	<u>1,119,449</u>
O. Tier 3 capital	-
P. Regulatory capital including Tier 3 (N+O)	<u><u>1,119,449</u></u>

	<b>EUR thousand</b>
<b>TOTAL TIER 1 and TIER 2 CAPITAL(*)</b>	
Breakdown of positive items	
Share capital	430,819
Share premium reserve	13,719
Reserves	712,554
Non-innovative equity instruments	-
Innovative equity instruments	-
Net income for the period	-
Positive IAS/IFRS prudential filters (+)	12,559
Fair value option: changes in group's own creditworthiness	-
Other positive prudential filters	6,596
<b>TOTAL POSITIVE ITEMS</b>	<u>1,176,247</u>
Breakdown of negative items	
Own shares or quotas	-
Goodwill	-
Other intangible assets	(55,949)
Loss for the period	-
Adjustments to loans	-
Adjustments calculated on the regulatory trading book	-
Other	-
Negative IAS/IFRS prudential filters (-)	-
Fair value option: changes in group's own creditworthiness	(849)
Negative reserves on equities and quotas of UCITS available for sale	-
Negative reserves on debt securities available for sale	-
Other negative prudential filters	-
<b>TOTAL NEGATIVE ITEMS</b>	<u>(56,798)</u>
<b>TOTAL TIER 1 and TIER 2 CAPITAL BEFORE ITEMS TO BE DEDUCTED</b>	<u>1,119,449</u>
<b>TOTAL ITEMS TO BE DEDUCTED</b>	<u>-</u>
<b>TOTAL TIER 1 and TIER 2 NET OF ITEMS TO BE DEDUCTED</b>	<u><u>1,119,449</u></u>

## 5. Capital adequacy<sup>20</sup>

### 5.1 Qualitative disclosure

#### **Assessment of the adequacy of the Bank's internal capital**

The management of capital adequacy consists of a series of policies that determine the size and optimal combination of the various capitalization instruments, in order to ensure that the levels of capital of the VUB Group and its subsidiaries are consistent with the risk profile assumed and meet the supervisory requirements.

The concept of capital at risk differs according to the basis for its measurement, and different target levels of capitalization are established:

- Regulatory Capital for Pillar 1 risks;
- Overall Economic Capital for Pillar 2 risks, for the ICAAP process.

The regulatory capital and the overall Economic Capital differ in terms of their definition and in terms of the coverage of the risk categories. The former derives from the formats laid down by the supervisory provisions and the latter from the identification of the significant risks for the VUB Group and the consequent use of internal models measurement in relation to the exposure assumed.

Capital Management essentially involves the control of capital soundness through the careful monitoring of both the regulatory constraints (Basel 2 Pillar 1) and current and prospective operational constraints (Pillar 2) in order to anticipate any critical situations within a reasonable period of time and identify possible corrective actions for the generation or recovery of capital.

The processes of assessment of capital adequacy are therefore based on a "twin track" approach: Regulatory Capital for the purposes of compliance with the Pillar 1 requirements and overall Economic Capital for the purposes of the ICAAP process.

The VUB Group assigns a primary role to the management and allocation of capital resources, also to run for the management of its operations. In this regard, the allocation of capital to the Business Units is established on the basis of their specific capacity to contribute to the creation of value, taking into account the level of return expected by the shareholders. To this end, internal systems are used to measure performance (EVA) on the basis of both the Regulatory Capital and the Economic Capital, in accordance with the criteria of the "use test" established by the supervisory provisions.

Verification of compliance with supervisory requirements and consequent capital adequacy is continuous and depends upon the objectives set out in the Business Plan.

The first verification occurs in the process of assignment of budget objectives: based on the growth trends expected for loans, other assets and income statement aggregates, the risks are quantified and their compatibility with compulsory capital ratios for the Bank and for the Group as a whole is assessed.

Compliance with capital adequacy is obtained via various levers, such as pay-out policy, definition of strategic finance operations (capital increase, issue of convertible bonds and subordinated bonds, disposal of non-core assets, etc.) and the management of loan policy on the basis of counterparty risk.

This dynamic management approach is aimed at identifying the risk capital raising instruments and hybrid capital instruments most suitable to the achievement of the objectives.

Compliance with the target levels of capitalization is monitored during the year and on a quarterly basis, taking appropriate actions, where necessary, for the management and control of the balance sheets aggregates.

A further step in the preventive analysis and control of the Group's capital adequacy takes place whenever extraordinary operations (such as acquisitions, disposals, joint ventures etc.) are resolved upon. In this case, on the basis of the information on the operation to be conducted, its impact on capital ratios is estimated and any necessary actions to ensure compliance with the requirement set forth by Supervisory Authorities are planned.

The VUB Group attaches great importance to risk management and control as conditions for:

- guaranteeing that the Group structure is consistent with the risk tolerances of the various stakeholders, by combining sustainable value creation with a level of risk considered to be acceptable;
- ensuring the Group's capital and financial adequacy, to effectively safeguard business continuity and the public and social objectives of financial stability of intermediaries;
- enabling the transparent representation of the risk profile of its portfolios.

<sup>20</sup> Regulation (EU) no. 575/2013, article 438a)

The Economic Capital, defined as the maximum “unexpected” loss that the Group may incur over a period of one year, is a key measure for determining the Group’s financial structure and guiding its operations, ensuring the balance between risks assumed and shareholder return.

Consequently, when determining the risk tolerance considered to be acceptable, the Group’s objective is to ensure that its liabilities are covered over a period of 12 months with a 99.9% confidence level.

With regard to the objectives of financial stability, the Group’s aim is to ensure that risk is covered with a 99.9% confidence level, even under conditions of stress.

The Group sets out these general principles in policies, limits and criteria applied to the various risk categories and business areas with specific risk tolerance sub-thresholds, in an intricate framework of governance, control limits and procedures.

The risks identified, covered and incorporated within the economic capital are as follows:

- credit risk, this category also includes concentration risk, country risk and residual risks on credit recovery rates;
- market risk (trading book), including position, settlement and concentration risk on the trading book;
- operational risk, including legal risk;
- financial risk of the banking book, mainly represented by:
  - o interest rate and foreign exchange rate risk;
  - o risk on equity investments not subject to line by line consolidation;
  - o risk on real estate assets owned for whichever purpose;
  - o strategic risk;
  - o reputational risk;
  - o liquidity risk.

The level of absorption of economic capital is estimated on the basis of the current situation and also at a forecast level, based on the Budget assumptions and the projected economic scenario under ordinary and stress conditions. The capital position forms the basis for the business reporting and is submitted quarterly to the Management Board and the Supervisory Board, as part of the Group’s Risk report.

## **5.2 Quantitative disclosure<sup>21</sup>**

### **Capital requirements and capital ratios of the VUB Group**

Methodology of capital requirement calculation is in accordance with Regulation EU No 575/2013. Within this framework, the Banking Group’s capital must represent at least 8% of the total of the weighted assets (total capital ratio) deriving from the typical risks of the banking and financial business (credit, counterparty, market and operational risks), weighted on the basis of the regulatory segmentation of the borrowing counterparties and taking into account the credit risk mitigation techniques.

For the calculation of credit and counterparty risk capital requirements, VUB Group, having received authorisation from the Supervisory Authority, uses the Advanced IRB approach for the Corporate segment and for Retail Small Business from the report as at 30 June 2014, Advanced IRB approach for portfolio of residential mortgages from reporting date 31 July 2012. The Group is also proceeding with the development of the rating models for the other segments, to which the standard methods are applied, and the extension of the scope of companies for their application in accordance with the gradual rollout plan for the advanced approaches presented to the Supervisory Authority.

Banks must comply with capital requirements for market risks calculated on the whole trading book separately for the various types of risk: Traded debt instruments, Equity, Foreign Exchange, Commodities. The use of internal models to calculate the capital requirement for market risks is permitted.

With regard to operational risk, upon request of the parent company, VUB Bank as part of the Group request has received in February 2010, from relevant Supervisory authorities, approval for usage and thus adopted the Advanced Measurement Approach (AMA), for Operational Risk management and measurement. Upon request of the parent company, VUB Bank as part of the Group request has received in June 2013, from relevant Supervisory authorities, approval for usage and thus adopted the Advanced Measurement Approach (AMA), for Operational Risk management and measurement for Consumer Finance Holding and VUB Leasing subsidiaries. As such, VUB Group uses combination of Advanced Measurement Approach (for VUB Bank, VUB Leasing and CFH) and Standardized Approach (for VUB Factoring).

In addition to the Total capital ratio referred to above, other ratio is also used to assess capital base soundness: the Tier 1 capital ratio represented by the ratio between Tier 1 capital and risk weighted assets.

<sup>21</sup> Regulation (EU) no. 575/2013, article 438c), d), e), f)



As at 30 September 2016 these ratios determined on the basis of the above mentioned method were respectively: Tier 1 ratio 13.79% and Total capital ratio 13.95%.

**Total capital requirement for VUB Bank as at 30 September 2016 was as follows:**

	Unweighted amounts	Weighted amounts	EUR thousand Requirements
A Capital Requirements			
<b>A.1 Credit and counterparty risks</b>	<b>17,163,814</b>	<b>7,333,794</b>	<b>586,703</b>
1. Standard methodology	6,275,202	2,251,186	180,095
2. Internal models (IRB)	10,746,487	4,719,615	377,569
3. Equity IRB	142,125	362,993	29,039
4. Securitisations			-
<b>A.2 Market risk</b>			<b>10,815</b>
1. Traded debt instrument			-
2. Equity			331
3. Foreign Exchange			-
4. Commodities			10
5. Internal models			10,474
<b>A.3 Operational risk</b>			<b>31,204</b>
1. Basic indicator approach			-
2. Standardised approach			-
3. Advanced approach			31,204
<b>A.4 Other capital requirements</b>			<b>13,470</b>
1. Total risk exposure amount for settlement/delivery			-
2. Total risk exposure amount for credit valuation adjustment			13,470
<b>A.5 Total capital requirements</b>			<b>642,192</b>
B. CAPITAL RATIOS (%)			
B.1 Core Tier 1			1,106,890
B.2 Tier 1 ratio			13.79
B.3 Total capital ratio			13.95

The tables below provide details of the Bank's different capital requirements as at 30 September 2016.

**Capital requirement for VUB Bank for Credit Risk (Standardised Approach)**

	<b>EUR thousand Capital requirement</b>
<b>Regulatory portfolio</b>	
Exposures to or secured by governments and central banks	9,936
Exposures to or secured by local authorities	2,254
Exposures to or secured by not for profit and public sector organisations	695
Exposures to or secured by multilateral development banks	-
Exposures to or secured by international organisations	-
Exposures to or secured by supervised institutions	17,114
Exposures to or secured by corporates	35,207
Retail exposures	102,393
Exposures secured by real estate property	29
Past due exposures	2,706
High-risk exposures	-
Exposures in the form of guaranteed bank bonds (covered bonds)	-
Short-term exposures to corporates	-
Exposures to UCITS	-
Other exposures	9,761
Securitised exposures	-
<b>Total Capital requirement for Credit Risk (Standardised Approach)</b>	<b>180,095</b>

**Capital requirement for Credit Risk (IRB Approach)**

	<b>EUR thousand Capital requirement</b>
<b>Regulatory portfolio</b>	
<b>Exposures to or secured by corporates</b>	
Large corporates	139,688
SME (Small and Medium enterprises)	92,266
Specialized lending - slotting criteria	72,817
<b>Exposures to or secured by retail</b>	
Mortgages	61,566
Retail SME	11,232
<b>Equity exposures: Simple risk weight approach</b>	
Private equity exposures in sufficiently diversified portfolios - 190%	-
Exchange-traded equity exposures - 290%	782
Other equity exposures - 370%	1,562
<b>Equity positions in Financial Sector Entities riskweighted at 250% and other Equity exposures subject to risk weights</b>	<b>26,695</b>
	<b>406,608</b>

**Capital requirement for Market Risk**

	<b>EUR thousand Capital requirement</b>
FX risk and IR risk (Internal model)	10,474
FX risk (STD approach)	-
Traded debt instrument	-
Equity	331
Commodity risk	10
<b>Total Capital requirement for Market Risk</b>	<b><u>10,815</u></b>

**Capital requirement for Operational Risk**

	<b>EUR thousand Capital requirement</b>
<b>Regulatory portfolio</b>	
Basic indicator approach	-
Standardized approach	-
Advanced Measurement Approach	31,204

**Leverage ratio**

Leverage ratio shall be calculated as an institution's capital measure divided by that institution's total exposure measure and shall be expressed as a percentage. The capital measure shall be the Tier 1 capital. The total exposure measure is the sum of the exposure values of all assets and off-balance sheet items not deducted when determining the capital measure referred to in.

The Bank's leverage ratio as at 30 September 2016 was as follows:

<b>Leverage ratio</b>	<b>%</b>
Leverage ratio	7.50

## 6. Credit risk

### 6.1 Qualitative Disclosure – General

#### Definitions of “non-performing loans”

From September 2010 the VUB Group implemented the definitions of non-performing loans coming from the Harmonization project. The Harmonization project is driven by Intesa Sanpaolo in order to unify the definitions and categories of non-performing loans across the Intesa Sanpaolo foreign subsidiaries. In March 2015 the next phase of the project was realized based on which three classification categories of non-performing loans were introduced (past due, unlikely to pay, doubtful) instead of previously used four categories (past due, restructured, substandard, doubtful). The definition of non-performing loans is based on delinquency (days past due - DPD) and judgemental criteria for categories doubtful and unlikely to pay. In case of past due category, DPD and materiality threshold of client are taken into account.

For regulatory reporting the Regulator definition on non-performing loans is followed.

Bank also monitors its portfolio based on the number of past due days. Portfolio is then divided between performing (= in bonis or zero days past due) and delinquent (split further into delinquency buckets for 30 days, i.e. 1-29, 30-59, etc.). As the bank adopted the Basel 2 default definition, the special focus is made on past due loans over 90 days, as 90 days past due status is one of the condition of default of client or transaction.

#### Watchlisted exposures

Obligors with on and off-balance sheet exposures in a temporary situation of objective difficulty which may be expected to be remedied within a reasonable period of time regardless they delinquency status are put on watchlist. Triggers for watchlist entering are set in internal guidelines.

#### Restructured exposures

On and off-balance sheet exposures for which a bank as a result of the deterioration of the obligor's financial situation, agrees to change/amend the original terms and conditions (e.g. the maturity). Rules for proving of deterioration of the obligor's financial situation is set in internal guidelines. According to the Harmonization project only those exposures are considered as restructured where the restructuring brings the economical loss, i.e. net present value of the restructuring is negative.

#### Description of the methods adopted to calculate the adjustments (impairments)

All credit assets are on monthly basis subject to the impairment test to assess whether there is objective evidence to consider that the carrying value of these assets is not fully recoverable.

Individual impairment is calculated on an individual basis for financial assets that have a specific evidence of losses, collective impairment (provisions and reserves) for financial assets which do not qualify for the individual impairment.

For individual impairment qualify credit assets which meet condition of objective evidence of impairment and trigger for significant exposure. Definition of objective evidence of impairment is based on IAS 39 definition (significant financial difficulty of the obligor, breach of contract such as default or delinquency or high probability of obligor's bankruptcy).

The methodology for measuring the loss from individually assessed impairment requires the use of estimates for:

- The expected amount to be recovered from the asset;
- The expected amount to be recovered from the utilization of any collateral / guarantee, less costs for obtaining and selling the collateral;
- The expected timing to recover the asset and the collateral.

The amount of loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the loan's original effective interest rate (i.e. the effective interest rate computed at initial recognition).

Credit assets which do not meet the condition of objective evidence of impairment and/or the trigger for significant exposure are subject to collective assessment of impairment – provisions (for on balance sheet) or reserves (for off balance sheet). Collective assessment of impairment requires the grouping of financial assets on the basis of similar credit risk characteristics that are indicative of the obligor's ability to pay all amounts due according to the contractual terms. On this basis, the bank will identify the historical series of default data and apply systems to recognize loan losses. The bank adopted three methodologies dependent on the ratings, data quantity, quality and time series: BASEL II IRB approach (PD x LGD x EAD), minimal requirements and Markov chains methodology.

#### Write-Off Policy

The Bank writes off a loan or security balance (and any related allowances for impairment losses) when it determines that the loans or securities are uncollectible. As the standard, the Bank considers the credit balances to be uncollectible based on the past due days. Since the beginning of 2008 the write-off policy has been changed from

180 to 1,080 days past due. Thus receivables are no longer written off and sold after 180 days past due, but are collected by external collection agencies until they qualify for write-off and tax deductibility.

As of 1 January 2013 Bank had fine-tuned the write-off policy. Additional condition is: Asset can be written off only in case the collateral pledged to this asset, if exists, was already realised.

The credit balance can be written off earlier than defined in the conditions described above if there is evidence that the receivable cannot be collected. The write-off of such receivables is subject to the approval of the Chief Risk Officer.

## 6.2 Quantitative disclosure – General

### Overall credit exposure of VUB Bank by risk class as at 30 September 2016 <sup>22</sup>

		EUR thousand		
		Amortized cost	Impairment losses	Carrying amount
<b>Banks</b>				
	Performing	99,607	(21)	99,586
<b>Sovereigns</b>				
	Performing	141,648	(108)	141,540
	Doubtful	2	-	2
		<u>141,650</u>	<u>(108)</u>	<u>141,542</u>
<b>Corporate</b>				
	Performing	3,826,485	(29,897)	3,796,588
	Past due	4	-	4
	Unlikely to pay	100,649	(24,975)	75,674
	Doubtful	60,431	(52,438)	7,993
		<u>3,987,569</u>	<u>(107,310)</u>	<u>3,880,259</u>
<b>Retail</b>				
	Performing	5,773,162	(41,464)	5,731,698
	Past due	8,507	(2,072)	6,435
	Unlikely to pay	40,498	(18,794)	21,704
	Doubtful	206,959	(109,848)	97,111
		<u>6,029,126</u>	<u>(172,178)</u>	<u>5,856,948</u>
<b>Securities</b>				
	Performing	2,051,706	(1,306)	2,050,400
	Doubtful	574	(574)	-
		<u>2,052,280</u>	<u>(1,880)</u>	<u>2,050,400</u>

<sup>22</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

**Overall credit exposure of VUB Bank by delinquency of payments as at 30 September 2016**

	EUR thousand		
	Amortized cost	Impairment losses	Carrying amount
<b>Banks</b>			
No delinquency	99,607	(21)	99,586
<b>Sovereigns</b>			
No delinquency	141,646	(108)	141,538
1 – 30 days	2	-	2
Over 181 days	2	-	2
	<u>141,650</u>	<u>(108)</u>	<u>141,542</u>
<b>Corporate</b>			
No delinquency	3,896,343	(49,759)	3,846,584
1 – 30 days	21,040	(2,627)	18,413
31 – 60 days	4,277	(1,419)	2,858
61 – 90 days	500	(349)	151
91 – 180 days	234	(146)	88
Over 181 days	65,175	(53,010)	12,165
	<u>3,987,569</u>	<u>(107,310)</u>	<u>3,880,259</u>
<b>Retail</b>			
No delinquency	5,587,574	(31,019)	5,556,555
1 – 30 days	181,106	(12,436)	168,670
31 – 60 days	36,244	(4,641)	31,603
61 – 90 days	23,909	(3,636)	20,273
91 – 180 days	39,811	(16,413)	23,398
Over 181 days	160,482	(104,033)	56,449
	<u>6,029,126</u>	<u>(172,178)</u>	<u>5,856,948</u>
<b>Securities</b>			
No delinquency	2,052,280	(1,880)	2,050,400

**Credit exposures of VUB Bank by geographical area as at 30 September 2016<sup>23</sup>**

	EUR thousand		
	Amortized cost	Impairment losses	Carrying amount
Europe			
Banks	94,337	(14)	94,323
Sovereigns	141,650	(108)	141,542
Corporate	3,865,857	(106,694)	3,759,163
Retail	6,026,562	(172,084)	5,854,478
Securities	2,026,562	(1,880)	2,024,682
	<u>12,154,968</u>	<u>(280,780)</u>	<u>11,874,188</u>
America			
Banks	5,074	(7)	5,067
Corporate	121,102	(535)	120,567
Retail	314	(4)	310
Securities	25,718	-	25,718
	<u>152,208</u>	<u>(546)</u>	<u>151,662</u>
Asia			
Banks	156	-	156
Corporate	610	(81)	529
Retail	1,655	(67)	1,588
	<u>2,421</u>	<u>(148)</u>	<u>2,273</u>
Rest of the World			
Banks	40	-	40
Retail	595	(23)	572
	<u>635</u>	<u>(23)</u>	<u>612</u>

**Net credit exposures of VUB Bank by industry sector as at 30 September 2016<sup>24</sup>**

	EUR thousand				
	Banks	Sovereigns	Corporate	Retail	Securities
Agriculture	-	-	130,567	22,285	-
Automotive	-	-	26,731	9	-
Commodity Traders	-	-	95,516	348	-
Construction	-	-	65,632	18,377	-
Consumers	-	-	-	5,580,549	-
Financial institutions	99,513	-	505,555	16	290,507
Government	-	134,304	-	49	1,759,893
Industry	-	-	741,999	22,391	-
Real estate	-	-	528,083	53,843	-
Retail and Wholesale Trade	-	-	397,125	56,723	-
Services	-	339	461,874	87,249	-
Transportation	-	456	128,795	9,750	-
Utilities	-	6,149	788,036	3,032	-
Others	73	294	10,346	2,327	-

<sup>23</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

<sup>24</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

**Changes in adjustments of VUB Group loans for the period ended 30 September 2016<sup>25</sup>**

Description	EUR thousand			
	Performing loans	Past due loans	Unlikely to pay loans	Doubtful loans
<b>A. Gross exposure as at 1 January</b>	8,940,369	18,282	161,408	385,140
<b>B. Current year movement (+)</b>	3,977,249	50,996	126,180	110,042
B1. From performing loans	-	44,402	45,635	39,760
B2. From past due loans	10,134	-	30,431	3,738
B3. From unlikely to pay	18,749	1,812	-	43,557
B4. From doubtful loans	8,335	491	15,348	-
B5. Other increases	3,940,031	4,291	34,766	22,987
<b>C. Current year movements (-)</b>	2,582,758	47,507	128,468	128,576
C1. To performing loans	-	10,134	18,749	8,335
C2. Write offs	-	271	128	39,691
C3. Recoveries	-	-	-	471
C4. Sales	-	-	14,026	7,550
C5. To past due loans	44,402	-	1,812	491
C6. To unlikely to pay	45,635	30,431	-	15,348
C7. To doubtful loans	39,760	3,738	43,557	-
C8. Other decreases	2,452,961	2,933	50,196	56,690
<b>D. Final gross exposure</b>	10,334,860	21,771	159,120	366,606
<b>E. Specific provisions as at 1 January</b>	87,294	9,618	39,912	242,466
<b>F. Current year movements (+)</b>	65,288	30,225	49,368	118,451
F1. From performing loans	-	8,531	2,867	4,625
F2. Write down of loans	56,503	19,794	22,132	80,217
F3. From past due loans	5,439	-	18,545	1,625
F4. From unlikely to pay	498	744	-	25,049
F5. From doubtful loans	1,560	187	5,645	-
F6. Other increases	1,288	969	179	6,935
<b>G. Current years movements (-)</b>	63,880	29,376	37,877	119,595
G1. To performing loans	-	5,439	498	1,560
G2. Write ups	47,817	3,441	8,722	52,483
G3. Write offs	-	271	128	39,692
G4. Recoveries	-	-	-	3,838
G5. Sales	-	-	1,436	3,801
G6. To past due loans	8,531	-	744	187
G7. To unlikely to pay	2,867	18,545	-	5,645
G8. To doubtful loans	4,625	1,625	25,049	-
G9. Other decreases	40	55	1,300	12,389
<b>H. Total specific provisions</b>	88,702	10,467	51,403	241,322
<b>I. Net exposure at the end of the period</b>	10,246,158	11,304	107,717	125,284

<sup>25</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013



**Movement of impairment losses of VUB Bank for the period ended 30 September 2016**

	EUR thousand						
	1 Jan 2016	Creation	Reversal	Assets written- off/sold	FX diff	Other	30 Sept 2016
Due from banks	25	2	(25)	-	19	-	21
Available for sale financial assets	574	1,555	(249)	-	-	-	1,880
Loans and advances to customers	274,954	123,968	(88,286)	(24,776)	(176)	(6,088)	279,596
Subsidiaries, associates and JVs	37,914	-	-	-	-	-	37,914
Property and equipment	10,500	-	-	-	-	-	10,500
Other assets	1,148	1,095	(1,181)	-	1	-	1,063
	<u>325,115</u>	<u>126,620</u>	<u>(89,741)</u>	<u>(24,776)</u>	<u>(156)</u>	<u>(6,088)</u>	<u>330,974</u>

**Exposures by residual contractual maturity for VUB Bank as at 30 September 2016** <sup>26</sup>

							EUR thousand	
	Up to 1 month	1 to 3 months	3 months to 1 year	1 to 5 years	Over 5 years	Not specified	Total	
<b>Financial assets</b>								
Cash and balances with central banks	816,771	-	-	-	-	-	816,771	
Due from banks	77,203	1,794	1,473	18,953	163	-	99,586	
Financial assets at fair value through profit or loss	-	6	150,193	-	-	431	150,630	
Available-for-sale financial assets	-	25,044	69,456	813,877	467,123	-	1,375,500	
Loans and advances to customers	190,843	430,513	1,119,833	3,663,041	4,302,703	171,816	9,878,749	
Held-to-maturity investments	-	-	150,425	272,131	101,714	-	524,270	
Subsidiaries, associates and joint ventures	-	-	-	-	-	95,566	95,566	
	<u>1,084,817</u>	<u>457,357</u>	<u>1,491,380</u>	<u>4,768,002</u>	<u>4,871,703</u>	<u>267,813</u>	<u>12,941,072</u>	
<b>Financial liabilities</b>								
Due to central and other banks	(181,937)	(22,402)	(5,765)	(198,926)	(62,723)	-	(471,753)	
Due to customers	(7,472,180)	(447,847)	(1,330,818)	(323,438)	5,830	-	(9,568,453)	
Debt securities in issue	(309)	(4,287)	(162,301)	(795,078)	(758,137)	-	(1,720,112)	
	<u>(7,654,426)</u>	<u>(474,536)</u>	<u>(1,498,884)</u>	<u>(1,317,442)</u>	<u>(815,030)</u>	<u>-</u>	<u>(11,760,318)</u>	
<b>Net position of financial instruments</b>	<b><u>(6,569,609)</u></b>	<b><u>(17,179)</u></b>	<b><u>(7,504)</u></b>	<b><u>3,450,560</u></b>	<b><u>4,056,673</u></b>	<b><u>267,813</u></b>	<b><u>1,180,754</u></b>	
Cash inflows from derivatives	1,629,748	634,733	618,996	1,905,701	1,036,667	-	5,825,845	
Cash outflows from derivatives	(1,631,934)	(625,156)	(618,361)	(1,905,775)	(1,036,237)	-	(5,817,463)	
<b>Net position from derivatives</b>	<b><u>(2,186)</u></b>	<b><u>9,577</u></b>	<b><u>635</u></b>	<b><u>(74)</u></b>	<b><u>430</u></b>	<b><u>-</u></b>	<b><u>8,382</u></b>	
<b>Total net position</b>	<b><u>(6,571,795)</u></b>	<b><u>(7,602)</u></b>	<b><u>(6,869)</u></b>	<b><u>3,450,486</u></b>	<b><u>4,057,103</u></b>	<b><u>267,813</u></b>	<b><u>1,189,136</u></b>	

<sup>26</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

### 6.3 Qualitative disclosure – portfolios subject to STD approach<sup>27</sup>

For the determination of risk weighting under standardised approach, VUB Bank adopts ISP methodology, which uses the ratings of the following external agencies:

- Fitch Ratings Ltd;
- Moody's Investors Service Limited;
- Standard & Poor's a division of The McGraw-Hill Companies, Inc.;

Bank applies ratings for the following segments:

- Institutions
- Governments and central banks
- Corporates

When determining the capital requirements, if there are two ratings for the same customer, the most prudential of the two is used, and when three ratings are available, the middle rating is adopted.

### 6.4 Qualitative disclosure – portfolios subject to IRB approach

#### The rollout plan for the internal models

VUB presented on 30 December 2009 the application for the use of FIRB on Corporate exposures, authorization received on December 2010 and February 2011. In December 2011 VUB submit the IRB application for retail mortgage portfolio. This application was approved in July 2012.

In 2012 VUB presented the application for the use of locally developed slotting models for Specialized Lending (for Real Estate and for Object Finance and Specialized Lending assets, which do not meet criteria to be processed nor by Real Estate neither by Project Finance), as an alternative for IRB compliant rating system. Authorization for utilization was received in July 2013 (Object Finance and Specialized Lending assets, which do not meet criteria to be processed nor by Real Estate neither by Project Finance model) and in August 2013 (Real Estate).

The Bank also presented application for the use of IRB models for retail - small business and AIRB for corporates (LGD model) in second semester 2013. This application was approved with effect from 30 June 2014. The bank will apply for AIRB for retail other, for EaD model for corporates and retail –small business and IRB models for banks and exposures of the Bank's subsidiaries based on the Basel plan.

#### Description of the structure, use, management processes and control mechanisms of the internal rating systems of the Corporate segment and Retail residential mortgage segment

##### Structure of the internal rating systems (PD)

The main features of the rating systems used are as follows:

- the rating is determined at counterparty level for Corporate segment and at contract level for Retail residential mortgage segment;
- the definition of default is established as an internal procedure of the Bank which takes into account all regulatory requirements. Classification of the loans is treated separately within Harmonisation project driven by ISP;
- the length of the time series used for the development and calibration of the models has been determined on the basis of a trade-off between the need to cover a broad time horizon and the need to be forward looking at available data;
- the segmentation of the rating models has been determined in accordance with both legislation and process and regulatory criteria;
- within the segmentation identified, uniform models have been used as far as possible,
- the models for Corporate segment incorporate financial, behavioural and qualitative components; models for Retail residential mortgage segment incorporates socio-demographic and behavioural components. Possibility of human inputs (override) is also allowed. The choice of giving the role to the human component enables the rating models to take account of all the information available, including the latest updates or data that would be difficult to incorporate into an automated model.

Bank has defined rules for revision and recalibration of models taking into account e.g., recommendations of internal validation, audit, parent company Intesa Sanpaolo, NBS; accurateness and logic of data used for model development.

<sup>27</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

### **Use of the rating systems (PD and LGD)**

The ratings are decisive in the process of granting credit and its monitoring and management, and also in pricing, the financial statement processes (for Corporate segment), the calculation of economic capital, value governance, and reporting, as described below.

#### **Credit granting**

The granting of credit involves the use of the rating as an essential reference for the various phases of the process of approving a line of credit.

In particular, the rating determines:

- the assignment of the Credit Strategies and Rules for the granting and managing of loans, which govern the procedures the Bank intends to adopt in assuming risk towards its customers, with the aim of promoting the balanced growth of loans to counterparties of the highest standing, and regulating the issue of credit to customers with lower credit quality, also directing them towards lines of credit with higher levels of guarantees;
- the exercise of the powers assigned, where the PD is among the main drivers. The method adopted allows the approval limits to be tailored to the customer's level of risk, permitting their extension for low risk customers and progressively transferring the decision concerning the higher risk customers to the senior decision-making bodies.

#### **Credit monitoring and management**

Customer credit risk is continuously monitored. In particular, individual assessment and / or transfer to Workout Department take place to positions which show more or less severe signs of difficulty with the possible impairment of the quality of the risk assumed. The positions are intercepted monthly on the basis of several indicators. The activities involve the re-examination of the positions intercepted via the updating of the rating, the adjustment, if necessary, of the credit policies, and the establishment of operational procedures aimed at minimising the risk. The PD is calculated centrally on a monthly basis, and is capable of capturing the changes in the counterparty's credit rating because it is able to make use of updated information, both financial and behavioural.

#### **Pricing**

The Group calculates the correct pricing of credit risk. This tool can quantify the minimum spread with respect to the internal rate of transfer of funds that the business must implement in order to ensure the coverage of the expected loss, the cost of capital and all the items that enable the generation of value.

#### **Financial Statement Processes – in case of Corporate segment**

The ratings (PD) contribute to the preparation of the Financial Statements through: the collective valuation of performing loans and transforming the expected loss into incurred loss in accordance with the IAS/IFRS.

#### **Calculation of economic capital and value governance**

In accordance with the provisions of the Pillar 2, the methods used to estimate the Economic Capital are based on internal rating models (for both the PD and the LGD component). Through the regulatory and economic capital, the internal ratings contribute to the determination of the Group's value creation during both the assignment of targets to the Business Units and the operational performance measurement.

#### **Reporting**

The rating form the basis of the management reporting and are spread across the risks of the loan portfolio. For the management reporting, the Risk Management Department produces the Credit Risk Report on monthly basis that provides an overall view of the Group's risk position at the end of the respective month.

### **Control and auditing of the rating systems**

Validation is required by Basel II as a component of the overall management of internal risk measurement systems, and a precondition for introduction of advanced risk measurement systems. More specifically, validation is performed both within the adoption of internal systems, for the purpose of regulatory authorization, and during the process of ongoing/continuous monitoring of authorized systems.

In charge of validation on internally developed risk measurement and management systems is sub-department Capital Management and Validation. From organizational point of view the sub-department is independent from the function performing internal audit on the systems.

The responsibilities of sub-department Internal Validation include:

- carrying out all procedures and activities within the validation process in order to assess the adequacy and quality of the internal risk measurement systems, i.e. systems compliance with regulatory requirements, specific operational needs of the bank and evolution in the context of business;
- performing internal validation process on internal systems, in line with the rules established by the Parent Company in terms of validation definition, scope, standards to be adopted by VUB Group;

- preparing validation reports with opinion on the level of adequacy of the risk management and measurement systems in terms of performance, functionality, effective use, and providing recommendations / proposals for system changes resulting from the validation activities;
- evaluating implemented validation recommendations and removal of system deficiencies identified throughout the validation process;
- preparing annual validation reports identifying areas for improvement of the approved internal risk measurements system;
- providing disclosure of validation findings to the Parent Company Internal Validation Unit, the VUB development functions, governing bodies and internal Audit and Control Department ("IACD").

### Description of the regulatory Corporate segment internal rating (PD) and LGD systems

The regulatory Corporate segment consists of companies or groups of companies with exposure of the Banking group of over 1 million euro or with consolidated revenue of over 1 million euro.

Risk measurement uses rating models which are differentiated according to the obligor's segment (Large Corporate, Small and Medium Enterprises, Small Business, Retail). These models make it possible to summarise the credit quality of the counterparty in a measurement, the rating which reflects the probability of default over a period of one year.

Approved internal rating model present the following characteristics:

- **Corporate Credit Model:** the model, estimated through a shadow rating approach (i.e. using the agency rating as a target estimation variable instead of the performing/default status) as the number of defaults on this segment is not sufficient to develop a default model. Model is composed by a quantitative module, which incorporates balance sheet data, and a qualitative module (a questionnaire), which covers two analysis areas (sector and market area and specific debtor characteristic area). Output of quantitative module and of each of the two parts of the qualitative module is a score; the three scores are simultaneously integrated through a logistic regression. The calibration takes place at the integrated score level, so that the latter is transformed in the probability of default through an exponential function. The PD is thus obtained and mapped on an internal master scale of 21 rating grades (20 grades pertaining to performing clients and 1 grade to clients in default);
- **SME Credit Model:** the model has been developed using VUB internal data through logistic regression. The model is composed by the following modules:
  - Application rating composed by Soft Fact score, covering the basic characteristics of the economic subject, and Financial score, covering the financial profile of the economic subject, further divided into single and double entry bookkeeping,
  - Behavioural rating, covering the account and loan behaviour of the client. This rating is computed regularly on the monthly basis,
  - Computed rating (Pre-computed rating), which is the result of the integration between application and behavioural scores with application of predefined automatic rules,
  - Final rating, which is the final result after application of override and/or expert rules. Any time when there is available some new information affecting the Computed rating (e.g. either in the Financial rating, Soft Fact rating default information), it is recomputed (taking into account also the most recent results of Behavioural rating).

The attribution of rating is centralized and fully automated. Model uses rating scale consisting of 16 rating grades (15 grades pertaining to performing clients and 1 grade to clients in default).

Approved internal LGD model present the following characteristics:

LGD model has been also developed using VUB internal data on the basis of a workout approach, in other words by analysing the losses suffered by the Bank on historical defaults. The LGD is therefore determined on the basis of the actual recoveries achieved during the default period, taking into account the direct and indirect costs. The calculation of loss rates has been made on contract level. The model is divided into two parts - one for performing (non defaulted) part of the portfolio and the second one for the non-performing part (clients in default). The so called "cure rate" methodology was used by the model development.

### Description of the SB segment internal rating (PD) and LGD systems

- **SB Credit Model:** the model has been developed using VUB internal data through logistic regression. The model is composed by the following modules:

- Application rating composed by Soft Fact score, covering the basic characteristics of the economic subject, and Financial score, covering the financial profile of the economic subject, further divided into single and double entry bookkeeping,
- Behavioural rating, covering the account and loan behaviour of the client. This rating is computed regularly on the monthly basis,
- Behavioural transactional rating, which is used instead of behavioural rating in case when client does not have behavioural rating yet, but client has a current account for a quite enough period. This rating is computed regularly on the monthly basis,
- Computed rating (Pre-computed rating), which is the result of the integration between application and behavioural (behavioural transactional) scores,
- Final rating, which is the final result after application of override and/or expert rules. Any time when there is available some new information affecting the Computed rating (e.g. either in the Financial rating, Soft Fact rating default information), it is recomputed (taking into account also the most recent results of Behavioural and Behavioural transactional rating).

The attribution of rating is centralized and fully automated. Model uses rating scale consisting of 14 rating grades (13 grades pertaining to performing clients and 1 grade to clients in default).

- **LGD model for SB segment** has been developed using VUB internal data on the basis of a workout approach, in other words by analysing the losses suffered by the Bank on historical defaults. The LGD is therefore determined on the basis of the actual recoveries achieved during the default period, taking into account the direct and indirect costs. The calculation of loss rates has been made on contract level. The model is divided into two parts - one for performing (non-defaulted) part of the portfolio and the second one for the non-performing part (clients in default). The so called “cure rate” methodology was used by the model development. The model estimates LGD separately for overdrafts and business loans.

#### **Description of the regulatory Corporate segment slotting models (supervisory slotting)**

The bank has analysed the possibility to develop local PD models for Specialized Lending portfolio. As development of the IRB compliant rating system was not viable (due to e.g. very low number of defaults, number of observations), the bank developed the regulatory slotting, that serves as an alternative for IRB compliant rating system.

- **The Specialised Lending models:** the Specialised Lending segment is covered by the two locally developed slotting models - RED (Real Estate Development) model for the real estate development initiatives and SPV model (Project and Object Finance and Specialized Lending assets, which do not meet criteria to be processed by RED model );
  - o RED model: Real Estate model, which follows an expert based approach. Development of the slotting function is in line with the regulatory requirements for IPRE (Income Producing Real Estate) category of Specialized Lending. It includes all areas to be covered by slotting – i.e. financial strength, transaction and/or asset characteristics, strength of the sponsor and developer, security package). The model is composed by:
    - Slotting questionnaire, which results in the assignment of preliminary slotting category Strong/Good/Satisfactory/Weak, based on questions aimed at evaluating all required areas,
    - Set of automatic rules, overrides, which are applied to obtain the final slotting categories;
  - o SPV model: Model for Project and Object Finance and Specialized Lending assets, which do not meet criteria to be processed by RED model , follows an expert based approach. Development of the slotting function is in line with the regulatory requirements for IPRE, PF a OF (Income Producing Real Estate, Project Finance and Object Finance) categories of Specialized Lending. It includes all areas to be covered by slotting – i.e. financial strength, political and legal environment, transaction and/or asset characteristics, strength of the sponsor and developer, security package). The model is composed by:
    - Slotting questionnaire, which results in the assignment of preliminary slotting category Strong/Good/Satisfactory/Weak, based on questions aimed at evaluating all required areas,
    - Set of automatic rules, overrides, which are applied to obtain the final slotting categories.

### **Description of the internal rating (PD) and LGD models for regulatory segment of Retail residential mortgages**

The Retail residential mortgage segment consists of retail mortgage loans pledged by residential real estate. There are developed two models – rating model for estimation of probability of default over a period of one year and LGD model for estimation of loss in case of default. Both risk parameters are calculated at the contract level.

Approved internal **rating model** has been developed using VUB internal data through logistic regression. The model is composed by the following modules:

- Application module, covering the socio-demographic characteristics of the applicant, information about his employer etc.,
- Behavioural modules, covering the account and loan behaviour of the client. They are developed separately for different types of credit products. Output of these modules – behavioural scores are computed regularly on the monthly basis. Behavioural score of given mortgage is integrated with application score into the individual account score,
- Pre-computed rating, which is the result of the integration between individual score and scores of other credit products of client,
- Final rating, which is the final result after application of predefined automatic rules, default information and override. Any time when is available some new information affecting the Final rating, it is recomputed (taking into account also the most recent results of behavioural modules).

The attribution of rating is centralized and fully automated. Model uses internal rating scale consisting of 11 rating grades (10 grades pertaining to performing mortgages and 1 grade to mortgages in default).

**LGD model** has been also developed using VUB internal data on the basis of a workout approach, in other words by analysing the losses suffered by the Bank on historical defaults. The LGD is therefore determined on the basis of the actual recoveries achieved during the default period, taking into account the direct and indirect costs. The calculation of loss rates has been made on contract level.

## 6.5 Quantitative disclosure – portfolios subject to STD approach and equity exposures subject to IRB approach

Distribution of exposures by credit quality step by exposure class as at 30 September 2016 - VUB Bank<sup>28</sup>:

Regulatory portfolio	Exposure with credit risk mitigation	Exposure without credit risk mitigation										EUR thousand
		0%	10%	20%	35%	50%	75%	100%	150%	250%	Other	Total
		Exposures to or secured by governments and central banks	2,363,740	2,307,848	-	-	-	-	-	10,356	-	45,536
Exposures to or secured by local authorities	150,344	-	-	150,344	-	-	-	-	-	-	-	150,344
Exposures to or secured by not for profit and public sector organisations	9,146	-	-	-	-	-	-	9,146	-	-	-	9,146
Exposures to or secured by multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-
Exposures to or secured by international organisations	-	-	-	-	-	-	-	-	-	-	-	-
Exposures to or secured by supervised institutions	510,720	-	-	146,535	-	358,737	-	2,061	3,387	-	-	510,720
Exposures to or secured by corporates	640,465	-	-	-	-	967	-	639,109	-	-	-	640,076
Retail exposures	2,000,427	-	-	-	-	-	2,000,816	-	-	-	-	2,000,816
Exposures secured by real estate property	522	-	-	-	111	-	-	411	-	-	-	522
Past due exposures	33,797	-	-	-	-	-	-	33,138	659	-	-	33,797
High-risk exposures	-	-	-	-	-	-	-	-	-	-	-	-
Exposures in the form of guaranteed bank bonds (covered bonds)	-	-	-	-	-	-	-	-	-	-	-	-
Short-term exposures to corporates	-	-	-	-	-	-	-	-	-	-	-	-
Exposures to UCITS	-	-	-	-	-	-	-	-	-	-	-	-
Other exposures	226,808	82,232	-	28,209	-	-	-	116,367	-	-	-	226,808
Securizations	-	-	-	-	-	-	-	-	-	-	-	-

<sup>28</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013



Specialized lending and Equity exposures subject to IRB approaches as at 30 September 2016 – VUB Bank<sup>29</sup>

Regulatory portfolio	EUR thousand Exposure value
<b>Exposures to or secured by corporates: Specialized lending - slotting criteria</b>	
Regulatory assessment - strong	173,947
Regulatory assessment - good	395,145
Regulatory assessment - satisfactory	240,061
Regulatory assessment - weak	69,772
Default	24,758
<b>Equity exposures: Simple risk weight approach</b>	
Private equity exposures in sufficiently diversified portfolios - 190%	-
Exchange-traded equity exposures - 290%	3,372
Other equity exposures - 370%	5,276
<b>Equity positions in Financial Sector Entities riskweighted at 250% and other Equity exposures subject to risk weights</b>	133,477
Total	1,045,808

#### 6.6 Quantitative disclosure – portfolios subject to IRB approach

As at 30 September 2016, Advanced IRB approach for calculation capital for credit risk is used in VUB Bank (including Prague branch) for Corporate regulatory segment, residential mortgages and retail Small Business. Foundation IRB approach is used for Corporate exposures where LGD is not available. Other segments and subsidiaries will be included according to the roll out plan.

Exposure Values by regulatory portfolio (IRB approach) as at 30 September 2016 are shown in the table below.

Regulatory portfolio	EUR thousand Exposure value
Large corporates	3,083,070
SME (Small and Medium enterprises)	1,962,892
Mortgages	4,516,258
Retail small business	280,584
Total credit risk (IRB)	9,842,804

<sup>29</sup> Regulation (EU) no. 575/2013, article 438, exposures assigned to each slotting category in Table 1 of Article 153(5), or to each risk weight mentioned in Article 155(2)

Breakdown of exposures by exposure class and PD class (IRB approach) as at 30 September 2016

		EUR thousand				
Regulatory portfolio		Rating class	Central PD %	Exposure Value	Average Risk Weight %	Average LGD %
<b>Exposures to or secured by corporates</b>						
Large corporates						
	AIRB	I1E	0.05	-	-	-
		I1F	0.07	90,930	21	38
		I2	0.10	485,136	30	36
		I3	0.15	1	67	49
		I4	0.23	201,410	40	39
		I5	0.35	99,739	46	36
		I6	0.54	58,992	51	39
		M1	0.82	560,480	72	35
		M2	1.25	259,355	82	40
		M3	1.90	103,053	84	37
		M4	2.90	66,149	105	35
		R1	4.40	28,515	106	36
		R2	6.65	25,349	127	35
		R3	10.22	-	-	-
		R4	15.59	1,013	173	35
		R5	27.14	-	-	-
		D(default)	100.00	11,190	1	55
	FIRB	I1E	0.05	53,591	21	45
		I1F	0.07	60,485	25	45
		I2	0.10	159,620	31	45
		I3	0.15	69,798	40	45
		I4	0.23	50,556	50	45
		I5	0.35	34,087	62	45
		I6	0.54	85,853	76	45
		M1	0.82	200,812	91	45
		M2	1.25	47,262	106	45
		M3	1.90	108,263	120	45
		M4	2.90	89,258	132	45
		R1	4.40	68,394	152	45
		R2	6.65	-	-	-
		R3	10.22	50,959	206	45
		R4	15.59	-	-	-
		R5	27.14	-	-	-
		D(default)	100.00	12,820	-	45
				<u>3,083,070</u>		

Breakdown of exposures by exposure class and PD class (IRB approach) as at 30 September 2016 (continued)

		EUR thousand			
Regulatory portfolio	Rating class	Central PD %	Exposure Value	Average Risk Weight %	Average LGD %
SME (Small and Medium enterprises)					
AIRB	I1	0.07	14,482	20	38
	I2	0.10	33,448	21	40
	I3	0.15	61,128	19	43
	I4	0.23	65,925	26	39
	I5	0.35	139,614	33	38
	I6	0.54	156,512	46	38
	M1	0.82	179,732	54	38
	M2	1.25	311,496	58	36
	M3	1.90	177,040	74	37
	M4	2.90	102,981	76	38
	R1	4.40	90,246	85	37
	R2	6.65	82,565	101	37
	R3	10.22	54,877	121	37
	R4	15.59	34,223	140	37
	R5	27.14	55,386	158	37
	D(default)	100.00	46,311	72	76
FIRB	I1	0.07	1,686	20	45
	I2	0.10	3,444	23	45
	I3	0.15	7,639	33	45
	I4	0.23	6,733	38	45
	I5	0.35	91,219	51	45
	I6	0.54	23,971	62	45
	M1	0.82	46,682	78	45
	M2	1.25	64,035	93	45
	M3	1.90	25,007	97	45
	M4	2.90	45,536	110	45
	R1	4.40	8,260	124	45
	R2	6.65	20,233	141	45
	R3	10.22	4,960	184	45
	R4	15.59	4,254	187	45
	R5	27.14	2,733	197	45
	D(default)	100.00	534	-	45
			<u>1,962,892</u>		

Breakdown of exposures by exposure class and PD class (IRB approach) as at 30 September 2016 (continued)

Regulatory portfolio	Rating class	EUR thousand			
		Central PD %	Exposure Value	Average Risk Weight %	Average LGD %
<b>Exposures to or secured by retail</b>					
Mortgages	L1	0.03	1,290,865	2	23
	L2	0.06	1,147,695	4	24
	L3	0.14	231,540	8	24
	L4	0.27	590,145	13	24
	N1	0.52	410,188	21	25
	N2	0.87	313,670	31	25
	N3	1.39	155,535	42	26
	W1	2.56	123,553	61	25
	W2	6.26	69,669	98	25
	W3	24.58	133,223	151	25
	D(default)	100.00	50,175	13	39
			<u>4,516,258</u>		
Retail SME	I1	0.07	-	-	-
	I2	0.10	-	-	-
	I3	0.15	16,922	13	49
	I4	0.23	13,117	18	50
	I5	0.35	13,724	25	52
	I6	0.54	21,824	32	51
	M1	0.82	23,864	39	50
	M2	1.25	37,079	48	51
	M3	1.90	40,859	58	52
	M4	2.90	38,422	62	50
	R1	4.40	32,120	70	50
	R2	6.65	15,179	73	47
	R3	10.22	7,136	86	49
	R4	15.59	4,972	80	46
	R5	27.14	1,026	112	47
	N	27.14	78	272	135
	D(default)	100.00	14,262	87	92
			<u>280,584</u>		

## 7. Risk mitigation techniques<sup>30</sup>

### 7.1 Qualitative disclosures

#### **Policies and processes for on and off balance sheet netting**

Netting techniques are not used.

#### **Policies and processes for collateral evaluation and management**

The bank's collateral policy is an integral and indispensable part of the credit risk management and credit risk mitigation for VUB Group. Collateral is used primarily to provide the bank with the means for repayment of an exposure in the event of default by the borrower.

Collateral management policy includes the following:

- The establishment and maintenance of collateral policy comprising types of collateral taken by the Bank, the legal documentation used by the Bank to secure its right to this collateral in the event of a default and the valuation of this collateral at origination. These aspects of collateral management are addressed in this policy document;
- The relevant and proper perfection and registration of collateral to secure the bank's right to collateral in the event of default by the borrower;
- The regular monitoring and re-valuation of collateral held by the bank during the life of the exposure;
- The analysis, monitoring and review of realization rates achieved by Recovery Department activities in order to assess the effectiveness of the collateral policy as a risk mitigant, i.e. that the impact of the policy reduces the net credit loss suffered by the bank as a result of its lending activities across all segments and products;

The principal objective of collateral management policy is to clearly set up rules for a common and standard set of collateral types used by the bank in its lending activities. The rules, as the minimum, describe and state:

- Conditions for legal enforceability;
- Conditions for the process of valuation and the maximum values accepted by the bank at origination for the certain types of collaterals; and
- Conditions for the process of revaluation.

The bank's collateral management policy is implemented further through the issuance of product programs, which determine the type, form and coverage ratio of collateral appropriate to each product within a customer segment. The collateral requirements will reflect principally the rating of the obligor, the exposure amount and the maturity of the exposure.

Initial collateral evaluation is done as a part of the underwriting process, i.e. at the moment of granting of credit. This evaluation is based on the actual value, namely the market value, or, otherwise the realisable value. The resulting value is then multiplied by haircut percentage rates, which are different according to type of collateral. The evaluation is done by external or internal specialist (depending on the type of collateral) and in case of real estate then supervised by internal expert. The enforcement of collateral is in case of obligor's default performed by Recovery department.

The presence of collateral does not grant exception from a complete assessment of the credit risk, which is mainly concentrated on borrower's ability to fulfil conditions for credit granting (i.e. to repay the loan), irrespective of the proposed type of collateral.

However, under certain conditions (type of obligor, assigned rating, and type of credit facility) the collateral has an impact, as the mitigating factor, on the determination of the conditions of the deal.

#### **Description of the collateral types accepted by the Bank**

Generally bank accepts the following types of collateral:

- cash collateral (receivables from deposit accounts)
- pledge on securities (bonds, treasury bills, depository receipts, depository certificates, etc.)
- pledge on shares listed on regulated markets
- pledge on the managed portfolios (private banking)
- pledge on investment fund quotas
- pledge on bonds and warrants
- guarantees (states, banks, other financial institutions)
- guarantees (non-financial institutions)
- pledge on real estate property
- pledge on movable assets

<sup>30</sup> NBS decree 16/2014 §2 section 2) and Regulation (EU) no. 575/2013

- pledge on receivables
- pledge on inventories
- life insurance policies vinculation
- others (letter of comfort, execution title)

Bank defines precisely in internal rule which type of risk mitigation tools are not acceptable for the bank, and which haircut is applied for the accepted types in order to reach the value accepted by the bank.

For mortgage collateral separate process and methods are set in order to ensure the proper evaluation, monitoring and re-evaluation of the value of properties accepted as collateral. At the moment of mortgage granting the property is evaluated by external expert and then the appraisal is supervised by internal expert (supervisor). External expert must be included on the official list of professionals for real estate evaluation. Bank monitors quality of work of the experts on individual basis.

The value of property under construction is monitored on the ongoing basis by internal specialist who performs inspections, verify the progress of construction and prepare technical reports for loan disbursement for transactions on a work progress basis.

The value of pledged properties is regularly monitored on the portfolio basis. The property value is updated in the event of limitation or splitting of the mortgage, of damage of the property and in any case regularly at least once in three years by Act (Bank currently uses annual basis update). Regular re-evaluation is done on the portfolio basis using statistical techniques based on the bank data and enhanced by the available data from Slovak market.

To cover the residual risks, the obligor is required to provide an insurance policy against damage, issued by insurance companies that have an agreement with or are approved by the bank.

#### **The main types of guarantor and credit derivative counterparty and their creditworthiness**

The bank did not enter into any credit derivative transaction.

#### **Information about market or credit risk concentration under the credit risk mitigation tools used**

Bank does not have any concentration under used credit risk mitigation tools. Given the fact that retail mortgages are the biggest portfolio of the bank, the majority of collateral represent the pledge on real estates. There are no particular concentrations on the individual obligor or geographical area level, bank sets the specific limit on concentration which is monitored on monthly basis.

Collateral policy is in detail dealing with the Basel III eligibility and conditions upon which the collateral can be used within standardized or IRB approach.

### **7.2 Quantitative disclosure – VUB Bank <sup>31</sup>**

Regulatory portfolio	Collateral	EUR thousand Guarantees or credit derivatives
Exposures to or secured by governments and central banks	-	-
Exposures to or secured by local authorities	-	-
Exposures to or secured by not for profit and public sector organisations	-	-
Exposures to or secured by multilateral development banks	-	-
Exposures to or secured by international organisations	-	-
Exposures to or secured by supervised institutions	-	-
Exposures to or secured by corporates	34	-
Retail exposures	499	-
Exposures secured by real estate property	-	-
Past due exposures	-	-
High-risk exposures	-	-
Exposures in the form of guaranteed bank bonds (covered bonds)	-	-
Short-term exposures to corporates	-	-
Exposures to UCITS	-	-
Other exposures	-	-
Securitizations	-	-

<sup>31</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

## 8. Counterparty risk

Counterparty risk is a specific type of credit risk and represents the risk of a counterparty in a transaction defaulting before the final settlement of the cash flows involved in the transaction.

Counterparty risk is calculated for the following categories of transactions:

- over-the-counter (OTC) financial and credit derivatives;
- Securities Financial Transactions -SFTs (e.g. repurchase agreements);
- transactions with medium to long-term settlement.

The framework provides for the uniform treatment of counterparty risk regardless of the portfolio in which the exposures have been classified (the banking and regulatory trading books are both subject to capital requirements for counterparty risk). For the purposes of reducing the amount of the exposures, recognition of various types of contractual netting arrangements (“Master netting agreements”) is permitted, subject to compliance with statutory requirements.

For regulatory reporting purposes the Group currently uses the “mark-to-market” approach for the calculation of the exposures subject to counterparty risk for OTC financial and credit derivatives, whereas for repurchase agreements it considers the guarantee in securities as financial collateral, directly reducing the value of the exposure (“comprehensive” method).

The counterparty risk that affects the types of transactions referred to above generates an exposure corresponding to their positive fair value plus the future credit exposure (add-ons, namely the percentage value applied to the notional amount of the derivative). These add-ons differ depending on the residual maturity of the transaction and the type of underlying risk (interest rate, equity, exchange, etc.).

**Over the counter financial derivatives: positive fair value – counterparty risk as at 30 September 2016**

	EUR thousand							
	IR derivatives gross amount	IR derivatives Fair value	Equity derivatives gross amount	Equity derivatives Fair value	FX derivatives gross amount	FX derivatives Fair value	Other derivatives gross amount	Other derivatives Fair value
A. Trading book for supervisory purposes	-	-	-	-	-	-	-	-
A1. Governments and central banks	-	-	-	-	-	-	-	-
A2. Other public entities	-	-	-	-	-	-	-	-
A3. Banks	174	1	7	2	635	15	-	-
A4. Financial institutions	52	-	-	-	224	6	-	-
A5. Insurance companies	-	-	-	-	-	-	-	-
A6. Non-financial companies	222	12	-	-	52	1	-	-
A7. Other counterparties	-	-	-	-	6	0	-	-
B. Banking book	-	-	-	-	-	-	-	-
B1. Governments and central banks	-	-	-	-	-	-	-	-
B2. Other public entities	-	-	-	-	-	-	-	-
B3. Banks	2,497	73	-	0	1,690	20	-	-
B4. Financial institutions	100	1	-	-	75	1	-	-
B5. Insurance companies	-	-	-	-	-	-	-	-
B6. Non-financial companies	-	-	-	-	-	-	-	-
B7. Other counterparties	-	-	-	-	-	-	-	-



## 9. Market risks: disclosures for banks using the internal models approach (IMA) for IR risk and foreign exchange risk.<sup>32</sup>

### 9.1 Qualitative disclosure

#### Value at Risk (VaR)

The analysis of market risk profiles relative to the trading book uses various quantitative indicators and VaR is the most important.

Value-at-Risk is a statistical measure of the worst-case (unexpected) loss over a given time horizon under normal market conditions at a given confidence level.

The Bank uses historical simulation method to estimate VaR. This method is robust, it precisely covers a wide range of products (linear and non-linear products), it uses full valuation and is easy to understand and interpret. This method is also used by Intesa Sanpaolo, Milan as a part of their internal model for measurement of capital adequacy requirement for market risk, which has been approved by National bank of Italy (Banca d'Italia). In VUB this method is being used regularly from 1 May 2005 after it had been approved by ALCO committee on Enterprise Risk Management Department proposal.

The Bank uses this Value at risk model as internal model for capital allocation for interest rate risk in trading book and foreign exchange risk in both trading and banking book, based on decision of NBS since January 2007.

VaR as of last business day is compared with average VaR during from last 60 business days multiply by factor value for back test of model. Capital charge is calculated as maximum from the previous values multiply by root square 10 as a time factor value.

VaR figures, back tests and capital charge are in daily report prepared by Market Risk subdepartment.

#### Stressed value at risk (SVaR)

SVaR is addition to VaR measure whose main task is to bring into the capital charge calculation for the trading book the period of high volatility. SVaR uses similar calculation methodology to VaR; nevertheless, selected stressed period is used instead of period of last 250 trading days.

As per Decree 1/2012 issued on 3 January 2012 which complements Decree 4/2007 of the National Bank of Slovakia of 13 March 2007 on banks' own funds of financing and banks' capital requirements and on securities dealers' own funds of financing and securities dealers' capital requirements, the bank officially started calculating SVaR values from 1 May 2012 which is in line with EU legislation and its regulation CRR.

VaR and SVaR models are used for calculation of capital allocation requirement. Capital charge is calculated as a sum of:

1. According to Regulation (EU) no. 575/2013 of the European Parliament and of the Council of 26 June 2013 (CRR) the higher of:
  - a. VaR calculated for the last day based on article 365(1) (VaR t-1),
  - b. average VaR computed for last 60 working days multiplied with multiplication factor received from backtesting (VaR avg); maximum of these values is multiplied by square root of ten according by Regulation (EU) no. 575/2013; and
2. The higher of:
  - a. stressed VaR (SVaR) calculated for the last day (sVaR t-1),
  - b. average SVaR computed for last 60 working days multiplied with multiplication factor received from VaR backtesting (sVaR avg); maximum of these values is multiplied by square root of ten.

VaR and SVaR values, backtesting results and capital allocation requirement are part of daily reporting.

#### Positions

In the model are included all positions which fulfil condition trade date  $\leq$  actual date  $<$  maturity date and are not flagged as liquidated. These conditions include all exposure with unrealized part of cash flow.

<sup>32</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

### Risk factors

FX rates and interest rates are used as risk factors for VaR computation. Interest rates of currencies different from EUR with maturity less than 1M are replaced with 1M rate to take into account “pull to maturity” effect. Interest rates of EUR currency are taken from the whole interest rate curve.

### Methodology

The historical simulation is one of the standardized approaches to calculate Value at Risk. This method assumes the maximal future change of market parameters – risk factors over a specified time horizon can be predicted from a series of historical changes. Scenarios of historical changes of risk factors are used to calculate market value of current portfolio, using full valuation. That means that market value of all instruments is calculated exactly not approximated. By comparing the actual value of portfolio with the set of market values under each scenario a set of hypothetical returns is calculated. The set of returns is then sorted and a specified percentile is selected as an estimate of VaR.

Risk factor is an independent variable, which value can be observed on the market and affects market value of a financial instrument. Standard risk factors are interest rates (each node on the yield curve), foreign exchange rates, and volatilities.

Full valuation requires a complete set of market parameters. This means that all relevant risk factors have to be identified and incorporated into scenarios of historical data set. Scenario consists of changes of all risk factors between two observations.

Hypothetical market value for scenario  $k$  is obtained from applying changes of all risk factors from the scenario to the current level of market parameters and using these modified market parameters to calculate market value of financial instruments in portfolio.

### VaR Methodology

In line with Intesa Sanpaolo methodology (using RiskWatch as the core system for historical simulation VaR and SVaR computing) we calculate daily changes of market parameters as follows:

$$\Delta S_{i,k} = \frac{S_{i,k}}{S_{i,k+1}} \quad k = 1, \dots, N$$

and

$$S'_{i,k} = S_{i,0} * \Delta S_{i,k} \quad k = 1, \dots, N$$

where

$S_{i,k}$  – value of a risk factor  $i$  on observation day  $k$  ( $k=1$  is a previous trading day)

$S_{i,0}$  – actual value of a risk factor  $i$

$S'_{i,k}$  – simulated value of a risk factor  $i$  after application of scenario  $k$  to the actual value

$\Delta S_{i,k}$  – change of risk factor  $i$  between observation day  $k$  and  $k+1$

$N$  – number of scenarios in historical data set (VUB uses 250)

To obtain a simulated value of a risk factor  $i$ , its actual value  $S_{i,0}$  is multiplied by a corresponding change  $\Delta S_{i,k}$ . This shift type is called as variable factor in RiskWatch system. Its advantage is that it can be used on risk factors which value change significantly over longer period of time without losing relevancy (i.e. EUR interest rates changed from levels around 5% p.a. to 2.5% p.a. Percentual change of 10% from 5% to 4.5% can be easily applied to market rates if even if the current value is 2.5%. But if we used absolute shifts, then the same shift of 0.5 percentage point may be not realistic if the rates were 2.5%). A disadvantage is that VaR may rise when actual values of risk factors rise. (Absolute difference between  $S'_{i,k}$  and  $S_{i,0}$  grows as  $S_{i,0}$  rises.)

In the next step, the valuation engine - RiskWatch calculates market values of current position applying historical scenarios  $S_{i,k}$ . The output of the process is a set of  $N$  market values, which can be interpreted as the hypothetical market values of the current position in the case of repetition of the historical changes of scenario  $k$ . Hypothetical returns (returns  $R_k$ ) are calculated as a difference between market value under scenario  $k$  and current market value.

It has been observed that volatility on financial market rises and decreases in clusters and that there are periods of high volatility and low volatility. Therefore the model should quickly react to the actual situation on the market and correctly assess the current state. This is achieved through assigning weights – probabilities to the individual returns. Every hypothetical return has a different level of probability. The generally accepted assumption is that the probability

of a scenario decreases as its time of observation is receding from the actual date. It means that probability of recurrence of the scenario  $k=1$  is higher than probability of recurrence of the scenario  $k=250$ . The weights applied to the hypothetical returns are calculated as follows:

$$W_k = \frac{\lambda^{(k-1)} * (\lambda - 1)}{\lambda^N - 1} \quad k = 1, \dots, N$$

where

$\lambda = 0.992$  (decay factor).

$k$  – scenario number (previous trading day = 1)

It means that scenario from the last day has highest weight (0.00924), scenario of previous day has weight 0.00924 multiplied by decay factor 0.992 (i.e. 0.00917), scenario of previous day has weight 0.00917 multiplied by decay factor (i.e. 0.00909), etc., scenario with date 250 working days before actual date has lowest weight (0.00125).

The final step is to calculate the left tail (the potential loss) at the given confidence level over the weighted distribution of hypothetical returns.

The implementation of the historical simulation approach consists of four phases:

- Identification of risk factors
- Generation of historical scenarios
- Performing the simulation (Full valuation)
- Estimation of Value at Risk

Market value as an intermediate base for calculation of VaR or other risk figures of all instruments is calculated independently by RiskWatch, using Net Present Value - all future cash flows are discounted to actual date using appropriate yield curve and are converted to EUR with appropriate FX rate (see chapter Market Data) or other instrument specific methods (i.e. for options). Methods and models used in RiskWatch are described in RiskWatch financial models documentation.

#### Process of calculation

For the historical simulation RM uses a time series of 250 historical scenarios. The holding period is one day and confidence level is set at 99% (left tail).

The historical time-series of prices are collected by Risk management department of Intesa Sanpaolo, Milan with cooperation of RM department of VUB. The data together with historical scenarios and actual positions are transferred to RiskWatch system in VUB where the valuation engine - RiskWatch computes hypothetical returns applying historical scenarios and selects the required percentile (99% - left tail).

#### Requirements

- The sufficient length of time series of market variables (at least 250 daily values),
- Full valuation engine.

#### Global VaR computation

VaR is computed by RiskWatch system for FX portfolio and IR portfolio separately. Computation of Value-at-Risk for all risk factors and all portfolios (Global VaR) is then done in MS Excel application. It uses reports from RiskWatch as inputs. These reports include historical scenarios with weights and profits/losses. For each of these scenarios with same date, it is possible to sum profit/loss of FX portfolio and IR portfolio to gain profit/loss of whole portfolio. These sums together with weight are new global historical scenarios. Global historical scenarios are sorted in ascending way by returns and scenario with cumulated probability exceeding 1% is chosen as VaR scenario. (The same process as described above.)

Chosen scenario is used as Global VaR for whole portfolio and all risk factors.

Short description of steps:

1. to sum up PL for FX consolidated portfolio with PL for IR trading portfolio
2. to assign weights to each PL
3. to sort scenarios by size of PL
4. to select PL which is first over 99% confidence level.

## **SVaR Methodology**

The Stressed VaR methodology is based on the current VaR methodology, with specific techniques required, where applicable, in order to adjust the current VaR model into one that delivers a Stressed VaR measure. Any risk factor occurring in the VaR model is therefore reflected in the Stressed VaR model as well.

While the Stressed VaR model shares some of the regular VaR standards, others diverge due to explicit Directive requirements set by Regulation (EU) no. 575/2013 of 26 June 2013 (CRR) or to methodological incompatibilities related to the Stressed VaR concept. In particular, Stressed VaR model as applied within VUB differs from regular VaR in following areas:

- The multiplication factor used for capital requirements should be at least 3 and be increased by an added between 0 and 1 depending on the VaR backtesting results. Backtesting is not a requirement in itself for determining the Stressed VaR measure,
- No weighting of historical data is applied for historical scenario set,
- Historical scenario set is defined by the user (VUB), and it is not directly selected as 250 most recent historical scenarios. Process for selection period for SVaR validate NBS, so VUB ask NBS to approve the selection period process using in VUB.

## **SVaR Period Selection**

In order to choose a historical period for calibration purposes, Regulation (EU) no. 575/2013 of 26 June 2013 (CRR) prescribes to formulate a methodology for identifying a stressed period relevant to their current portfolios. There are two possible ways to select the period:

- Judgement-based approach
- Formulaic approach

A judgement-based approach is one that does not use a detailed quantitative analysis to identify the precise period to use for calibration, but rather relies on a high-level analysis of the risks inherent in an institution's current portfolio and past periods of stress related to those risk factors.

A formulaic approach instead is one that applies, in addition to expert judgement, a more systematic quantitative analysis to identify the historical period representing a significant stress for an institution's current portfolio.

Institution may also choose to combine the two approaches, which is the way applied by VUB. The judgement-based approach was used to restrict the historical data periods, while VaR methodology, which is one of the formulaic approaches defined by the directive, was used to identify which of the periods produces the highest resulting measure for the current portfolio.

Three identified periods were compared for their volatility, taking into consideration actual portfolio. Specifically, for each date within the scenario set, VaR measure was calculated using same underlying parameters as for regular VaR (99% confidence level, 250 historical scenarios, 1-day holding period). Data set with the highest volatility was then selected as a base period for SVaR calculation.

Stressed VaR period review is required at least twice a year and in following circumstances:

- $SVaR < VaR$  for more than 10 consecutive days
- $SVaR < VaR$  for more than 20 days during a quarter (not necessarily consecutive).

Stressed VaR period selection process is subject to NBS approval. VUB Bank has formally filed a request for the process approval. This request was approved by the NBS at the beginning of 2013.

## **Advantages**

This section describes advantages of the chosen method for VaR calculation against the parametric and Monte Carlo method.

- The assumption of normal distribution of market variables and determination of correlations between risk factors are not required,
- The method is applicable also for portfolios with a large number of assets and allows nonlinearities of positions to be precisely measured,
- The method deals directly with the choice of horizon for measuring VaR. Returns are simply measured over intervals that correspond to the length of the horizon (in our case the horizon is set as  $O/N$ ),

- Historical simulation method does not rely on specific assumptions about valuation model or underlying stochastic structure of the market,
- The used method is in line with Intesa Sanpaolo methodology and their approved internal model for measuring market risk,
- Easy for interpretation,
- The method is robust and intuitive and the most widely used method to compute VaR,
- Computational requirements are lower than in Monte Carlo method.

#### **Disadvantages**

This section describes disadvantages of the chosen method for calculation of VaR against the parametric and Monte Carlo method. At the same time it lists possible situations when the model may not work effectively.

- The sufficient quality and quantity of historical data is required,
- The efficient full valuation engine is necessary,
- The method does not recognize risk, which arises from situations that are not directly described by any of the used scenarios,
- The speed of computation is slower than in the case of delta (parametric) VaR. The on-line calculation is not available,
- The source of positions is crucial for the calculation engine in the case of VUB Bank. The process is sensitive for the collapse of the uploading process (the responsibility is divided between Market Risk Department of VUB Bank and Risk Management Department of Intesa Sanpaolo).

#### **Back test**

Risk measurement is based on several presumptions and specified model. These presumptions and model must be steadily compared to reality in order to assure quality of risk figures. Verification of model by comparing its predictions to observed data is called backtesting.

In the case of backtesting of Value at Risk model, calculated figure, as the worst loss over a specified time horizon at given confidence level of a portfolio is compared with theoretical and actual profit or loss (P/L) of this portfolio realized over the same period of time.

#### **Stress testing**

The legal framework to implement the stress testing is included in Regulation (EU) no. 575/2013 of the European Parliament and of the Council of 26 June 2013 (CRR) on prudential requirements for credit institutions and investment firms.

EU and NBS require that the bank should implement a complex program of stress testing that includes stress scenarios and qualitative and quantitative tests. **Quantitative** stress tests identify possible impacts on the bank caused by movements of real prices, interest rates, volatility, correlation, and other market factors. **Qualitative** tests verify adequacy of bank's own funds for the protection against possible losses and identify possibilities to reduce risks.

#### **Object of Stress testing**

The capability to predict the financial instability is one of the most important features to keep the revenue at the desiderative level. The better understanding of the vulnerabilities in financial systems and measures could help prevent the financial crises. One of the key techniques for quantifying financial sector vulnerabilities is stress testing.

The main goal of stress testing is to caution the institution for unexpected losses that could be made by an exceptional but plausible development of market factors. To set the boundary between the realistic development with the low probability and unrealistic scenario is the object of many studies.

The impact of the financial crisis is not limited only for the profitability of trading portfolios. The financial instability affects a range of financial soundness indicators of the financial institution.

#### Financial Soundness Indicators (FSIs)

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Capital Adequacy  
Capital Adequacy for market risks  
Regulatory capital to risk-weighted assets  
Sensitivity to market risk  
Duration of assets  
Duration of liabilities  
Net open position in foreign exchange to capital  
Earnings and profitability  
Return on assets  
Return on equity

Interest margin to gross income  
 Non-interest expenses to gross income  
 Asset quality  
 Large exposures to capital

Source: IMF (2003)

Stress test shocks and models are based on judgments and assumptions, so the stress test output is not comparable to FSIs measuring actual condition in a financial system. Stress testing and FSIs provide complementary approaches to analysing similar risks. The complementarity between stress testing and FSIs is probably of greatest relevance in the area of exposure to market risk. The more advanced state of market risk stress testing makes it feasible to use the measure of loss from these stress tests as a soundness indicator along with market risk FSIs. This is a more likely to be the case in more sophisticated systems where banks conduct frequent market risk stress tests as an integral part of risk management. The result of these stress tests could be presented in a form comparable to the relevant market risk FSI (e.g. as a measure of loss relative to capital for a shock of a given size).

#### Stress tests and Value at Risk methods

All Value at Risk methods are based on the assessment of the losses from the historical volatilities and correlations or over historical scenarios of prices. The assessment is made over the predefined level of probability (confidence level). VaR method does not cover fat tails and movements that happened in the past and are not included in the set of data. This inefficiency is covered through calculating Stressed Value at Risk, which simulates VaR over selected period with highest volatility from data set beyond standard VaR methodology. On the other hand, the future is imitable and may not be mirrored in the past.

#### Stress scenarios

Market Risk sub-department in cooperation with Corporate Strategy and Economic Research Department prepares a set of stress scenarios – scenarios, which imitate state of market factors during a financial crisis and reevaluates the actual positions with these scenarios. The change of market value between actual situation and the scenario is considered a stress value.

These stress values are then both directly and compared to FSIs reported to management in Daily report and to ALCO in a Monthly Risk report.

The set of scenarios is dynamic and reflects the current development of prices (Interest Rates, Foreign Exchange Rates and Implied Volatilities) and current position.

## 9.2 Quantitative parameters

Data in tables presents maximum, minimum and average daily value of market risk for monitored period and for the end of the period.

	January - September 2016			
	End of Period	Average	Max	Min
	Balance EUR	EUR	EUR	EUR
Foreign currency risk	22,863	27,148	149,981	2,879
Interest rate risk	471,987	405,587	717,433	40,414
Total VaR	482,950	408,642	721,085	32,078
Total SVaR	486,247	553,193	959,130	93,167

	July - September 2016			
	End of Period	Average	Max	Min
	Balance EUR	EUR	EUR	EUR
Foreign currency risk	22,863	26,484	70,835	6,177
Interest rate risk	471,987	411,231	578,779	238,508
Total VaR	482,950	412,726	575,563	241,021
Total SVaR	486,247	702,304	959,130	484,474

## 10. Operational risk<sup>33</sup>

### 10.1 Qualitative disclosure

Operational risk is defined as the risk of suffering losses due to inadequacy or failures of processes, human resources and internal systems, or as a result of external events. Operational risks include legal risk, that is, the risk of losses deriving from breach of laws or regulations, contractual or out-of-contract responsibilities or other disputes; strategic and reputational risks are not included.

The Group has a centralized function within the Risk Management Division for the management of the Group's operational risks. This function is responsible for the definition, implementation, and monitoring of the methodological and organizational framework, as well as for the measurement of the risk profile, the verification of mitigation effectiveness and reporting the Top Management, as per standards and principles defined by Intesa Sanpaolo Head Office.

In compliance with current requirements, the Group's organizational units have been involved into the process and each of them was assigned the responsibility for the identification, assessment, management and mitigation of its operational risks; specific officers and departments have been identified within these organizational units to be responsible for Operational Risk Management.

#### **Methods for calculating Operational Risk**

As at 31 December 2007 the Group adopted the Traditional Standardized Approach - TSA. Later, in February 2010, VUB Bank has adopted Advanced Measurement Approach, for Operational Risk management and measurement. Since July 2013 Consumer Finance Holding and VUB Leasing subsidiaries were included in the AMA perimeter.

For the use of the Advanced Measurement Approach and Standardized approach, and in addition to the corporate governance mechanisms required by the Supervisory regulations, the Bank has set up an effective system for the management of operational risk certified by the process of annual self-assessment carried out by the Group Companies that fall within the scope of the AMA and TSA. This self-assessment is verified by the Internal Audit and Control department and submitted to the corporate bodies for the annual certification of compliance with the requirements established by the regulation.

Under the AMA approach, the capital requirement is calculated by internal model, which combines all elements stipulated in Supervisory regulation, allowing to measure the exposure in a more risk sensitive way. Under the Standardized approach, the capital requirement is calculated by multiplying gross income by separate regulatory percentages for each of the business lines into which the Banks' activities are divided. Monitoring of operational risks is performed by an integrated reporting system, which provides management with the information necessary for the management and/or mitigation of the operational risk.

The internal AMA model, used for operational purposes and for the ICAAP process, has the following summary features.

Intesa Sanpaolo Group's internal AMA model is designed to combine all the main quantitative (internal and external historical incurred loss data) and qualitative information sources (scenario analysis and operating valuation context).

The quantitative component is based on the assessment of historical data on internal events (recorded by organizational units, verified by the central function and managed by a dedicated IT system) and external events (including participation in consortium initiatives such as "Database Italiano Perdite Operative" – Italian Operating Loss Database – managed by the Italian Banking Association and Operational Riskdata eXchange Association) applying actuarial techniques that entail the separate study of event frequency and impact and the subsequent formation, through Montecarlo simulations, of the annual loss distribution curve and consequently of risk measures. Insurance and diversification effect are integral parts of the model.

The qualitative component (scenario analyses) focuses on the forward-looking assessment of the risk exposure of each unit and is based on the structured, organized collection of subjective estimates expressed directly by Management (subsidiary companies, Parent Company's business areas, Corporate Centre) with the objective of assessing the potential economic impact of particularly serious operational events; such assessments, processed with statistical-actuarial techniques, calculate an unexpected loss estimate which is subsequently integrated in the measurement obtained by the analysis of historical loss data.

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<sup>33</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

Capital-at-Risk is therefore identified as the minimum amount at Group level, net of insurance, cover, required to bear the maximum potential loss (worst loss); Capital-at-Risk is estimated using a Loss Distribution Approach model (actuarial statistical model to calculate the Value-at-Risk of operational losses), applied on quantitative and qualitative data assuming a one-year estimation period, with a level of confidence level of 99.9%; the methodology also applies a corrective factor, which derives from the qualitative analyses of the risk of the evaluation of the business environment and internal control factors, to take account of the effectiveness of internal controls in the various organizational units.

The VUB Group utilizes a traditional operational risk transfer policy (insurance) with the objective of mitigating the impact of any unexpected losses.

Compliance with Group standards is supported by a programme of periodic reviews undertaken by Internal Audit. The results of Internal Audit reviews are discussed with the management of the business unit to which they relate, with summaries submitted to the Audit Committee and senior management of the Group.



## 11. Equity exposures: disclosures for banking book positions<sup>34</sup>

### 11.1 Qualitative disclosure

#### **Equity exposures included in the banking book: differentiation between exposures according to the objectives pursued**

The investments in equities present in the Group have a variety of functions:

- strategic - companies subject to significant influence and joint ventures with industry partners;
- institutional - investments in associates, consortium companies, and local institutions;

#### **Recognition and valuation of the equity instruments included in the banking book**

The equity exposures included in the banking book are classified under the balance sheet items Subsidiaries, associates and joint ventures and Available-for-sale financial assets. Subsidiaries are included only for the purpose of separate financial statements of VUB Bank.

##### Subsidiaries, associates and joint ventures – accounting policies for separate financial statements

For the purposes of separate financial statements of VUB Bank, subsidiaries, associates and joint ventures are recorded at cost less impairment losses. The impairment loss is measured as the difference between the carrying amount of the shares and the present value of estimated future cash flows discounted at the current market rate of return for a similar financial asset.

##### Associates and joint ventures – accounting policies for consolidated financial statements

Associates are entities, in which the Group has significant influence, but not control, over the financial and operating policies. The financial statements include the Group's share of the total recognized gains and losses of associates on an equity accounted basis, from the date that significant influence commences until the date that significant influence ceases.

Joint ventures are joint arrangements whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. The financial statements include the Group's share of the total recognized gains and losses of joint ventures on an equity accounted basis, from the date that joint control commences until the date that joint control ceases.

##### Impairment tests of investments

At each balance sheet date the equity investments in associates or companies subject to joint control are subjected to an impairment test to assess whether there is objective evidence to consider that the carrying value of such assets is not fully recoverable. The detection of any impairment involves the verification of the presence of impairment indicators and the determination of any write-down. The presence of specific impairment indicators results in the recognition of a write-down to the extent that the recoverable amount is lower than the recognition value. The recoverable amount consists of the higher of the fair value less costs to sell and the value in use. Value in use is the present value of expected future cash flows from the asset undergoing the impairment process; it reflects estimated expected future cash flows from the asset, the estimate of possible changes in the amount and/or timing of cash flows, time value of money, the price able to repay the risk of the asset and other factors such as for example the illiquidity of the asset, which may affect the appreciation by market participants of expected future cash flows from the asset. Value in use is determined by discounting future cash flows.

##### Financial assets available for sale – accounting policies

Available-for-sale securities are those financial assets that are not classified as fair value through profit or loss or held-to-maturity. Subsequent to their initial recognition, these assets are accounted for and re-measured at fair value.

The fair value of available-for-sale securities, for which an active market exists, and a market value can be estimated reliably, is measured at quoted market prices. In circumstances where the quoted market prices are not readily available, the fair value is estimated using the present value of future cash flows.

Equity investments are held at cost less impairment as their fair value cannot be reliably measured. For available-for-sale equity investments, the Bank assesses at each end of reporting period whether there is objective evidence that an investment or a group of investments is impaired.

In the case of debt instruments classified as available-for-sale, impairment is assessed based on the same criteria as financial assets carried at amortized cost. If, in a subsequent year, the fair value of a debt instrument increases and the increase can be objectively related to an event occurring after the impairment loss was recognized in the statement of comprehensive income, the impairment loss is reversed through the statement of comprehensive income.

<sup>34</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

In the case of equity investments classified as available-for-sale, objective evidence would include a significant or prolonged decline in the fair value of the investment below its cost. Where there is evidence of impairment, the cumulative loss – measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that investment previously recognized in profit or loss – is removed from equity and recognized in profit or loss. Impairment losses on equity investments are not reversed through profit or loss; increases in their fair value after impairment are recognized directly in equity.

Unrealized gains and losses arising from changes in the fair value of available-for-sale securities are recognized on a daily basis in the 'Revaluation reserve' in equity.

Interest earned whilst holding available-for-sale securities is accrued on a daily basis and reported in the statement of comprehensive income in 'Interest and similar income'.

## 11.2 Quantitative disclosure

### Banking book: on balance sheet equity exposures

	Share %	Reason for holding	Evaluation Method	Book value (EUR thousand)	Listed
<b>Subsidiaries</b>					
Consumer Finance Holding, a.s.	100	strategic	cost	53,114	no
VÚB Leasing, a.s.	100	strategic	cost	17,029	no
VÚB Factoring, a.s.	100	strategic	cost	6,002	no
<b>Associated companies</b>					
Slovak Banking Credit Bureau, s.r.o.	33.3	institutional	equity	3	no
VÚB Asset Management, správ. spol., a.s.	40.55	strategic	equity	2,821	no
<b>Joint ventures</b>					
VÚB Generali DSS, a.s.	50	strategic	equity	16,597	no
<b>Other in AFS portfolio</b>					
RVS, a.s.	8.01	institutional	cost	-	no
S.W.I.F.T.	0.01	institutional	cost	60	no
Visa Inc.	0.00	institutional	fair value	4,638	no
ISP shares	0.01	other	fair value	1,635	yes

Table incorporates also subsidiaries that are included at cost in the separate financial statements of VUB.

On 21 December 2015, Visa Europe and Visa Inc. officially announced the plan to become a unique entity, through the sale of 100% of share capital of Visa Europe to Visa Inc.

Following confirmation on 3 June 2016 that the European Commission approved the proposed purchase of Visa Europe Limited by Visa Inc., the fair value of the closing transaction was evaluated consisting of three elements in total amount of € 21,509 thousand. Apart from cash consideration, the Bank is receiving Visa Inc. preferred shares Series C and also deferred cash payment will be due after third anniversary of the closing date.

## 12. Interest rate risk on positions in the banking book<sup>35</sup>

### 12.1 Qualitative disclosure

#### Interest rate risk

The main risk to which non-trading portfolios are exposed is the risk of loss from fluctuations in the future cash flows or fair values of financial instruments due to a change in market interest rates. Interest rate risk is managed principally through monitoring interest rate gaps. Financial instruments are mapped to re-pricing gaps either by the maturity, i.e. fixed rate instruments, or by the next re-pricing date, i.e. floating rate instruments. Assets and liabilities that do not have contractual maturity date or are not interest - bearing are mapped according to internal models based on behavioural assumptions.

The Risk Management division is responsible for monitoring these gaps at least on a monthly basis.

The management of interest rate risk is measured by shift sensitivity analysis (change in present value) which is defined as a parallel and uniform shift of + 100 basis points of the rate curve and +/- 200 basis points of the rate curve. These standard scenarios are applied on monthly basis.

The sensitivity of the interest margin is also measured on the basis of a parallel and instantaneous shock in the interest rate curve of  $\pm 100$  basis points, over a period of 12 months. It should be noted that this measure highlights the effect of variations in market interest rates on the portfolio being measured, and excludes assumptions on future changes in the mix of assets and liabilities and, therefore, it cannot be considered as a predictor of the future levels of the interest margin.

Shift Sensitivity methodology is applied to calculate and allocate the economic capital for interest rate risk in banking book. All calculations are performed on both individual VUB basis and individual for each VUB subsidiary.

Overall banking book interest rate risk positions are managed by Balance Sheet Management, which uses different balance and off balance sheet instruments to manage the overall positions arising from the Bank's banking book activities.

Interest rate risk comprises of the risk that the value of a financial instrument will fluctuate due to changes in market interest rates and the risk that the maturities of interest bearing assets differ from the maturities of the interest bearing liabilities used to fund those assets. The length of time for which the rate of interest is fixed on a financial instrument therefore indicates the extent to which it is exposed to the interest rate risk.

#### Models applied for calculation of interest rate risk

Each financial and non-financial instrument is mapped to the gap based on contractual or behavioural re-pricing date.

##### Contractual

This category includes instruments, where the Group knows exactly when the maturity or next re-pricing takes place. This treatment is applied mainly to: securities bought and issued loans and term deposits.

##### Behavioural

These are items for which it is not exactly known when the maturity or next re-pricing will take place (e.g. current accounts). There are also some items where maturity or re-pricing period is known but it can assume that they will behave differently, it means that some of prepayments can occur (e.g. mortgages and consumer loans). In this case, it is necessary to make certain assumptions to reflect the most probable behaviour of these items. The assumptions are based on deep analysis of the Group historical data and statistical models. The group also includes items such as fixed assets, equity, provisions, etc., which have an indefinite maturity and also have to be modelled.

#### Models applied for shift sensitivity calculation

For current accounts the non-sensitive core portion of some clients' categories is calculated and is mapped to the interest rate gap. Duration depends on segment. The remaining amount is classified in the overnight segment.

Prepayment model for mortgages and consumer loans based on historical observations is used to reflect real behaviour of these portfolios.

<sup>35</sup> NBS decree 16/2014 §2, section 2) and Regulation (EU) no. 575/2013

### **13. Declaration of the Manager responsible for preparing the Company's financial reports**

The Manager responsible for preparing the Company's financial reports, Antonio Bergalio, declares, pursuant to par. 2 of art. 154-bis of the Italian "Testo Unico della Finanza" (Consolidated Law on Finance), that the accounting information contained in this document corresponds to the corporate records, books and accounts.

11 November 2016



Antonio Bergalio  
Manager responsible for preparing the  
Company's financial reports