Solvency Financial Condition Report VIVAT 2018

Zwitserleven Reaal nowGO actiam VIVAT

Contents

Summary

Introduction

The structure of the Solvency and Financial Condition Report (SFCR) has been prepared in accordance with annex XX of the delegated acts. The subjects addressed are based on articles 51 to 56 of the Solvency II directive and articles 292 up to 298 of the Delegated Acts. Furthermore, the figures presented in this report are in line with the Quantitative Reporting Templates as reported to the supervisor. In this SFCR report of VIVAT NV we will use the name 'VIVAT' for the consolidated insurance business as a whole. The SFCR of VIVAT is a combined report which also includes the solo insurance entities SRLEV NV, VIVAT Schadeverzekeringen NV and Proteq Levensverzekeringen NV.

In the following chapters, the various topics are covered, as required by the Delegated Acts. Chapter A describes the business and performance of VIVAT and of its solo entities. Chapter B discusses the system of governance. Chapter C contains the risk profile. Chapter D starts with a description of the method of valuation of the Solvency II balance sheet, followed by the various balance sheet items which are explained in relation to the IFRS financial statements. Chapter E provides a more detailed explanation of the own funds and Solvency Capital Requirements (SCR) under Solvency II.

In this report the shown figures of SRLEV NV, VIVAT Schadeverzekeringen NV and Proteq Levensverzekeringen NV are unconsolidated figures, whereas the figures of VIVAT are consolidated figures. All amounts in this report are prepared in millions of euros being the functional currency of VIVAT and all its underlying entities.

The Quantitative Reporting Templates that are to be disclosed per legal entity are added in annex II. The figures presented in this report are in line with these templates.

2018 at a Glance

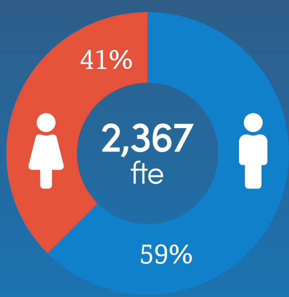
> In 2018, VIVAT made strong progress on its strategic agenda. We were able to grow premium income in our focus areas (Pensions and Property & Casualty), lower our cost base again by 4% and further re-risk our investment portfolio. P&C managed its combined ratio below 100% again, including the impact of the severe January storm. These positive developments contributed to a higher net underlying result. As an insurer, VIVAT makes important choices every day that have far-reaching influence on the world of tomorrow. With the assets we manage on behalf of our clients, we can and want to exercise our influence on that world, to safeguard it for future generations.

Ron van Oijen, CEO VIVAT

About VIVAT

Offices

Employees



Customers

> 2.5 million

Mission: VIVAT makes your financial choices easy

Our Brands

Zwitserleven
Reaal
actiam
nowGO
Reaal Dier&Zorg
Route Mobiel

Our Performance

Gross Premium Income

2,842 mln EUR

2017: 2,923 mln EUR

Solvency II Own Funds

4,635 mln EUR

2017: 3,780 mln EUR

Solvency II Ratio

192%

2017: 162%

Net Result IFRS

-284 mln EUR

2017: -116 mln EUR

IFRS Equity

3,541 mln EUR

2017: 3,547 mln EUR

Solvency II Total Assets

55,900 mln EUR

2017: 58,200 mln EUR

Other Milestones

- 5 Star Money View Award for Zwitserleven PPI
- Individual Life made good progress with automation and cost reduction thanks to **Pega**
- VIVAT trained **37** new Data Analysts
- nowGo Travel Insurance Voted as Best Buy
- ACTIAM wins VWD Cash Public Award
- Sickness absence down from 5.1 to **3.8%**
- Portfolio Growth P&C **8.7%**
- Updated CSR Policy: SDGs leading
- Combined Ratio P&C down to **96.8%**
- New Business Life Corporate up from 18% to **20.4%**
- Reaal Commercial Nominated for Gouden Loeki Award
- Zwitserleven Retention Rate up from 67% to **88%**

CSR Statement: VIVAT provides long-term value creation

Four Strategic Themes for the Business

VIVAT has defined four key themes for the whole company. These themes are embedded in execution and change of VIVAT:


Customer Centricity


Data


Digitalisation


Innovation

Summary

The Solvency Financial Condition Report VIVAT provides insight in:

Business and Performance

In December 2018, a longevity reinsurance transaction was signed which lowered our Solvency Capital Requirement. Together with the issuance of € 300 million Restricted Tier 1 notes in June 2018 and an increase of the Volatility Adjustment (VA) in 2018, VIVAT's Solvency II ratio (based on the standard model) increased significantly to 192%. Capital generation was still limited in 2018, but it was improving and further rerisking will help to increase this over time. We closed 2018 with a negative IFRS result of -/- € 284 million (2017: -/- € 116 million). The negative result is driven by a number of one-off items and additions to the LAT shortfall:

- the longevity reinsurance transaction (-/- € 97 million),
- adjustment of the net Deferred Tax Assets (DTA)-position due to a decrease in the tax rate in the coming years (-/- € 97 million),
- the tender offer on the SRLEV Tier 2 notes (-/- € 23 million),
- additions to the LAT shortfall originating from fair value movements (-/- € 309 million), which includes additions to the LAT shortfall due to fair value movements of interest and cash flows, the decrease in the UFR from 4.2% to 4.05% and the UFR drag.

Further information about Business and Performance has been included in chapter A 'Business and Performance'.

System of Governance

VIVAT implemented a consistent and efficient risk management system in which specific Solvency II requirements such as the key functions and the Own Risk and Solvency Assessment (ORSA) are incorporated. It operates an integrated approach, with risk management integral part of the decision making process.

In 2018, VIVAT has focused on new opportunities and sustainability towards our clients. The strategic ambition to become an innovative insurer has led to several initiatives in products, services, methodologies and processes. This dynamic and change oriented environment, the announced strategic reorientation of Shareholder, new and changed legislation, combined with a continued focus on cost reduction and revenue models could influence operational and compliance risks. This rationalisation will continue in 2019. VIVAT is aware of the increasing strategic importance of collecting, managing and use of data, taking into account relevant legislation, e.g. GDPR. VIVAT has implemented a sustainable design for Data Governance to manage and monitor the diverse data related initiatives.

Further information about System of Governance has been included in chapter B 'System of Governance'.

Risk profile

VIVAT's Solvency II ratio increased from 162% to 192% in 2018. This increase was driven both by management actions and market developments. The main items driving the change in the Solvency II ratio were;

- SRLEV executed a longevity re-insurance transaction in December 2018 that had a positive impact of 13 %-points on the Solvency II ratio of VIVAT,

- VIVAT issued € 300 million Restricted Tier 1 notes in June 2018 and tendered € 150 million of SRLEV Tier 2 notes to optimise the capital position. Combined with the coupon payments on subordinated loans this added 7 %-points to the Solvency II ratio,
- an increase in market risk SCR, mainly due to the continued re-risking of the investment portfolio had a negative impact of 16 %-points on the Solvency II ratio,
- an increase in the Volatility Adjustment from 4 bps to 24 bps in 2018 given widening credit spreads in the VA reference portfolio. As VIVAT's investment portfolio has more high quality sovereign bond allocation than the VA reference portfolio, the impact of the spread widening on the investment portfolio was limited. Therefore overall market developments had a positive impact of 38 %-points on VIVAT's Solvency II ratio,
- Model improvements, which had a negative impact of 12 %-points.

Ineligible own funds decreased from € 428 million at YE 2017 to € 47 million at YE 2018 driven by the € 150 million tender offer on Tier 2 notes and a lower net DTA position mainly due to the announced decrease in the Dutch corporate tax rate and the increase of the VA.

SRLEV's Solvency II ratio increased from 158% to 188% in 2018. In general, the drivers of SRLEV's increase in its Solvency II ratio were similar to those that applied to VIVAT. The main differences were capital flows. The issuance of € 300 million Restricted Tier 1 notes impacted VIVAT only. In September 2018, SRLEV received a € 200 million capital injection from VIVAT with a positive impact of 10 %-points on the Solvency II ratio of SRLEV. This injection did not impact VIVAT's Solvency II ratio.

VIVAT Schade's Solvency II ratio decreased from 162% to 156% in 2018. The main drivers are the coupon payments on subordinated loans to VIVAT, an increase of the SCR due to the re-risking programme and losses incurred by the January 2018 windstorm. The decrease was partly offset by re-insurance adjustments.

The Solvency II ratio of Proteq Levensverzekeringen increased from 263% to 327% in 2018. The increase is mainly explained by swap spread and VA movement.

VIVAT's organic capital generation in 2018 was still limited, mainly due to UFR unwinding and the low expected asset returns caused by a low exposure to market risks. The result of re-risking activities in 2018 has not been fully incorporated in the figures. Together with further re-risking activities, capital generation is expected to improve going forward.

Solvency II position

	SRLEV		VIVAT Schade		Proteq		VIVAT	
In € millions/ percentage	2018	2017	2018	2017	2018	2017	2018	2017
Total eligible own funds	4,000	3,246	564	570	119	92	4,635	3,780
SCR	2,127	2,061	361	351	36	35	2,412	2,327
Solvency II ratio	188%	158%	156%	162%	327%	263%	192%	162%

Managing Sensitivities of Regulatory Solvency

In addition to underwriting risks, important market risks are interest rate risk and spread risk (credit spreads). Sensitivity to interest rates is measured by means of a parallel movement in the yield curve.

The Ultimate Forward Rate (UFR) of 4.05% prescribed by the European Insurance and Occupational Pensions Authority (EIOPA) also introduces a risk. Over the course of time, the positive valuation effect of the UFR reduces, which puts downward pressure on the trend in solvency in the future. EIOPA decided to yearly decrease the UFR starting in 2018 with 0.15% per year. This will have a negative impact on solvency and IFRS results .

The solvency of the Life Insurance portfolio is sensitive to changes in the parameters used for calculating the market value of insurance liabilities. These relate to mortality risk, longevity risk, expense risk and surrender risk, since these insurance risks proved to have most impact on the calculation of SCR. The Non-Life business is sensitive to changes in the disability rates, claims and loss ratios.

Quantitative information about risks and related sensitivities for both Solvency II and IFRS have been described in chapter C 'Risk profile'.

Valuation for Solvency purposes

The assets and liabilities in the Solvency II balance sheet are recognized and measured at fair value in accordance with the Solvency II regulation.

The following significant differences in measurement under Solvency II and under IFRS exist:

> Technical provisions – Under Solvency II the technical provisions (including provisions for saving mortgages) are measured using Solvency II parameters, taking into account current market estimates. Under IFRS a liability adequacy test on the technical provision is performed, if the carrying amount of the technical provision is inadequate, the provision is increased. With respect to economic parameters used, there are differences regarding the interest rate curve and the cost of capital. The difference in the interest rate curve development, due to the VA development that is only applicable for Solvency II, is a main driver for the development of the reconciliation of IFRS and Solvency II.

> Deferred Tax Assets – Due to differences in the valuation of assets and liabilities the resulting DTA position is different.

To determine the capital requirements at consolidated level, VIVAT applies the 'Accounting consolidation based method', according to which the capital requirements are calculated based on the Solvency II consolidated balance sheet.

In the SFCR VIVAT 2017, ACTIAM NV and Zwitserleven PPI NV were consolidated on the balance sheet of VIVAT. To recognize these subsidiaries in accordance with Solvency II method 1: sectorial rules the assets and liabilities are eliminated from the balance sheet and the participations of VIVAT in these subsidiaries are recognized. To recognize ESC accordingly the Solvency II method D&A the assets and liabilities are eliminated from the balance sheet and the participation of VIVAT in the subsidiary ESC is recognized.

Further information about valuation and an explanation of various balance sheet items has been included in chapter D 'Valuation for Solvency purposes'.

Capital Management

Capitalisation refers to the extent to which VIVAT and its underlying legal entities have buffer capital available to cover unforeseen losses and to achieve the strategic objectives of the company. VIVAT manages its capitalisation within limits set in the Risk Appetite Statement. Annually target setting happens in the Operational Plan culminating in a Capital & Funding Plan. Monthly and quarterly forward looking monitoring enables VIVAT taking timely action if capitalisation would deteriorate. VIVAT assesses its capitalisation regularly with respect to level and quality in the ORSA and with respect to risk / return in the ALM Study. In 2018 VIVAT concluded that the Solvency Capital Requirement (SCR) was appropriate and that the Solvency was sufficient.

VIVAT aims for a robust and strong capital position in accordance to its risk profile, which contributes to both the confidence that clients have in the institution and access to financial markets. VIVAT deems a Solvency ratio between 140% and 200% as a normal going concern level. The objective of the Capital Policy is to ensure that there is sufficient capital to fulfill obligations towards policyholders and meet requirements. The second objective of the Capital Policy is to ensure capital is used as efficiently and flexibly as possible to facilitate the implementation of VIVAT's strategy.

A Recovery Plan exists which describes the procedure that applies in a contingency situation. A contingency situation is a situation in which a capital deficit arises, or threatens to arise, which poses a direct threat to the going concern of VIVAT. In its Risk Appetite Statements, VIVAT has defined specific triggers that determine whether a contingency situation exists.

The ORSA is an integral part of VIVAT’s management control cycle. It is input for the operational plan and capital management and is used in determining the risk appetite. The ORSA 2018 concludes that VIVAT’s risk profile is well reflected in the SCR standard formula and Solvency is adequate.

Solvency II

Under Solvency II, the supervision of the risks to which an insurer is exposed and the management of those risks play a central role. The financial requirements reflect the risks to which insurers are exposed. Moreover, Solvency II aims to be in line with market developments and the internal risk management systems used by insurers.

VIVAT discloses its solvency position and financial condition on a Solvency II basis by means of public reports as required by law. Solvency II applies to the supervised insurance entities and also to the consolidated activities of VIVAT.

VIVAT calculates its position under Solvency II using the standard formula, applying the Volatility Adjustment (VA) and thus making use of the possibility of applying long-term guarantee measures. VIVAT does not apply the Matching Adjustment.

The internal risk limit for the Solvency II capital ratio on VIVAT level amounts to 140%. When determining the Solvency II capital ratio, the loss absorbing capacity of deferred tax assets may be set off against the Solvency Capital Requirement. Tax offsetting (Loss Absorbing Capacity of Deferred Taxes) in the SCR is applied at 0% for VIVAT and its legal entities, except for legal entities with a net Deferred Tax Liability (net DTL). In these cases tax offsetting equals the net DTL-position.

The classification of the hybrid capital of VIVAT NV and SRLEV NV (outstanding on 31 December 2018) into Tier 1 and Tier 2 capital is based on the transitional measures contained in the level 1 regulations, and aligned with DNB.

Further information about Capital Management has been included in chapter E ’Capital Management’.

We also refer to the Annual Report 2018 of VIVAT NV, in which more information has been included.

Amstelveen, 8 April 2019

A. Business and Performance

A.1. Business

A.1.1. About VIVAT

VIVAT

VIVAT is an insurance company with strong positions in the Dutch Life and Non-Life markets. Through its main brands Zwitserleven and Reaal and the direct label nowGo, VIVAT provides pension, life, property & casualty and disability insurances. VIVAT also offers asset management services via its asset manager ACTIAM.
In 2018, VIVAT generated € 2,842 million in gross written premiums (GWP), which makes VIVAT one of the top 5 insurance companies in the Netherlands.

VIVAT's main offices are located in Amstelveen and Alkmaar, smaller offices are situated in Utrecht and Rotterdam. The office in Assen will be closed in early 2019.

Structure

VIVAT is organised into four product lines:

- Non-Life: this product line offers property, casualty and disability insurance for retail and SME markets (VIVAT Schadeverzekeringen).
- Individual Life: the portfolio of this product line mainly consists of life annuity insurance policies, mortgage-related endowment policies, term-life policies and unit-linked insurance policies. Individual Life operates in the retail and SME markets (SRLEV and Proteq Levensverzekeringen).
- Life Corporate: this product line offers pension solutions for business customers. A range of products provides the employees of our customers freedom in making the right decisions to secure their financial future. The main brand of this product line is Zwitserleven (SRLEV).
- Asset Management: this product line offers a comprehensive range of investment funds and investment solutions that varies from responsible index investing to impact investing (ACTIAM).

The chart below translates the product lines structure into the legal structure of VIVAT.

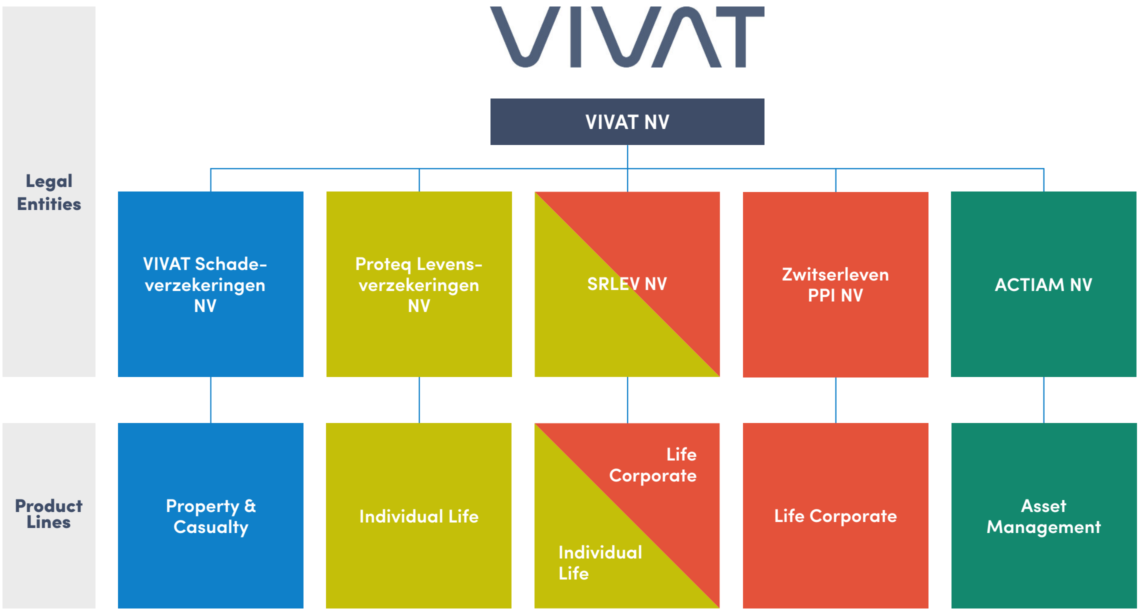


Figure 1: Structure VIVAT

Anbang Group Holdings Co. Limited, an indirect subsidiary of Anbang Insurance Group Co., Ltd., is the sole shareholder of VIVAT NV. Since February 2018 the China Insurance Regulatory Commission (CIRC) has temporarily taken over management of Anbang. During this interim period, the far majority of the shares are temporarily held by the Chinese Insurance Security Fund (CISF), a non-governmental industrial fund.

Within these product lines VIVAT recognises the following material lines of business:
Life insurance (SRLEV and Proteq Levensverzekeringen):

- Insurance with profit participation;
- Index-linked and unit-linked insurance;
- Other life insurance.

Non-Life insurance (VIVAT Schadeverzekeringen):

- Property insurance;
- Casualty insurance;
- Disability insurance.

A.1.2. Name and contact details

Business information

Reporting reference date:	31 December 2018
Group undertaking name:	VIVAT NV
Solo undertaking name:	SRLEV NV VIVAT Schadeverzekeringen NV Proteq Levensverzekeringen NV
Address:	Burg. Rijnderslaan 7, Amstelveen
Contact:	Victor Zijlema +31(0) 205436053
Shareholder:	Anbang Group Holdings Co. Limited 1 Austin Road West, Level 67, International Commerce Centre, Kowloon, Hong Kong, China
Supervisor:	De Nederlandsche Bank Westeinde 1, 1017 ZN Amsterdam +31(0) 205249111
External auditor:	Ernst & Young Accountants LLP Cross Towers, Antonio Vivaldistraat 150, 1083 HP Amsterdam +31(0) 884071000

External auditor

The external auditor of VIVAT is Ernst & Young Accountants LLP (EY). EY has been appointed for the years 2016-2019 to audit the group financial statements of VIVAT NV as well as among others, the financial statements of the solo undertakings SRLEV NV, VIVAT Schadeverzekeringen NV and Proteq Levensverzekeringen NV and the prescribed subset of the Quantitative Reporting Templates. The SFCR has not been audited by EY.

A.1.3. Main brands

Zwitserleven

Zwitserleven was founded in 1901 and has become one of the leading pension insurers in the Netherlands. Zwitserleven offers wealth accumulation products 'for later'. Zwitserleven has been awarded repeatedly for having the most sustainable investment policy in the Netherlands.

Reaal

Reaal offers Life and Non-life insurance products. Reaal improves the financial resilience of customers by helping them make well-considered choices about their financial situation.

nowGo

VIVAT's digital channel nowGo enables customers to buy smart and simple products directly online. Fast, completely tailored and at a competitive price. NowGo focusses on three segments: car, travel and living.

ACTIAM

ACTIAM is an alternative investment funds manager in accordance with the Dutch Financial Supervision Act. ACTIAM manages the assets of VIVAT's insurance entities and of listed and nonlisted investment funds, pension funds, insurance companies and corporate clients in Europe.

A.1.4. Legal structure

VIVAT NV owns 100% of the shares of the following main companies:

- SRLEV NV
- VIVAT Schadeverzekeringen NV
- Proteq Levensverzekeringen NV
- ACTIAM NV
- Zwitserleven PPI NV

See Annex I for a list of material related undertakings.

A.1.5. Developments

In 2018 VIVAT has focused on new opportunities and sustainability towards our clients. The strategic ambition to become an innovative insurer has led to several initiatives in products, services, methodologies and processes. This dynamic and change oriented environment, the announced strategic reorientation of Shareholder, new and changed legislation, combined with a continued focus on cost reduction and revenue models could influence operational and compliance risks. These risks are addressed, managed and monitored within the VIVAT risk framework to maintain a sound and controlled organisation.

In order to realise more efficiency, VIVAT has defined the target IT landscape and non-target systems are made redundant. This rationalisation will continue in 2019. VIVAT is aware of the increasing strategic importance of collecting, managing and use of data, taking into account relevant legislation, e.g. GDPR. VIVAT has implemented a sustainable design for Data Governance to manage and monitor the diverse data related initiatives.

In 2018, VIVAT completed its model inventory and by that increased overview and insight into its model landscape. Within the Risk Model Landscape programme important steps towards lower model risk are taken by converting important SCR- and ALM-tooling. Ongoing model validations on reporting, (asset) valuation and pricing models, following a risk based approach, further increased model insight and provides guidance towards lower model risk.

A.2. Underwriting Performance

A.2.1. VIVAT

In the table below the statement of profit or loss account by entity is presented:

Statement of profit or loss account by entity 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other[1]	VIVAT
> Income					
Premium income	2,098	735	6	3	2,842
Less: Reinsurance premiums	7	44	-	-	51
Net premium income	**2,091**	**691**	**6**	**3**	**2,791**
Fee and commission income	42	-	-	29	71
Fee and commission expense	16	-	-	2	18
Net fee and commission income	**26**	**-**	**-**	**27**	**53**
Share in result of associates	15	-	-	-11	4
Investment income	1,471	22	20	11	1,524
Investment income for account of policyholders	-389	-	-	2	-387
Result on investments for account of third parties	-	-	-	-44	-44
Result on derivatives	14	7	2	-23	-
Other operating income	-	-	-	-	-
Total income	**3,228**	**720**	**28**	**-35**	**3,941**
> Expenses					
Result on derivatives	136	-	-	-39	97
Technical claims and benefits	3,130	426	22	-26	3,552
Charges for account of policyholders	-90	-	-	4	-86
Acquisition costs for insurance activities	21	161	-	-8	174
Result on liabilities from investments for account of third parties	-	-	-	-44	-44
Staff costs	141	74	2	53	270
Depreciation and amortisation of non-current assets	4	2	-	1	7
Other operating expenses	39	26	1	27	93
Impairment losses	-3	-	-	4	1
Other interest expenses	104	11	-	20	135
Other expenses	-	-	-	-	-
Total expenses	**3,482**	**700**	**25**	**-8**	**4,199**
Result before taxation	**-254**	**20**	**3**	**-27**	**-258**
Taxation	24	4	2	-4	26
Net result continued operations for the period	**-278**	**16**	**1**	**-23**	**-284**

[1] This column contains eliminations due to consolidation as well as the balance sheets of VIVAT NV , Actiam NV, Zwitserleven PPI NV and of the subsidiairies of SRLEV (e.g. N.V. Pensioen ESC) and VIVAT Schadeverzekeringen. For more details we refer to Annex I.

Statement of profit or loss account by entity 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other[1]	VIVAT
> Income					
Premium income	2,241	671	7	4	2,923
Less: Reinsurance premiums	12	39	–	–	51
Net premium income	**2,229**	**632**	**7**	**4**	**2,872**
Fee and commission income	39	–	–	48	87
Fee and commission expense	21	–	–	–	21
Net fee and commission income	**18**	**-**	**-**	**48**	**66**
Share in result of associates	9	-2	–	-6	1
Investment income	1,398	16	13	23	1,450
Investment income for account of policyholders	428	–	–	1	429
Result on investments for account of third parties	49	–	–	8	57
Other operating income	15	–		–	15
Total income	**4,146**	**646**	**20**	**78**	**4,890**
> Expenses					
Result on derivatives	391	9	12	15	427
Technical claims and benefits	3,389	376	–	49	3,814
Charges for account of policyholders	77	–	–	10	87
Acquisition costs for insurance activities	23	143	–	-7	159
Result on liabilities from investments for account of third parties	49	–	–	8	57
Staff costs	154	73	3	51	281
Depreciation and amortisation of non-current assets	3	5	–	2	10
Other operating expenses	41	26	1	27	95
Impairment losses	4	–	–	4	8
Other interest expenses	110	11	–	6	127
Total expenses	**4,241**	**643**	**16**	**165**	**5,065**
Result before taxation	**-95**	**3**	**4**	**-87**	**-175**
Taxation	-40	1	1	-21	-59
Net result continued operations for the period	**-55**	**2**	**3**	**-66**	**-116**

[1] This column contains eliminations due to consolidation as well as the balance sheets of VIVAT NV , Actiam NV, Zwitserleven PPI NV and of the subsidiairies of SRLEV (e.g. N.V. Pensioen ESC) and VIVAT Schadeverzekeringen. For more details we refer to Annex I.

VIVAT's net result IFRS in 2018 of -/- € 284 million was negatively impacted by a longevity reinsurance transaction, adjustment of the net DTA-position, the tender offer on the SRLEV Tier 2 notes and additions to the Liability Adequacy Test (LAT) shortfall. For a more detailed explanation of the development in the IFRS LAT, we refer to Note 16 in the Notes to the Consolidated Financial Statements of VIVAT NV 2018.

Gross premium income decreased by 3% from € 2,923 million to € 2,842 million. This decrease was mainly due to differences in lump sum pension fund buy-outs in 2017 (€ 375 million) versus 2018 (€ 211 million). Excluding these contracts, premium income increased by € 84 million (3%), driven by Life Corporate and P&C. Individual Life premiums showed a limited decrease of 4% in 2018 in a consistently shrinking market.

Lower regular premiums Individual Life were offset by a higher volume single premiums from Direct Annuities.

Direct investment income increased in 2018 compared to 2017, mainly due to an increase in interest income from the interest derivatives portfolio and a positive impact from re-risking activities.

Operating expenses declined compared to 2017. Additional costs for handling of the January storm, investments in ACTIAM and a focus on customer engagement and client processes (PEGA) were offset by further cost savings in 2018.

In the table below the IFRS premiums, technical claims and benefits are broken down by entity:

Premiums, technical claims and benefits by entity

In € millions	SRLEV		VIVAT Schade		Proteq		Other		Total	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Premiums earned (gross)	2,099	2,241	736	671	6	7	2	4	2,843	2,923
Reinsurers' share	7	12	45	39	–	–	–1	–	51	51
Premiums earned	**2,092**	**2,229**	**691**	**632**	**6**	**7**	**3**	**4**	**2,792**	**2,872**
Claims incurred (gross)	3,332	3,271	437	391	12	11	12	26	3,793	3,701
Reinsurers' share	22	24	20	5	–	–	–1	–	41	29
Claims incurred	**3,310**	**3,247**	**417**	**386**	**12**	**11**	**13**	**26**	**3,752**	**3,672**
Changes in other technical provisions (gross)	–281	204	9	–12	10	–11	–37	9	–299	212
Reinsurers' share	–15	–15	1	–2	–	–	1	–	–13	–17
Changes in other technical provisions	**–266**	**219**	**8**	**–10**	**10**	**–11**	**–38**	**9**	**–286**	**229**
Total technical claims and benefits	**3,044**	**3,466**	**425**	**376**	**22**	**-**	**–25**	**35**	**3,466**	**3,901**

The following paragraphs show the results per legal entity.

A.2.2. SRLEV

The figures shown in the table below are unconsolidated figures.

Statement of profit and loss account SRLEV

In € millions	Life Corporate		Individual Life		Total	
	2018	2017	**2018**	2017	**2018**	2017
> Income						
Premium income	1,255	1,362	843	879	2,098	2,241
Less: Reinsurance premiums	–	3	7	9	7	12
Net premium income	**1,255**	**1,359**	**836**	**870**	**2,091**	**2,229**
Fee and commission income	14	3	28	23	42	26
Fee and commission expense	11	2	5	6	16	8
Net fee and commission income	**3**	**1**	23	17	**26**	**18**
Share in result of associates	–	–	15	9	15	9
Investment income	944	701	527	694	1,471	1,395
Investment income for account of policyholders	-185	193	-204	235	-389	428
Result on investments for account of third parties	–	–	–	49	–	49
Result on derivatives	–	–	14	–	14	–
Other operating income	–	15	–	–	–	15
Total income	**2,017**	**2,269**	**1,211**	**1,874**	**3,228**	**4,143**
> Expenses						
Result on derivatives	136	327	–	61	136	388
Technical claims and benefits	2,262	2,455	868	934	3,130	3,389
Charges for account of policyholders	-61	-361	-29	438	-90	77
Acquisition costs for insurance activities	2	2	19	21	21	23
Result on liabilities from investments for account of third parties	–	–	–	49	–	49
Staff costs	76	86	65	68	141	154
Depreciation and amortisation of non-current assets	2	1	2	2	4	3
Other operating expenses	17	22	22	19	39	41
Impairment losses	-2	3	-1	1	-3	4
Other interest expenses	31	34	73	76	104	110
Other expenses	–	–	–	–	–	–
Total expenses	**2,463**	**2,569**	**1,019**	**1,669**	**3,482**	**4,238**
Result before taxation	**-446**	**-300**	**192**	**205**	**-254**	**-95**
Taxation	-29	-84	53	44	24	-40
Net result continued operations for the period	**-417**	**-216**	**139**	**161**	**-278**	**-55**

Life Corporate

VIVAT's Life Corporate product line offers pension solutions for business customers. A range of products provide the employees of our customers freedom in making the right decisions to secure their financial future. The brand of this product line is Zwitserleven.

Life Corporate had a strong commercial year. The customer retention rate increased from 67% in 2017 to 88% in 2018, and market share new business increased from 18% to 34%. This resulted in an increase of 6% of the gross premium income compared to 2017, excluding the lump sum pension fund buy-outs in both years (€ 375 million in 2017 and € 211 million in 2018). Including buy-outs, gross premium income decreased by 8% compared to 2017.

The net result IFRS decreased to -/- € 417 million. Historically, all elements that effect the LAT shortfall of SRLEV NV are allocated to Life Corporate. Also the IFRS loss following the longevity reinsurance transaction was fully allocated to Life Corporate, as well as the majority of the adjustment of the Deferred Tax Asset. This results in a significant loss of the net result IFRS.

Individual Life

The portfolio of the Individual Life product line mainly consists of life annuity insurance policies, mortgage-related endowment policies and unit- linked insurance policies. These products are targeted at the retail and SME markets.

Gross premium income decreased slightly in line with market developments, driven by a decrease in regular premiums, partly offset by an increase in single premium due to high production levels of direct annuities (DIL). Regular premiums declined due to the shrinking individual life market and strong competition from both insurers and banks, further accelerated by early surrenders.

The net result IFRS decreased by € 22 million to € 139 million compared to 2017, mainly due to a lower result on interest as a result of the tender offer on the SRLEV Tier 2 notes.

In the table below the IFRS premiums, technical claims and benefits are broken down to Solvency II Line of Business:

Premiums, technical claims and benefits per line of business SRLEV

In € millions	Insurance with profit participation		Index-linked and unit-linked insurance		Other life insurance		Total	
	2018	2017	2018	2017	2018	2017	2018	2017
Premiums written (gross)	266	266	707	673	1,126	1,302	2,099	2,241
Reinsurers' share	2	6	–	–	5	6	7	12
Premiums written	**264**	**260**	**707**	**673**	**1,121**	**1,296**	**2,092**	**2,229**
Claims incurred (gross)	938	684	1,402	2,006	992	581	3,332	3,271
Reinsurers' share	1	1	–	1	21	22	22	24
Claims incurred	**937**	**683**	**1,402**	**2,005**	**971**	**559**	**3,310**	**3,247**
Changes in other technical provisions (gross)	374	932	-997	-973	342	245	-281	204
Reinsurers' share	–	–	–	–	-15	-15	-15	-15
Changes in other technical provisions	**374**	**932**	**-997**	**-973**	**357**	**260**	**-266**	**219**
Total technical claims and benefits	**1,311**	**1,615**	**405**	**1,032**	**1,328**	**819**	**3,044**	**3,466**

A.2.3. VIVAT Schadeverzekeringen

The figures shown in the table below are unconsolidated figures.

Statement of profit or loss account VIVAT Schadeverzekeringen (P&C)

In € millions	2018	2017
> Income		
Premium income	735	671
Less: Reinsurance premiums	44	39
Net premium income	**691**	**632**
Share in result of associates	–	-2
Investment income	22	16
Result on derivatives	7	-9
Total income	**720**	**637**
> Expenses		
Technical claims and benefits	426	376
Acquisition costs for insurance activities	161	143
Staff costs	74	73
Depreciation and amortisation of non-current assets	2	5
Other operating expenses	26	26
Impairment losses	–	–
Other interest expenses	11	11
Total expenses	**700**	**634**
Result before taxation	**20**	**3**
Taxation	4	1
Net result continued operations for the period	**16**	**2**

Gross premium income increased by 10% in 2018 to € 735 million compared to 2017. This was due to growth in all areas of the portfolio and a release of the unearned premium reserve linked to authorised agents due to an improvement of in-depth portfolio data.

The net IFRS result improved by € 14 million, also supported by the increase in the technical result and higher realised gains on the sale of investments.

The COR of 96.8% improved by 2.2 %-point compared to 2017. This improvement was driven by a lower expense ratio. In addition, the improvement is driven by a slightly improved claims ratio (net of reinsurance ratio). Excluding the storm in January 2018 the COR decreased by 4.9 %-points to 94.1%. The release from the unearned premium reserve had a positive impact on the COR of 1.7 %-points.

In the table below the IFRS premiums, technical claims and benefits are broken down to Solvency II Line of Business:

Premiums, technical claims and benefits per line of business P&C

In € millions	Total Non-life		Health (similar to Life)		Total	
	2018	2017	2018	2017	2018	2017
Premiums earned (gross)	648	581	88	90	736	671
Reinsurers' share	40	34	5	5	45	39
Premiums earned	**608**	**547**	**83**	**85**	**691**	**632**
Claims incurred (gross)	389	346	48	45	437	391
Reinsurers' share	16	2	4	3	20	5
Claims incurred	**373**	**344**	**44**	**42**	**417**	**386**
Changes in other technical provisions (gross)	–	–	12	-12	12	-12
Reinsurers' share	–	–	1	-2	1	-2
Changes in other technical provisions	**–**	**–**	**11**	**-10**	**11**	**-10**
Total technical claims and benefits	**373**	**344**	**55**	**32**	**428**	**376**

Premiums, technical claims and benefits per line of business Non-life

In € millions	Fire and other damage to property insurance		Motor insurance		Marine, aviation and transport insurance		General liability insurance		Other insurance		Total Non-life	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Premiums earned (gross)	231	212	229	198	42	36	57	54	89	81	648	581
Reinsurers' share	16	11	2	2	1	1	1	2	20	18	40	34
Premiums earned	**215**	**201**	**227**	**196**	**41**	**35**	**56**	**52**	**69**	**63**	**608**	**547**
Claims incurred (gross)	144	131	148	131	29	23	19	18	49	43	389	346
Reinsurers' share	11	-3	–	-2	–	1	-5	-5	10	11	16	2
Claims incurred	**133**	**134**	**148**	**133**	**29**	**22**	**24**	**23**	**39**	**32**	**373**	**344**
Total technical claims and benefits	**133**	**134**	**148**	**133**	**29**	**22**	**24**	**23**	**39**	**32**	**373**	**344**

A.2.4. Proteq Levensverzekeringen

The figures shown in the table below are unconsolidated figures.

Statement of profit or loss account Proteq Levensverzekeringen

In € millions	2018	2017
> **Income**		
Premium income	6	7
Less: Reinsurance premiums	–	–
Net premium income	**6**	**7**
Investment income	20	13
Result on derivatives	2	–
Total income	**28**	**20**
> **Expenses**		
Result on derivatives	–	12
Technical claims and benefits	22	–
Staff costs	2	3
Other operating expenses	1	1
Total expenses	**25**	**16**
Result before taxation	**3**	**4**
Taxation	2	1
Net result continued operations for the period	**1**	**3**

The net result continued operations for the period decreased to €1 million in 2018.

In the table below the IFRS premiums, technical claims and benefits are broken down to Solvency II Line of Business:

Premiums, technical claims and benefits per line of business

In € millions	Insurance with profit participation		Index-linked and unit-linked insurance		Other life insurance		Total	
	2018	2017	2018	2017	2018	2017	2018	2017
Premiums written (gross)	6	6	–	–	–	1	6	7
Reinsurers' share	–	–	–	–	–	–	–	–
Premiums written	**6**	**6**	**–**	**–**	**–**	**1**	**6**	**7**
Claims incurred (gross)	8	7	–	–	4	4	12	11
Reinsurers' share	–	–	–	–	–	–	–	–
Claims incurred	**8**	**7**	**–**	**–**	**4**	**4**	**12**	**11**
Changes in other technical provisions (gross)	6	2	–	–	4	-13	10	-11
Reinsurers' share	–	–	–	–	–	–	–	–
Changes in other technical provisions	**6**	**2**	**–**	**–**	**4**	**-13**	**10**	**-11**
Total technical claims and benefits	**14**	**9**	**–**	**–**	**8**	**-9**	**22**	**–**

A.3. Investment Performance

In the next section in the tables IFRS figures are shown, allowing for a comparison with 2017.

A.3.1. VIVAT

The following tables show a breakdown of the investment income in the profit and loss of VIVAT:

Breakdown investment income in profit and loss acccount 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Investment income	1,475	21	20	8	**1,524**
Result on derivatives	-122	7	2	16	**-97**
Total	**1,353**	**28**	**22**	**24**	**1,427**

Breakdown investment income in profit and loss account 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Investment income	1,398	16	13	23	**1,450**
Result on derivatives	-391	-9	-12	-15	**-427**
Total	**1,007**	**7**	**1**	**8**	**1,023**

Result on investment income

The following tables show a further breakdown of the investment income:

Breakdown of investment income 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Interest	1,012	13	13	18	**1,056**
Dividends	23	-1	-	-1	**21**
Rental income	20	-	-	6	**26**
Direct operating expenses	-4	-	-	-1	**-5**
Total interest dividends and rental income	**1,051**	**12**	**13**	**22**	**1,098**
Realised gains and losses	265	9	7	0	**281**
Unrealised revaluations	159	-	-	-14	**145**
Total revaluations	**424**	**9**	**7**	**-14**	**426**
Total	**1,475**	**21**	**20**	**8**	**1,524**

Breakdown of investment income 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Interest	1,007	16	13	-10	**1,026**
Dividends	31	-1	-	-	**30**
Rental income	14	-	-	11	**25**
Direct operating expenses	-2	-	-	-3	**-5**
Total interest dividends and rental income	**1,050**	**15**	**13**	**-2**	**1,076**
Realised gains and losses	390	1	-	-1	**390**
Unrealised revaluations	-42	-	-	26	**-16**
Total revaluations	**348**	**1**	**-**	**25**	**374**
Total	**1,398**	**16**	**13**	**23**	**1,450**

The investment income of VIVAT primarily consist of interest income and realised revaluations. The increase in investment income in 2018 is mainly caused by the unrealised revaluations in 2018 compared to 2017. The sales of bonds and realisation of profits in 2018 was approximately the same as in 2017. Because of these sales the interest income on the available for sale portfolio will decrease. In 2018 re-risking activities and interest results on the derivatives portfolio offset this decrease in the investment income.

The investment income in the segment "Other" includes mainly interest income from interest derivatives for hedging a subordinated Tier 2 loan. The interest expenses for this loan are taken into account in other interest expenses.

The interest income increased with € 30 million compared to 2017. The increase is the sum of an increase in re-risking activities and interest results on the derivatives portfolio and a decrease due to the sale of sovereign bonds. This decrease due to the sale of sovereign bonds is for a large part offset by an increase in technical provision, due to amortisation of realised results because of the application of shadow and discretionary profit sharing accounting.

Result on derivatives
Breakdown of result on derivatives 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Result on derivatives held for cash flow hedge accounting	4	-	-	-	**4**
Market value movements of derivatives held for fair value hedge accounting	-9	-	-	-	**-9**
Market value movements of derivatives maintained for ALM not classified for hedge accounting	-117	7	2	16	**-92**
Total	**-122**	**7**	**2**	**16**	**-97**

Breakdown of result on derivatives 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Result on derivatives held for cash flow hedge accounting	**-3**	–	–	–	**-3**
Market value movements of derivatives held for fair value hedge accounting	**33**	–	–	–	**33**
Market value movements of derivatives maintained for ALM not classified for hedge accounting	**-420**	-9	-12	-15	**-456**
Total	**-391**	**-9**	**-12**	**-15**	**-427**

The result on derivatives is due to market value movements of derivatives for hedging interest rate sensitivities.

A.3.2. SRLEV

Investment income
Breakdown of investment income 2018

In € millions	Fair value through profit or loss	Available for sale	Loans and receivables	Investment property	Total
Interest	232	403	377	–	**1,012**
Dividends	–	23	–	–	**23**
Rental income	–	–	–	20	**20**
Direct operating expenses	–	–	–	-4	**-4**
Total interest dividends and rental income	**232**	**426**	**377**	**16**	**1,051**
Realised gains and losses	24	238	2	1	**265**
Unrealised revaluations	7	121	5	26	**159**
Total revaluations	**31**	**359**	**7**	**27**	**424**
Total	**263**	**785**	**384**	**43**	**1,475**

Breakdown of investment income 2017

In € millions	Fair value through profit or loss	Available for sale	Loans and receivables	Investment property	Total
Interest	157	410	440	–	**1,007**
Dividends	–	31	–	–	**31**
Rental income	–	–	–	14	**14**
Direct operating expenses	–	–	–	-2	**-2**
Total interest dividends and rental income	**157**	**441**	**440**	**12**	**1,050**
Realised gains and losses	2	384	1	3	**390**
Unrealised revaluations	-4	-43	–	5	**-42**
Total revaluations	**-2**	**341**	**1**	**8**	**348**
Total	**155**	**782**	**441**	**20**	**1,398**

Fair value through profit or loss

Fair value through profit or loss investments consist primarily of interest income from bonds and interest income from derivatives for hedging interest rate sensitivities.

Available for sale

SRLEV holds fixed-income assets to generate interest income. These fixed income assets are generally classified as Available For Sale and consist mainly of Dutch and German Government bonds. The interest income decreased with € 7 million compared to 2017. The decrease is the sum of an increase in re-risking activities and a decrease due to the sale of sovereign bonds. This decrease due to the sale of sovereign bonds is for a large part offset by an increase in technical provision, due to amortization of realised results because of the application of shadow- and discretionary profit sharing accounting.

Loans and receivables

The investment income of Loans and receivables relates to loans, saving mortgages and mortgages. Investment income of saving mortgages was € 215 million in 2018.

A.3.3. VIVAT Schadeverzekeringen

Investment income
Breakdown of investment income 2018

In € millions	Fair value through profit or loss	Available for sale	Loans and receivables	Total
Interest	2	11	–	**13**
Dividend	–	–1	–	**-1**
Total interest and dividends	**2**	**10**	**-**	**12**
Realised revaluations	–	9	–	**9**
Unrealised revaluations	–	–	–	**-**
Total revaluations	**-**	**9**	**-**	**9**
Total	**2**	**19**	**-**	**21**

Breakdown of investment income 2017

In € millions	Fair value through profit or loss	Available for sale	Loans and receivables	Total
Interest	2	14	–	**16**
Dividend	–	–1	–	**-1**
Total interest and dividends	**2**	**13**	**-**	**15**
Realised revaluations	–	1	–	**1**
Unrealised revaluations	–	–	–	**-**
Total revaluations	**-**	**1**	**-**	**1**
Total	**2**	**14**	**-**	**16**

VIVAT Schadeverzekeringen holds fixed-income assets to generate interest income. These fixed-income assets are classified as Available For Sale and mainly consist of Dutch and German Government bonds.

Result on derivatives

The results on derivatives is due to market value movements of derivatives for hedging interest rate sensitivities.

A.3.4. Proteq Levensverzekeringen

Investment income
Breakdown of investment income 2018

In € millions	Fair value through profit or loss	Available for sale	Total
Total Interest and dividend	1	12	**13**
Realised gains and losses	–	7	**7**
Total	**1**	**19**	**20**

Breakdown of investment income 2017

In € millions	Fair value through profit or loss	Available for sale	Total
Total Interest and dividend	1	12	**13**
Realised gains and losses	–	–	**-**
Total	**1**	**12**	**13**

Proteq Levensverzekeringen holds fixed income assets to generate interest income. These fixed-income assets are classified as Available For Sale and mainly consist of Dutch and German Government bonds.

Result on derivatives

The results on derivatives is due to market value movements of derivatives for hedging interest rate sensitivities.

A.4. Performance of other activities

The performance of other activities relate to VIVAT NV, ACTIAM NV, Zwitserleven PPI NV and of the subsidiaries of SRLEV (e.g. N.V. Pension ESC) and VIVAT Schadeverzekeringen. For more details we refer to Annex I.

Zwitserleven PPI

In € thousands	2018	2017
> Result		
Total Income	2,343	1,550
Total costs	2,386	1,723
Net result continued operations for the period	-32	-130

The total income of Zwitserleven PPI relates to management and adminstration fees. In 2018 Zwitserleven PPI has grown significantly in number of clients and its services. As a result, the total income and corresponding costs increased. The total costs increased mainly due to higher administration costs.

ACTIAM

In € millions	2018	2017
> Result		
Received fee and commission	67	79
Paid fee and commission	31	35
Net fee and commission income	**36**	**44**
Operating expenses	45	42
Net result continued operations for the period	-7	1
Assets under management (€ billions)	56.1	54

Net fee and commission income decreased to € 36 million in 2018. This was mainly the result of the outflow of funds related to a sister company of the former shareholder.

Operating expenses rose by € 3 million, primarily as a result of strategic investments in infrastructure robustness related to data systems, portfolio management and ESG-tooling to support future growth for ACTIAM, both in the Netherlands and internationally.

The net result continued operations for the period decreased by € 8 million compared to 2017 as a result of lower net fees and commission income as well as higher operating expenses.

Assets under management increased to € 56.1 billion as a result of new inflows for the responsible funds, a larger captive mandate and market movements. The ACTIAM retail fund range has grown to more than € 6 billion assets under management at the end of the year.

Holding

In € millions	2018	2017
> Result		
Direct Investment income	35	11
Operating expenses	20	23
Technical claims & benefits	-8	23
Other interest expenses	36	18
Net result continued operations for the period	-20	-40

The net result continued operations for the period in 2018 increased by € 20 million, mainly driven by external refinancing activities and changes in intercompany funding of subsidiaries. In 2017 the net result continued operations for the period was negatively influenced by technical claims and benefits relating to the own pension contract. In 2018, the net result continued operations was negatively impacted by the DTA adjustment.

Operating expenses in 2018 were € 3 million lower. Lower expenses as a result of cost savings initiatives were partly offset by higher costs due to a different allocation of pension costs. At the consolidated level this pension costs allocation had no impact on VIVAT NV.

A.5. Any other information

No other disclosures are applicable.

B. System of Governance

B.1. General information on the system of governance

B.1.1. General governance arrangements

VIVAT NV is a public limited company. Anbang Group Holdings Co. Limited holds 100% of the shares in VIVAT NV. VIVAT has a two-tier board structure consisting of an Executive Board (EB) and a Supervisory Board (SB).

VIVAT is a matrix organisation with both product and functional lines focusing on sustainable profitable growth. The governance model of VIVAT reflects this matrix organisation with product lines being sponsored by various board members and functional lines included in the various product line management teams. This allows control at the level of management teams facilitating the product lines, risk and finance to work together at this level. At the level of the board, sponsorship by each EB member of product and functional lines ensure that they are closely involved in the business of the company.

B.1.1.1. The Executive Board

The Executive Board is responsible for the strategy and management of the company. The Executive Board as of 31 December 2018 consists of the following:

Composition, Appointment and Role

Name	Nationality	Position	Date of appointment
J.J.T. (Ron) van Oijen	Dutch	Chief Executive Officer	14 March 2016
Y. (Yinhua) Cao	Chinese	Chief Financial Officer	23 October 2015
L. (Lan) Tang	British	Chief Risk Officer	26 July 2015
W.M.A. (Wendy) de Ruiter-Lörx	Dutch	Chief Commercial Officer	24 May 2016
X.W. (Xiao Wei) Wu	Chinese	Chief Transformation Officer	26 July 2015
J.C.A. (Jeroen) Potjes	Dutch	Chief Operating Officer	24 May 2016

J.J.T. (Ron) van Oijen (1961) is chief executive officer. He obtained a master's degree in actuarial science at the University of Amsterdam, followed by an advanced management programme at the Wharton Business School. Van Oijen started his career at Aegon and ING in the Netherlands. He subsequently worked as chief executive officer of ING Life and ING Bank in the Czech Republic and Slovakia for four years. In Seoul and Hong Kong he led the large ING Life branches in India, Thailand and South Korea as regional chief executive officer, after which he was appointed as chief executive officer of AIA Thailand. Van Oijen is also a member of the board of the Association of Insurers, Chairman of the Supervisory Board of football club NEC and president of the Royal Actuarial Association of the Netherlands.

Y. (Yinhua) Cao (1975) is chief financial officer. He holds a bachelor's degree in international finance from the Shanghai University of Economics and Finance. Cao started his career in the financial service sector at

PricewaterhouseCoopers in 1998. He was the lead audit partner for large insurance companies and asset management companies, and as the lead partner, he was also involved in various finance and solvency consulting programmes for insurers. His last position with PricewaterhouseCoopers was the partner of the financial service group. At Anbang, he commenced as managing director of Anbang Asset Management Hong Kong and finance director of the Anbang Insurance Group. Cao is also a member of the financial and economic committee of the Association of Insurers.

L. (Lan) Tang (1974) is chief risk officer of the Executive Board. He holds a bachelor's degree in engineering from Beijing University of Aeronautics and Astronautics and a master's degree in actuarial science from Central University of Finance and Economics in Beijing. Tang is a qualified actuary of the United Kingdom. He worked as a consulting actuary for an actuarial consulting firm in London, after which he worked for a global actuarial consulting firm in Hong Kong and an accounting firm in China. In 2010, he started to work as the chief actuary of Anbang Life, where his last position was the deputy general manager and chief actuary of Anbang Life. Tang is also chairman of Fidea NV, as well as a member of the supervisory boards of ACTIAM Beleggingsfondsen NV, SNS Beleggingsfondsen NV and Zwitserleven Beleggingsfondsen NV. He is also a non-executive director of Bank Nagelmackers NV.

W.M.A. (Wendy) de Ruiter-Lörx (1973) is chief commercial officer of the Executive Board. She holds a master's degree in business economics from Erasmus University Rotterdam. She also completed a master's in management & organisation at TIAS Business School in Tilburg. She started her career at ING and Nationale Nederlanden, where she worked for fifteen years, fulfilling various managerial roles in operations and product and process management at both Nationale Nederlanden and ING Bank. Her most recent position at Nationale Nederlanden was that of director of retail clients. De Ruiter-Lörx joined Reaal Life as a unit manager in 2012. Two years later, she was appointed director of Reaal's life business in charge of life policies and mortgages. De Ruiter-Lörx is a member of the distribution committee of the Association of Insurers.

X.W. (Xiao Wei) Wu (1980) is chief transformation officer of the Executive Board. She holds a bachelor's degree in international finance from the University in Fudan, China, and a master's degree in business administration from China Europe International Business School in Shanghai. She worked as associate principal at McKinsey Shanghai, for the insurance sector in Asia. In 2012, Wu commenced at the Anbang group of companies and subsequently worked as director of strategy, director of IT and director of risk. She also was director at Hexie Health, and Anbang Annuity Insurance, both part of Anbang. Wu is non-executive member and chairwoman of Anbang Belgium Holding NV and Bank Nagelmackers NV.

J.C.A. (Jeroen) Potjes (1965) is chief operating officer of the Executive Board. He holds a master's degree in econometrics from Erasmus University Rotterdam as well as a doctorate in economics from the same university. Potjes joined ING Verzekeringen in 1992; he started out at the head office before being assigned to Japan between 1997 and 2001 and to Hong Kong until 2008; in Hong Kong, he served as chief financial officer of the insurance business and asset manager of ING Asia Pacific. He returned to the Netherlands in 2008, when he became responsible for the risk management practices of the global insurance business of ING and subsequently NN Group. During this period, Potjes also sat on the supervisory board of ING Re, ING's reinsurance business. Potjes joined Anbang in 2015, one of his roles being that of non-executive director of Anbang Belgium Holding NV. Potjes is also a member of the committee life insurance of the Association of Insurers and a member of the board of SIVI, member of the Supervisory Committee of Zwitserleven PPI and chairman of the Supervisory Board of ESC Pensioen NV (Curacao).

Governing Rules

VIVAT adheres to the Code of Conduct of Insurers 2018.

VIVAT aims to have gender balance of having at least 30% men or 30% women on the board of directors. In case of a vacancy, we will always aim to find the best candidate for the position. When more candidates show equal qualities, we will give preference to a woman or a man, if that means we can reach our intended gender balance. Currently VIVAT has close to 30% females on the board.

The governing rules of VIVAT are set out in the articles of association and regulations of the Executive Board of VIVAT. Under the articles of association and regulations, certain decisions of the Executive Board are subject to the approval of its shareholder and/or the Supervisory Board of the relevant company or companies. The members of the Executive Board of VIVAT NV are the same as the management board members of SRLEV NV, VIVAT Schadeverzekeringen NV and Proteq Levensverzekeringen NV.

As part of the continuing education programme of VIVAT, the Executive Board members participate in various education sessions. These sessions are sometimes attended together with the Supervisory board members or with senior management of VIVAT and are provided by internal and external speakers. The continuing education programme this year included sessions such as Customer Centricity, Data & Analytics, New Recovery & Resolution Tools and IFRS 17.

VIVAT NV is a public limited company. Anbang Group Holdings Co. Limited holds 100% of the shares in VIVAT NV. The Chinese regulator China Insurance Regulatory Committee (CIRC) announced on 23 February 2018 that it is temporarily taking over the management of Anbang. VIVAT has taken notice of this.

B.1.1.2. The Supervisory Board

Composition, appointment and role

Name	Nationality	Position	Date of appointment
M.W. (Maarten) Dijkshoorn	Dutch	Chairman	23 December 2016
M.R. (Miriam) van Dongen	Dutch	Member	26 July 2015
M. (Ming) He	American	Member	26 July 2015
K. (Kevin) Shum	British	Member	26 July 2015
P.P.J.L.M.G. (Pierre) Lefèvre	Belgian	Member	26 July 2015

M.W. (Maarten) Dijkshoorn was appointed as chairman of the Supervisory Board on 23 December 2016. He is a member of the remuneration and nomination committee, a member of the risk committee and a member of the audit committee. Dijkshoorn has worked in the financial services industry for more than forty years. From 2002 to 2009, Dijkshoorn was chief executive officer and chief operational officer of Eureko BV (Achmea). Prior to that, Dijkshoorn held various management functions within Nationale-Nederlanden for twenty-five years. He was, until recently, supervisory board member of PGGM, Monuta and MediRisk, and he was chairman of the supervisory board of de Goudse Verzekeringen NV.

M.R. (Miriam) van Dongen was appointed as member of the Supervisory Board on 26 July 2015. She is chair of the audit committee and member of the risk committee and member of the remuneration and nomination committee. She has over twenty five years of experience in corporate finance, business strategy and in the financial services industry. Miriam is a non-executive board member by profession and holds various supervisory board positions and is the chair of the audit committees of these supervisory boards. Miriam currently serves as supervisory board member and chair of the audit committee of PGGM NV and Optiver. She is also member of the Supervisory Council and chair of the audit committee of The Netherlands' Kadaster (Land Registry) and board member of Stichting Administratiekantoor Aandelen KAS BANK.

M. (Ming) He was appointed as member of the Supervisory Board on 26 July 2015. He is member of the audit committee. He went to Chengdu University of technology in China for his college education and completed a bachelor degree in 1982. He obtained a master's degree at Bowling Green State University in 1992 and a MBA at the American Graduate School of International Management in 1998. He started his career at the Superior Environment Corporation in 1992 as an environmental engineer. In 2009, he joined Anbang Insurance Group Co., Ltd. as chief investment director of Anbang Property & Casualty Insurance Co., Ltd. In 2012 he was appointed as director and general manager of Anbang Asset Management. Ming He became chief executive officer of Anbang Belgium Holdings NV and Chairman of Board of Bank Nagelmackers in 2016. Until recently, He was chief executive officer of AB Win Win II [LP].

P.P.J.L.M.G. (Pierre) Lefèvre was appointed as member of the Supervisory Board on 26 July 2015. He is chairman of the risk committee and member of the audit committee. After his studies in mechanical engineering and industrial administration, Lefèvre became internal auditor at Unilever before joining AXA Belgium NV in Belgium as a financial controller. He continued his career with AXA Belgium as general manager for Individual Life and later on as general manager for P&C Personal Lines. In 1994, he moved to AXA Insurance (United Kingdom) as chief executive officer of the P&C insurance business and was subsequently appointed chairman of the board. In 1998 he was appointed as chairman of the executive board of AXA Netherlands. Between 2002 and 2013 Lefèvre fulfilled various chief executive officer roles in subsidiaries of Groupama SA in the United Kingdom. Since 2013, Lefèvre has acted as independent non-executive director and chair of the risk committee of Hasting Group Holdings PLC and, since 2014, as senior advisor of Eurohold Corporate Finance, SL. He also serves as an independent nonexecutive director and chairman of the risk committee of Advantage Insurance Company Limited and as non-executive director of Anbang Belgium Holding NV. He is also an independent nonexecutive director, member of the nomination and governance committee and chairman of the audit, risk and compliance committee of Fidea NV.

K. (Kevin) Shum was appointed as member of the Supervisory Board on 26 July 2015. He is chair of the remuneration and nomination committee and member of the risk committee. With over twenty years' experience in the financial industry, Shum is a qualified solicitor of England & Wales, a solicitor of Hong Kong, a member of the Chartered Institute of Arbitrators in the United Kingdom and is a Chartered Financial Analyst in the United States. Previously, Shum worked as a private practitioner at Coudert Brothers LLP and Jun He Law Offices, as Legal Counsel for private equity firm Alliance Capital Asia Limited, a hedge fund of CCIB Asset Management Co. Limited and as Executive Director, Legal & Compliance, for Anbang Overseas Holdings Co. Limited. He currently serves as General Counsel for the Logan Family Trust, is a non-executive director of Fidea NV (chair of governance, nomination and remuneration committee) as well as a member of the supervisory boards of ACTIAM Beleggingsfondsen NV, RZL Beleggingsfondsen NV and Zwitserleven Beleggingsfondsen.

Meetings of the Supervisory Board

The Supervisory Board meets on a regular basis in accordance with an annual schedule, which in practice implies two-day meetings every six weeks on average. The Supervisory Board has drawn up regulations that elaborate and expand on several provisions from the articles of association. These regulations set out additional powers. All members of the Supervisory Board have declared their acceptance of the substance of these regulations and have undertaken to abide by the rules contained therein.

Functioning of the Supervisory Board

The Supervisory Board aims to have a strong representation of diversity in terms of experience, gender, age, professional and cultural background. In accordance with the regulations of the Supervisory Board, the Supervisory Board considers complementarity, collegial collaboration, independence and diversity to be conditions for a proper performance of duties by the Supervisory Board.

All members have confirmed the moral and ethical conduct declaration, which includes the need to make a balanced assessment of the interests of customers, shareholder, bondholders, employees and the society in which the company operates. The regulations of the Supervisory Board explicitly provide that the Supervisory Board shall strike a careful balance between the interests of the company's stakeholders, such as the clients of the company, shareholder and employees.

Self-assessment

The Supervisory Board carries out a self-assessment once every three years facilitated by an external consultant. This was done in 2016. In 2018, the Chairman of the Supervisory Board conducted individual interviews with the members of the Supervisory Board based on the outcome of a questionnaire that each individual board member filled out. The questionnaire was used as a supporting tool to evaluate the functioning of the Supervisory Board as a whole, the functioning of the individual committees, the individual supervisory directors and their relationship with the Executive Board during 2018. The outcome of this self-assessment was in line with the expectations. It was discussed within the Supervisory Board and with the Executive Board. Actions have been taken where necessary.

Continuing Education

Members of the Supervisory Board are encouraged to maintain their expertise at the required standard and enhance it where necessary. In this context, a programme is compiled for the Supervisory Board every year. Each year the Supervisory Board members take at least three training courses within the framework of continuing education. The continuing education programme relates to relevant developments within VIVAT NV and the financial sector, corporate governance in general and of the financial sector in particular, customers, integrity, risk management, financial reporting and audit. The participation of the members of the Supervisory Board in the programme was monitored.

These continuing education sessions included – amongst others – topics on Pensions, Data, Capital Generation and Longevity.

Important Topics and Key Discussions

The formal meetings of the Supervisory Board took place every six weeks (on average). Several additional meetings and conference calls were held. The attendance rate at meetings and committees is high, demonstrating the strength of the Supervisory Board's commitment. None of the Supervisory Board members were frequently absent at these meeting, meaning that there was always a valid quorum.
During the formal meetings the Supervisory Board was updated on strategic activities and topical issues. Furthermore, the Supervisory Board was briefed on the discussions and resulting recommendations from Supervisory Board committee meetings. Twice a year the Supervisory Board held business reviews with all product lines to discuss business activities and key initiatives.

In 2018 the Supervisory Board discussed and approved several items, such as:

- Investment insurance policies and aftercare program
- Re-risking programme

- Restricted Tier 1
- Capital Generation
- Risk Appetite
- General Data Protection Regulation
- The Strategic review VIVAT
- The Operational Plan
- IFRS 17
- Risk Model Landscape

The Supervisory Board and the Chairman of the Supervisory Board had regular contact about these subjects with other stakeholders of VIVAT NV, the Dutch Central Bank (DNB) and Dutch Authority for Financial Markets (AFM).

Cooperation with Committees

The Supervisory Board has three committees: the Audit Committee, the Risk Committee and the Remuneration and Nomination Committee. Each member of the Supervisory Board has sufficient knowledge and experience to assess the main aspects of VIVAT's policy and to form an independent opinion of the basic risks. Decisions regarding risk management and risk control are prepared and recommended by the Risk Committee (RC) and the Audit Committee (AC), respectively. These committees are carefully composed where at least two members of these committees have knowledge of risk management / risk control and internal control / reporting respectively. The Audit Committee discussed the audit scope, key audit matters, the external auditor's report and the management letter of the external auditor. The independence of the external auditor and fees were also reviewed by the Audit Committee. The Audit Committee maintains regular contact with the external auditor by meetings between the chair of the Audit Committee and the external auditor. The external auditors, by mutual agreement, were represented at all meetings of the Audit Committee in 2018. The Audit Committee discussed the annual plan and quarterly reports of the internal audit function, and evaluated the functioning of Internal Audit. Both the internal auditor and external auditor reported on the quality and effectiveness of governance, internal control and risk management. The Audit Committee took note of and discussed VIVAT's consultations with the DNB, and considered the results of on-site examinations conducted by the DNB. The committees met in the presence of members of the Executive Board.

The Supervisory Board's Remuneration and Nomination Committee (ReNomCo) prepares decisions on remuneration regarding Identified Staff and employees in control functions. The ReNomCo members have sufficient expertise with regard to remuneration policies, culture and incentives.

Cooperation between the Supervisory Board and the committees has been positive. The meetings of the committees drill down into the subject matter so that the decisions of the Supervisory Board can be carefully prepared. The substance of the meetings of the committees is fed back to the meeting of the Supervisory Board to ensure that the supervisory directors are kept fully informed and are well positioned to take prudent decisions.

The Supervisory Board appreciates all the efforts made by the Executive Board and all employees in 2018 and looks forward to continuing this cooperation in 2019.

B.1.2. Remuneration

B.1.2.1. Remuneration policy VIVAT NV

For the 'Remuneration policy VIVAT NV' we refer to paragraph 4.4. of the Annual Report VIVAT NV 2018.

B.1.2.2. Actual Remuneration (former) Members of the Executive Board

The following table provides a breakdown of the total remuneration of the Executive Board for the year 2017 and 2018, including former and existing key management. More information about the remuneration of the boards and comparative information has been included in Note 22 of the Annual report VIVAT NV 2018.

Breakdown of Remuneration (former) Members of the Executive Board

In € thousands	2018	2017
Short-term employee benefits	4,372	4,691
Post-employment benefits	138	150
Other long-term benefits	3	-
Total	**4,513**	**4,841**

The other long-term benefits relate to a retention scheme; the vesting of this scheme is subject to certain conditions and any payment will be made in instalments based on current remuneration regulations.

Loans, advances and guarantees

There are no loans, advances or guarantees outstanding on 31 December 2018 (and 2017) and/or granted to members of the Executive Board during 2018.

B.1.2.3. Actual Remuneration Members of the Supervisory Board

The following table provides an overview of the total remuneration of the Supervisory Board members in 2017 and 2018 (excluding 21% VAT).

Breakdown of Remuneration Members of the Supervisory Board

In € thousands	2018	2017
Total fixed actual remuneration for Supervisory Board members	610	610
Total remuneration for the members of the Supervisory Board's Committees	25	25
Total	**635**	**635**

Loans, advances and guarantees

There are no loans, advances or guarantees outstanding on 31 December 2018 (and 2017) and/or granted to members of the Supervisory Board during 2018.

B.1.2.4. Balances and Transactions with Shareholders and Key Management Personnel of VIVAT

Identity of related parties

Parties are considered to be related if one party can exercise control or significantly affect the other party's financial or operating policies. VIVAT's related parties are its parent Anbang and affiliates and VIVAT's key management personnel and their close family members. Unless stated otherwise, transactions with related parties are conducted at arm's length.

Intra-group Balances and Transactions between VIVAT NV, Anbang and Affiliates

	Anbang		Affiliates		Total	
In € millions	2018	2017	2018	2017	2018	2017
> Positions						
Other assets	-	-	-	2	**-**	**2**
Other liabilities	1	2	-	-	**1**	**2**
> Transactions						
Interest expense	-	30	-	-	**-**	**30**
Redemption loans including interest	-	484	-	-	**-**	**484**
Service fees expenses	-1	2	-	-	**-1**	**2**
Service fees income	-	-	1	2	**1**	**2**

The intra-group balances and transactions between VIVAT NV, Anbang and affiliates in 2018 were:

- In 2018 VIVAT have provided administration and investment services to certain affiliates of Anbang in the Netherlands and Belgium.
- In 2017 Anbang have provided IT services to VIVAT, these fees are adjusted in 2018 and still outstanding at the end of 2018.

Intra-group Balances and Transactions with Key Management Personnel of VIVAT

The key management personnel consists exclusively of the members of the Executive Board and the Supervisory Board. This applies to VIVAT and also to SRLEV NV, Proteq Levensverzekeringen NV and VIVAT Schadeverzekeringen NV.

The Executive Board comprised six members as at 31 December 2018 (31 December 2017: 7). The Supervisory Board comprised five members as at 31 December 2018 (31 December 2017: 5).

B.2. Fit and proper requirements

The requirements on suitability for employees who effectively run VIVAT or have other key functions have been extensively described in their specific job profiles. The job profiles reflect the required experience and expertise of the (key)functions. The job profiles are frequently reviewed. All employees (including directors and senior management) are obliged to take the oath financial sector within three months of their appointment. The oath also reflects the required suitability and integrity of the (key)functions.

As part of its legal duties, the Dutch Central Bank (DNB) assesses the suitability and integrity of prospective directors. The suitability and integrity of prospective second tier senior managers are assessed within VIVAT. This internal assessment is subject of approval by the DNB. Employees with intended key functions are also assessed on suitability and integrity within VIVAT. VIVAT has a pre-employment screening policy and second tier screening policy in place which covers both the screening on integrity and suitability of the key functions and second tier senior managers.

Within VIVAT are several instruments in place to assess and direct employees (including employees with key functions) on suitability and integrity during their employment. The regular screening on suitability and integrity is performed in accordance with the key functions fit and proper policy. VIVAT and senior management in particular, also have the responsibility to detect and report signals of unreliable behaviour of employees. Employees whose integrity is not beyond any doubt can be sanctioned in accordance with the sanctions regulations of VIVAT.

B.3. Risk management system including the own risk and solvency assessment

B.3.1. Risk management system general

B.3.1.1. General

VIVAT has established a Risk Management System that is aimed at a controlled and effective achievement of the strategic objectives. It relates risks to the strategic, financial and operational objectives as well as to the objectives in the areas of sustainability and reputation. The framework consists of organizational, control and culture components. The management of VIVAT recognises that transparency is a vital element in effective risk management. The Executive Board and the VIVAT Risk Committee (VRC), which is responsible for setting the Risk Management System, monitor that the desired culture and level of risk awareness are translated into identifiable aspects, such as desirable behaviour, details of the risk appetite or criteria for evaluation of employees.

The Executive Board of VIVAT has set guidelines in the risk governance areas of strategy, risk appetite and culture in order to enable risk assessments to be performed properly and efficiently. These guidelines apply to the entire organisation. VIVAT seeks to have an open culture in which risks can be discussed, employees feel a responsibility to share information on risks and (pro)active risk management is appreciated.

The established Integrated Control Framework (ICF), part of the Risk Management System, provides the basis for the internal control system on risk maturity of process key controls and management controls within VIVAT. The management of a Product Line or Functional Line is responsible for day-to-day operations within the Risk Management System, schedules the testing of operating effectiveness of key controls and prepares operational plans on a yearly basis. These plans are subject to the approval of the Executive Board of VIVAT.

For all components within the ICF, standards include applicable minimum requirements. All components of VIVAT are scored for each Product Line and Functional Line by a yearly assessment of all Management Controls, in which both first line and second line of defence are involved.

B.3.1.2. Overview

In the Risk Management System, specific Solvency II requirements such as the Key Functions and the Own Risk and Solvency Assessment (ORSA) are incorporated. The VIVAT Risk Management System operates an integrated approach for risks that the organisation is or could be exposed to, with Risk Management being an integral part of the decision making process. Major decisions of the Executive Board have to be accompanied by a Key Function opinion.

The core of the VIVAT Risk Management System consists of a Governance part and a Risk management part. In the governance part, starting from the VIVAT Vision and Mission and business strategy, the Risk Strategy and Risk Appetite are derived. The components Risk Policy, Risk Classification and Risk Organisation are necessary conditions to enable these strategic risk processes. To ensure an integrated approach the first line product and functional lines and the second line key functions use the same risk classification, operations are covered by the Risk Appetite and are aligned by a policy structure.

Governance including an adequate Risk Culture, is conditional for performing risk management on tactical and operational level, with as the core a control cycle of risk identification-measurement- mitigation and continuous monitoring and reporting. The Risk Management Process is supported by the ICF, built up from several components that together form the basis for sound and controlled business operations and hence for visibly being in control of VIVAT and its Product and Functional lines. The ICF measures maturity of risk management and ensures steering on correct and complete risk reports.

The internal reports are a part of (the operation of) the Risk Management Process. The reports on recognized types of risks are input for the integrated risk reports, enabling Key Risk Indicator (KRI) monitoring and drawing management attention to deviations of the risk tolerance limits.

VIVAT performs Risk Self Assessments (RSA) and Strategic Risk Assessments (SRA). An ORSA is incorporated in the VIVAT Risk Management System and is performed at least annually.

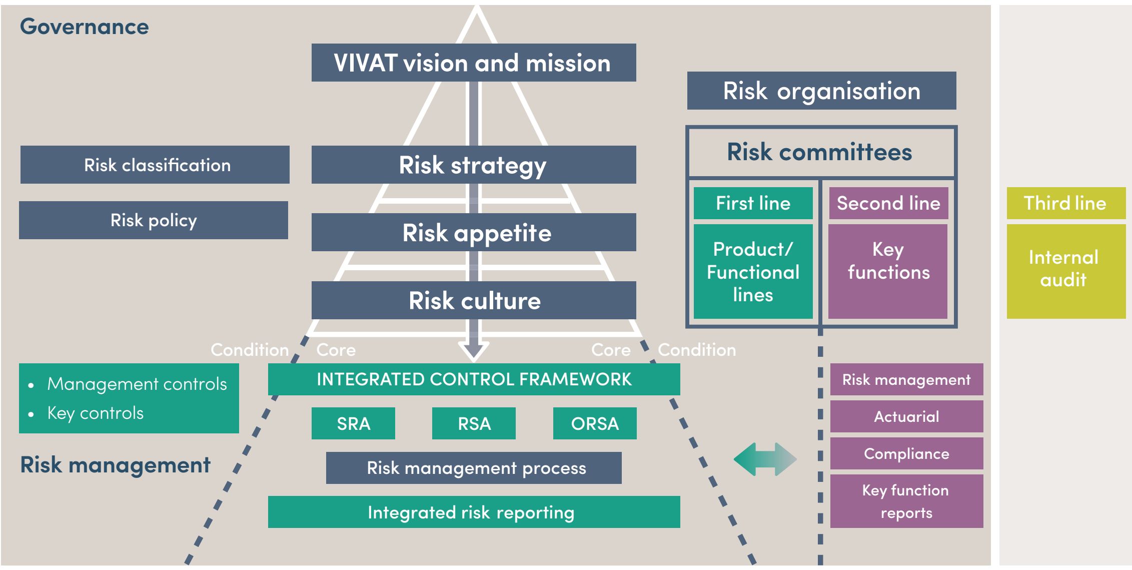


Figure 2: Risk Management

B.3.2. Risk management governance

B.3.2.1. Mission

To achieve our mission to make financial choices easy, VIVAT has set itself three main goals: Customer advocacy, Profitable growth and Cost discipline. With these goals as our starting point, we have set out a Risk Strategy that contributes to a sustainable profitable growth of VIVAT, for the benefit of all its stakeholders.

In order to achieve our mission, VIVAT takes its role in society seriously. Corporate Social Responsibility (CSR) forms an integral part of the strategy and business operations. VIVAT wishes to offer simple and comprehensible, competitively priced products in efficient business processes, using a central back office in addition. VIVAT pursues a customer-centric strategy, with both Zwitserleven, Reaal and nowGo positioned clearly and appealing to different segments. The focus on these flagship brands allows for a more agile and lean operation bringing costs to a lower required level.

B.3.2.2. Risk Strategy

VIVAT has derived a Risk Strategy, a supporting set of objectives following from the VIVAT vision and mission to achieve the strategic goals. VIVAT aims for a robust and strong capital position, which contributes to the trust of customers, employees, society and financial markets in the company. VIVAT offers competitively priced products by utilising economies of scale in its organisation. The Risk Strategy is expressed in the Risk Appetite.

As main principles VIVAT has defined a robust capital position, a sustainable capital generation and sound and controlled business operations.

VIVAT provides guarantees for future payments to its customer and therefore VIVAT needs a strong capital position. The Executive Board would like to hold a buffer above regulatory requirement to absorb temporary volatility and provide more certainty to its customers.

B.3.2.3. Risk Appetite

The Risk Tolerance in the Risk Appetite is set yearly by the Executive Board and confirmed by the Risk Committee (RC) of the Supervisory Board. The Risk Tolerance is limited by the risk capacity, which indicates the maximum amount of risk VIVAT can accept at consolidated level, in view of its capital and liquidity position and any restrictions due to funding agreements or requirements imposed by regulators. The Risk Appetite is subsequently translated into practical risk objectives.

Figure 3: Risk Appetite framework

Risk Appetite is defined at VIVAT level. Subsequently it is developed in more detail on the individual legal entity level or specific Product or Functional Lines in the form of individual quantitative risk limits and qualitative constraints. The limits are measurable; the qualitative constraints are observable. When implementing the strategy, the Executive Board gives guidelines to the Product Lines for establishing Operational plans, taking into account the set Risk Appetite and corresponding limits. With those objectives and constraints as starting point, the Product Lines optimise risk and return by developing the best possible products and services.

The evaluation of the Risk Tolerance in the Risk Appetite, which is carried out at least once a year, consists of a number of steps, including risk identification, the determination of risk capacity, the selection of measures, risk mitigation, risk criteria, reporting and monitoring.

B.3.2.4. Risk Culture

Culture and conduct in general play a vital role in steering a company, and specifically in adequate risk management. Both are considered standard elements in performance evaluation meetings and in annual performance objectives. VIVAT has awareness programmes in place that focus on how employees hold each other accountable for their conduct and how they can escalate matters if necessary. VIVAT has five core behaviours: Client Focus, Result Driven, Immediate Execution, Take Responsibility and Change Attitude.

VIVAT realises that the tone at the top is defining for Risk Culture, which makes communication and exemplary behaviour determinant. VIVAT encourages an open corporate culture in which risks are to be discussed, employees feel responsible to share knowledge on risks and where (pro) active risk management is appreciated. Exemplary behaviour, the openness for discussion of dilemmas, practicability of policy and transparency are inseparably linked to an open corporate culture.

Risk Culture is also embedded in the organisation by risk management being an integral part of the organizational processes and decision making of VIVAT. Decision making is clear, explicit, and in line with the Risk Policy and Risk Appetite of VIVAT. The management teams of the Product Lines and Functional Lines promote awareness of risks and are supported by the second line departments of the Risk organisation. The management teams are responsible for ensuring that risk decisions are made in accordance with the delegated authorisations, in consultation with all second line Solvency II key functions.

Furthermore, VIVAT ensures that senior management and employees on key functions are fit and proper to fulfill their job. Finally, VIVAT's Remuneration Policy discourages taking undesired and irresponsible risks focused on short-term profit and personal gain.

B.3.2.5. Risk Organisation

VIVAT implemented the 'Three Lines of Defence' control model (3LoD) including the Solvency II Key Functions and a risk committee governance structure. It contributes to the strengthening of the Risk Culture, taking responsibility for managing risks and internal control, and eventually to the further optimisation and integration of the risk management.

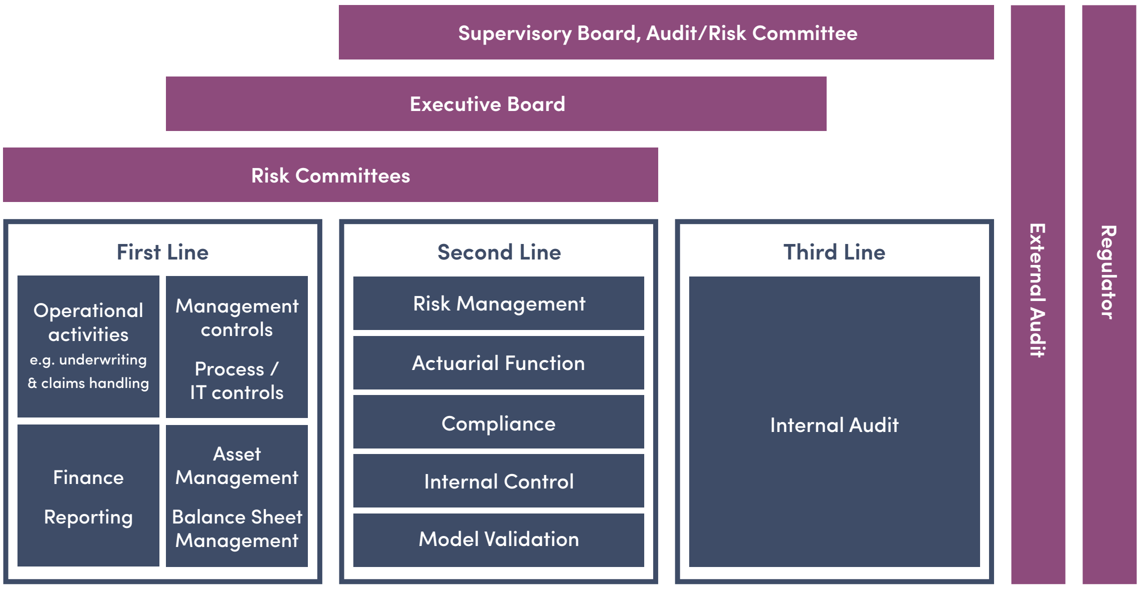


Figure 4: Three Lines of Defence

First line: risk taker

Business plans are prepared in the first line. With this preparation, the first line operationalises the (risk) strategy, focusing on the primary process (i.e. underwriting, claims handling, preparing financial accounts) of the business and on investment activities.

Within the policy framework and subject to internal procedures and risk limits, it is the objective of the risk taker to achieve an optimum risk/return. Consequently risks are managed by identifying, measuring, mitigating and monitoring them and report whether the risks remain within the risk appetite of VIVAT and its underlying entities.

Risk Self Assessments are carried out and in combination with the ORSA, these assessments could lead to changes in the (risk) strategy. For all these activities the first line has an active role in various risk committees including the ability to demonstrate management and process key controls according to the standards as set by the ICF.

Second line: risk management

The second line has a monitoring role in respect of the risk management actions and activities carried out by the first line. The second line assesses actions in the first line as well as the effectiveness of procedures by means of testing key controls, and is responsible for monitoring the overall risk profile to be in line with the risk appetite.

The second line is also responsible for formulating the Risk Management System and setting Risk Policies. The first line is responsible for the execution of these policies. The second line assesses policy compliance on a regular basis, using risk reports, reports on management and process key controls and own observations. Furthermore, the second line sets the mandates in line with the risk appetite. It also defines basic principles and preconditions for risk models and the control framework and supports central decision-making bodies. The data used, including models, assumptions and techniques, are validated periodically.

The second line risk management organisation of VIVAT is part of the Risk department, resorting under the Chief Risk Officer (CRO). This department includes the second line Financial and Non-Financial Risk departments. The CRO is member of the Executive Board.

Third line: internal audit

Audit VIVAT is the independently operating audit function: Audit VIVAT provides assurance and consulting services, helping VIVAT to accomplish its objectives by evaluating and improving the effectiveness of governance, risk management and control processes. For a further explanation of Internal audit see section B.5.

Risk Committees

In addition to the risk management organisation, VIVAT has established Risk Committees to manage risks effectively. VIVAT has established at Group level the following Risk Committees: VIVAT Risk Committee (VRC), Asset Liability Committee (ALCO), Policies Models and Assumptions Committee (PMAC), Investment Committee (IC), Operational Risk Committee (ORC VIVAT) and Product Committee (PC). The ORC VIVAT is leading for the underlying ORC MT's. In the ORC MTs, the issues regarding Operational Risk and Compliance are discussed. The PC is leading for the underlying PMP MT's (Product, Marketing, Pricing) in the Product Lines.

Key Functions

In accordance with Solvency II VIVAT recognises four Key Functions. A function as intended in Solvency II is not a person or a department but an internal capacity to perform certain tasks and responsibilities. The Key Functions are established on Group level and carry out activities on behalf of all insurance entities of VIVAT. The CRO is the Risk Management Function Holder, the Managing Director Risk is the Actuarial Function Holder and the Director Non-financial Risk is the Compliance Function Holder. The Director Audit VIVAT is the Audit Function Holder.

The Risk Management Function (RMF) coordinates the Enterprise Risk Management Report (ERM Report), an integrated comprehensive report on the major financial and non-financial risks within VIVAT. It consists of reports from the three second line Key Functions (Risk Management Function, Actuarial Function and Compliance Function) and shows both the development and the outlook with regard to actuarial, financial, model and non-financial risks, and in addition strategic developments. The ERM Report presents both new and progress on existing high risk findings and/or issues compiled on the basis of the information obtained from monitoring reports, risk dashboards, RAS, Internal Control Statements, reports by internal and external regulators, incidents and issues reported, and own assessments & perceptions. It contains a second line opinion on the development of the various risks, the dependency, and the impact on OP, solvency and strategy. The Risk opinion is discussed in the risk committees and in EB, VRC and the Risk Committee of the Supervisory Board.

The RMF provides annually the Risk Management Function Review Report, aimed at providing a sufficient level of assurance that the Solvency II-figures, and Solvency II and IFRS sensitivities, are determined adequate and reliable. This RMF report is submitted to the VRC and the Audit Committee of the Supervisory Board.

The Actuarial Function (AF) opines on the adequacy of the Technical Provision used for IFRS-LAT and Solvency II purposes. It furthermore assesses the reliability and adequacy of Underwriting and Reinsurance programmes. The Actuarial Function Report (AFR) is submitted to the VRC and the Audit Committee of the Supervisory Board.

Regularly the RMF and the AF submit an update based on the follow-up of findings in the AFR and RMF report, supplemented with recent findings and advices. This update is part of the ERM report.

The main purpose of the Compliance Function is to support management in conducting its business operations in a controlled, honest and sound manner, and with regard to the risks which in this context are a threat to achieving the strategic objectives, obligations arising from laws and regulations, insights from social discussions and guidelines imposed by regulators. The Compliance Function provides regularly, as part of the ERM Report, a report on the most important Compliance Risks of VIVAT to the VRC and the Risk Committee of the Supervisory Board.

B.3.2.6. Risk Policy

VIVAT has an integrated risk management policy structure. The entire policy structure is accessible to employees through the internal policy site. The policy structure ensures the timely identification and assessment of risks and adequate monitoring and reporting of the material risks, both on board and workplace level. The Risk Policy is structured in levels, the aim is to give insight in the cascading from (Solvency II-) legislation, (second line) risk policy, corresponding processes and (first line) implementation. At least once a year the Risk Policies are assessed, adjusted if necessary and approved following regular governance.

B.3.3. ORSA

As part of its risk-management system VIVAT conducts its own risk and solvency assessment (ORSA). That assessment includes:

- the overall assessment of solvency taking into account the specific risk profile, approved risk tolerance limits and the business strategy of VIVAT;
- the significance in which the risk profile of VIVAT deviates from the assumptions underlying the SCR calculated with the standard formula.

The ORSA is an integral part of VIVAT's management control cycle and is filed with the regulator.

B.3.3.1. ORSA Process

The ORSA considers external factors, the business strategy, future developments, the risk profile and risk appetite to assess the amount and quality of capital. An overview is shown in the figure below.

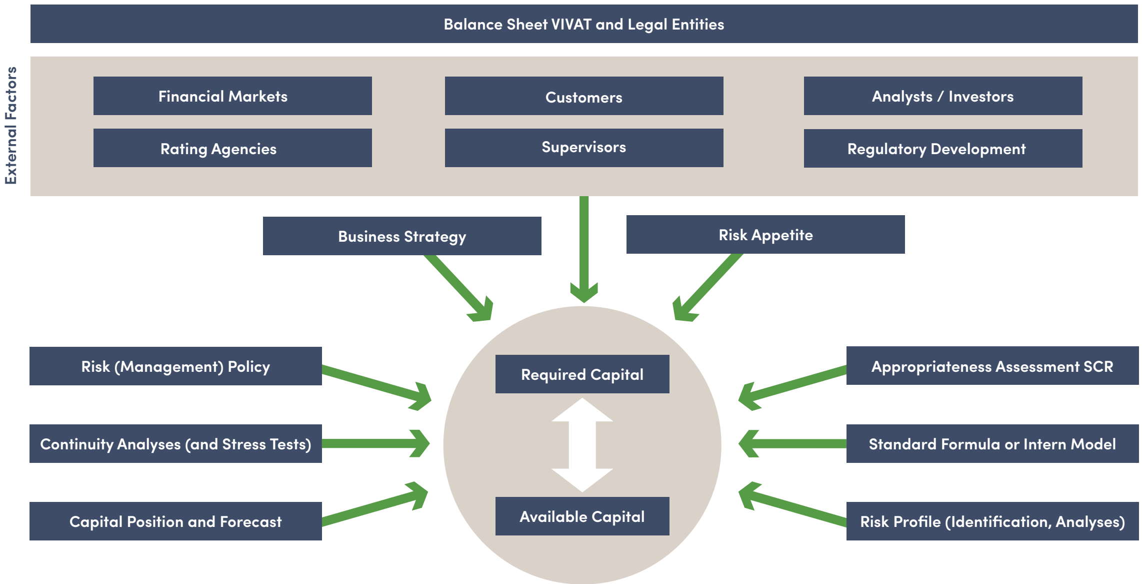


Figure 5: ORSA Process

VIVAT performs the ORSA annually and if any significant change in its risk profile occurs. The Executive Board is accountable and actively involved. Adequacy of capital is tested against a range of stressed scenarios thereby considering the possible effect of management actions.

B.3.3.2. Scenario Tests and Mitigation Action

An extensive risk identification process takes place. The identified risks are subject to a range of stress scenarios, which are severe but plausible, to test the financial position of VIVAT. This is in contrast to the Recovery Plan, in which the scenarios should be severe enough to create a direct threat to the going concern of VIVAT.

For all scenarios in the ORSA mitigating management actions have been assessed.

B.3.3.3. Main Conclusions

The ORSA concludes that VIVAT's risk profile is well reflected in the SCR standard formula and Solvency is adequate. Risks that are out-of-scope of the standard formula have been identified in risk assessments, examined in stress scenarios and mitigated by managerial actions. The quality of VIVAT's capital is good, refinancing of a limited part of VIVAT loans is only due in 2024. VIVAT complies with capital requirements and substantial liquidity and a Revolving Credit Facility is available to recover from stress. VIVAT re-risking plans would further improve capital generation and supports the strong capital position going-forward, while reducing spread volatility by moving to an asset mix more in line with VA reference portfolio.

B.4. Internal control system

B.4.1. Integrated Control Framework

The Integrated Control Framework (ICF) contains a set of (management and process) controls and an analysis on operating effectiveness enabling management to adequately manage risks, following (strategic) objectives and VIVAT's risk appetite. This enables the identification of gaps in the control framework and monitoring on follow-up using a standardised approach.

The ICF forms the basis for sound and controlled operations within VIVAT and monitors Process Controls and Management Controls.

B.4.2. Process Controls and Management Controls

The effectiveness of Process (key) Controls within VIVAT is scheduled each quarter for independent testing by first line management. The second line (internal control) subsequently performs reviews or reperformance.

Management Controls (or Entity level Controls) give insight in the maturity of risk management and mitigation in the individual product- and functional lines. The standards and control objectives used relate to relevant legislation (e.g. WFT, Solvency II) and internal policies.

After the implementation of the Integrated Control Framework (ICF) and GRC tooling in the period 2015-2017, the ICF was further strengthened in 2018 by focus on the governance, structural improvement of process design and increased analysis and reporting possibilities in GRC tooling. The governance was strengthened by installing an Operational Risk an Compliance Committee at VIVAT level. Regarding process design initiatives were started to facilitate and strengthen process ownership for solid process and control design in which all risk and regulatory elements are incorporated. Also, good progress was made in 2018 in order to incorporate automated controls within the ICF. Practically all processes and controls for P&C were reconsidered and updated. At the end of 2018 a start was made to also rationalise and strengthen the monitoring controls within the actuarial departments of Finance which will further continue in 2019.

Due to the update of the methodology of assessing management controls (MCSA) in 2018, the standards for achieving a specific maturity level have been stricter in comparison to the MCSA2017. Despite the stricter assessment, overall the PL/FL's have been able to further improve or at least maintain comparable maturity levels. Amongst others an increase was measured in maturity on model management in the Finance and

Risk domains, due to pro-active communication with second line concerning the model inventory list, model changes and follow-up on findings.

B.4.3. Compliance function

The main purpose of the Compliance Function is to support management in conducting its business operations in a sound and controlled manner, and with regard to the risks which in this context are a threat to achieving the strategic objectives, obligations arising from laws and regulations, insights from social discussions and guidelines imposed by regulators, through:

- Systematic identification analysis of Integrity Risks;
- Drafting and communicating understandable and clear policies and guidelines with regard to Compliance Risks;
- (Pro) actively promoting within VIVAT, a culture of integrity and openness;
- Stimulating and substantively monitoring the Product Lines and Functional Lines in adhering to relevant laws and regulations, codes of conduct, policies and (internal) standards, and also monitoring the implementation of laws and regulations within VIVAT on progress and monitoring the design, existence and operation of the first line responsibility to implement laws and regulations. Monitoring by the Compliance Function focuses on laws and regulations related to integrity and behaviour;
- Challenging both solicited and unsolicited proposals, advises, steering information and management in relation to integrity and Compliance Risks;
- Reporting to EB and SB on adherence to laws and regulations and with regard to identified shortcomings, which remedial measure were taken or are required to be taken.

The Compliance Function is a second line function and is assigned to the Non-Financial Risk department. It carries out its activities on behalf of all entities of VIVAT and performs its tasks independently and takes into account the interests of all its relevant stakeholders. The Director of Non-Financial Risk is the Compliance Function Holder (CFH). In order to ensure the independent role of the CFH, several safeguards have been implemented, amongst others that the CFH (a) is represented in the VRC and the Operational Risk & Compliance and Product Marketing Pricing MT's; (b) has periodic bilateral meetings with the CEO and an escalation line to the CEO and if deemed necessary by the CFH, to the Chairman of the SB; and (c) the Annual Compliance Plan and budget of the Compliance Function is subject to approval by the EB and the Risk Committee of the SB.

In 2018 VIVAT has focused on new opportunities and sustainability towards our clients. The strategic ambition to become an innovative insurer has led to several initiatives in products, services, methodologies and processes. This dynamic and change oriented environment, the announced strategic reorientation of Shareholder, new and changed legislation, combined with a continued focus on cost reduction and revenue models could influence operational and compliance risks. These risks are addressed, managed and monitored within the VIVAT risk framework to maintain a sound and controlled organization.

B.5. Internal audit function

Audit VIVAT is the independently operating audit function: Audit VIVAT provides assurance and consulting services, helping VIVAT to accomplish its objectives by evaluating and improving the effectiveness of governance, risk management and control processes.

Audit VIVAT does not take part in determining, implementing or steering of VIVAT's risk appetite, risk management processes and risk responses. Audit VIVAT reports to the chairman of the Executive Board of VIVAT and has direct access to the Chairman of the Audit Committee of the Supervisory Board of VIVAT.

Audit VIVAT performs risk based audits on VIVAT's risk management processes, including their design and how well they are working, on the management of key risks, including the effectiveness of the controls and other activities, and on the reliability and appropriateness of risks and reporting of risk and control status. This means formulating an opinion on whether the organisation's risk management methodology is understood by key groups or individuals involved, including the Executive Board and the Audit Committee. Further, Audit assesses whether risk management processes are sufficient to protect the assets, reputation, and ongoing operations of the organisation.

B.6. Actuarial function

The Managing Director Risk is accountable for the Actuarial Function (AF). The main responsibilities of the AF are to coordinate the calculation of the technical provision, to express an opinion on the overall underwriting policy, to express an opinion on the adequacy of reinsurance arrangements and to contribute to the effective implementation of the risk-management system, in particular with respect to the risk modelling underlying the calculation of the capital requirements and to the own risk and solvency assessment.

In order to ensure an independent opinion of the AF, safeguards have been implemented. The AF is represented in various risk committees. That is, in particular, the RC, VRC, ALCO, PMAC, PC and the PMPs of the Product Lines. The representation and escalation procedure are registered in the mandates of the committees. The AF co-operates closely with the Risk Management Function. The Managing Director Risk reports to the CRO, however the AF holder has a direct escalation line to both Executive Board and the Chairman of the SB. Position, rights and authorities of the AF are defined and approved on by the VRC.

B.7. Outsourcing

VIVAT has outsourced several business activities to improve its operational efficiency. The full responsibility and accountability for the results of the activities performed by the service suppliers remains with VIVAT. To manage the outsourcing risk VIVAT has a written Outsourcing policy in place to safeguard controlled and sound business operations. The policy contains requirements and guidelines under which activities can be performed by an external service provider. The policy is applicable for all legal entities operating within VIVAT.
The performance of the outsourcing of activities is regulated by a written contract. The contract contains the conditions under which the service provider must operate. This includes quality standards, continuity guarantees and reporting requirements. The exit clauses are also taken up to guarantee a smooth hand over in case the activities have to be taken back by VIVAT. Compliance by the service provider to the treaty is monitored through regularly discussions with the service provider on several levels and includes the option of conducting an audit by VIVAT Audit.
VIVAT distinguishes between the following main outsourcing categories:

- Outsourcing of business processes to external service providers (Business Process Outsourcing). This relates to primary processes and ancillary processes.
- Outsourcing to other legal entities within VIVAT. Control principles are applied in proportionality to the intra-group relation. This applies for example for key functions.

- Outsourcing of IT processes and/or assets to external service providers and/or suppliers. This concerns software development (customisation), management of IT components, housing of IT, or external hosting and management.
- Outsourcing of insurance activities to authorized agents.
- Outsourcing of asset management services. The VIVAT outsourcing policy applies to outsourcing to ACTIAM by insurance entities within VIVAT and/or subsequent sub-outsourcing by ACTIAM to a party outside VIVAT Group. With respect to outsourcing of asset management, ACTIAM has its own outsourcing policy.

B.8. Any other information

No other disclosures are applicable.

C. Risk profile

General

VIVAT and her insurance subsidiaries keep focusing on improving capital generation by re-risking, improving its combined ratio and value of new business, and further optimizing its risk profile taking into account its Risk Appetite. In 2018, as part of re-risking program, the investment portfolio has been shifted to more US credit investments, Emerging Markets Debt and a securities lending program has been started which will have an expected positive impact on capital generation. However, this also leads to an immediate increase on the Solvency Capital requirement decreasing the Solvency II Ratio.

As part of optimizing the risk profile, VIVAT by her subsidiary SRLEV has entered into a full indemnity reinsurance contract to transfer longevity risk (a Quota Share Reinsurance agreement). The Solvency II ratio has been increased significantly by decreasing the longevity risk as part of life underwriting risk. Furthermore, due to new regulatory developments and, as a result of this, the limited effectiveness of the Mass Lapse stop loss treaty, VIVAT by her subsidiary SRLEV has decided to cancel the mass lapse reinsurance contract, which was activated in Q4 2016. The consequence of this cancellation in the increase for underwriting risk is nihil.

VIVAT has continued the process of re-risking and of reducing the spread mismatch between assets (mainly German and Dutch government bonds) and liabilities (mainly swap plus Volatility Adjustment) over 2018. Similar to 2017, the basis risk was further mitigated during 2018 by replacing long duration German and Dutch government bonds by swaps combined with short duration government bonds.

In June 2018 VIVAT successfully executed a Restricted Tier 1 issuance by VIVAT of € 300 million combined with a successful tender offer of EUR 150 million for part of the SRLEV € 400 million Tier 2 subordinated notes. The transaction increased both the capital position as the effectiveness of capital (due to a decrease in non-eligible capital), increasing the Solvency II ratio of VIVAT. In September 2018 € 200 million of VIVAT's liquidity was injected as Tier 1 capital to SRLEV increasing the Solvency II ratio of SRLEV.

Due to widening of government bonds spreads and especially corporate bond spreads in the reference portfolio of the Volatility Adjustment (VA), the applicable VA has increased per year-end 2017 from 4bps to 24bps per year-end 2018. The portfolio of VIVAT is currently more defensive than the VA Reference portfolio, as a consequence the spread impact to the assets was more limited than the decrease of the market value of insurance liabilities caused by the VA, increasing the Solvency II ratio of VIVAT, SRLEV, VIVAT Schadeverzekeringen and Proteq Levensverzekeringen substantially.

The portfolio of VIVAT is currently more defensive than the VA Reference portfolio, as a consequence the spread impact to the assets was more limited than the decrease of the market value of insurance liabilities caused by the VA, increasing the Eligible Own Funds of VIVAT substantially.

As part of the re-risking strategy VIVAT by her subsidiary SRLEV has also entered a limited tactical spread position. Furthermore, VIVAT and SRLEV have managed their interest rate risk slightly further increasing the interest rate risk under Solvency II. However, VIVAT's interest rate risk remains well hedged on a Solvency II ratio basis.

The main risk profile changes in 2018 for VIVAT and SRLEV relate to changes in spread risk (re-risking), interest rate risk (re-balancing and tactical spread position), counterparty default risk (securities lending program equity risk (One-time item), and life underwriting risk (entering longevity re-insurance). Furthermore, the UFR has decreased per year-end 2017 from 4.2% with 15bps to 4.05% per year-end 2018. This had a negative impact on the valuation of long term life insurance liabilities.

The main risk profile of VIVAT Schadeverzekeringen relate to changes in spread risk (re-risking) and Non-life underwriting Risk (new re-insurance treaty). VIVAT Schadeverzekeringen has improved technical results, but combined with low expected asset returns and funding costs the Own Funds development is negative. To become more in line with the developments on climate change, VIVAT has purchased additional reinsurance cover through an Annual Aggregate Excess of Loss treaty for 2019. The Annual Aggregate Excess of Loss treaty protects on an annual basis the retention of the catastrophe reinsurance programme and regular property program against an increase in frequency, decreasing the Non-life underwriting risk (catastrophe risk) and increasing the Solvency II ratio.

The risk profile change of Proteq Levensverzekeringen is mainly due to an increase in spread risk as a result of re-risking. Furthermore, Proteq's Solvency has improved substantially by an update in expense assumptions.

Development Solvency Ratio

The development in 2018 of the solvency ratio is explained by the analysis of change as presented in the graphs below. The movement consists of the categories Capital Generation, Capital Effects, Market Impacts, One-time items, Tax and Tiering effects and Miscellaneous Movements (Other).

Capital Generation is defined as the change of eligible own funds caused by (organic) capital generation due to expected asset return, Value New Business, release of Risk Margin and unwinding of the UFR.

In Capital Effects the effects to capital are shown (i.e. coupon payments to subordinated loans, (Restricted) Tier 1 and Tier 2 capital issuances, Tier 1 capital injection).

In Market Impacts the impact of economic variance to the asset and liability return is taken into account (i.e. spread and interest rate movement). Next to these movements, also the change caused by the Volatility Adjustment is taken into account.

One-time items show the impact of events like entering into a longevity reinsurance contract, the UFR decrease, re-risking impact and changes in models.

Changes of Tax and Tiering due to fiscal movements, Senate approved changes to the corporate income tax-rate and Solvency Capital Requirement changes are presented in Tax and Tiering effects. Next to these movements the Loss Absorbing Capacity of Deferred Taxes movements is taken into account.

Miscellaneous Movements or Other consists mainly of changes in insurance parameters (including expense), insurance results, as well as other business developments. It also contains the regular development (run-off development and new business) of the Solvency Capital Requirement.

VIVAT

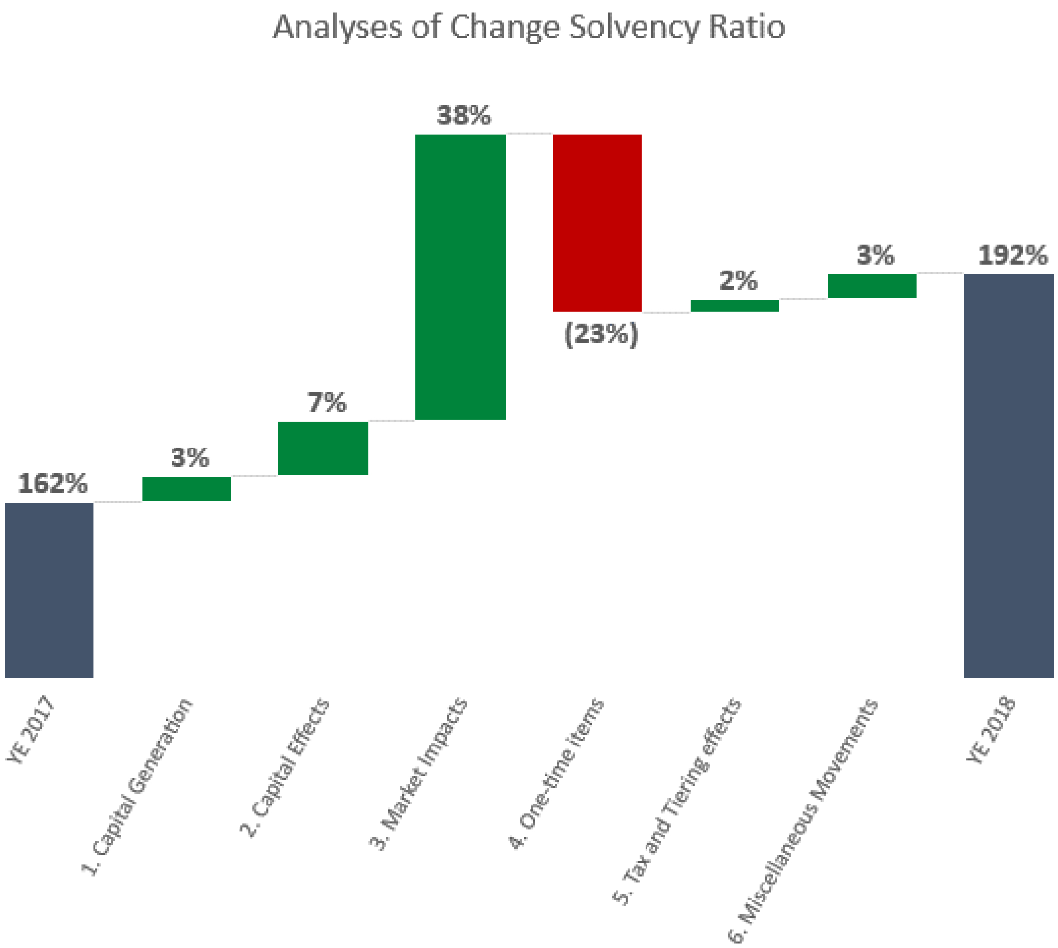


Figure 6: Analysis of Change Solvency Ratio VIVAT

The Solvency II ratio of VIVAT NV increased from 162% to 192% in 2018. The main drivers of this movement are:

Capital Generation (+/+3%)

VIVAT is actively steering to improve organic capital generation amongst others by optimizing her risk profile and re-risk. Re-risking will also decrease spread volatility by better matching the reference portfolio of the Volatility Adjustment. VIVAT's organic capital generation is hampered by the UFR-drag and low due to low expected asset returns caused by a low exposure to market risks.

Capital Effects (+/+7%)

The increase of the Solvency II ratio of 7% is mainly explained by the successfully executed Restricted Tier 1 issuance by VIVAT of € 300 million combined with a successful tender offer of € 150 million for part of the SRLEV € 400 million Tier 2 subordinated notes in June. The transaction increased both the capital position as the effectiveness of capital (due to a decrease in non-eligible capital), increasing the Solvency II ratio of VIVAT. This increase of the eligible own funds is partly offset by coupon payments on subordinated loans.

Market Impacts (+/+38%)

The increase in Solvency II ratio of 38% is mainly explained by spread and Volatility Adjustment movement.

Under the Solvency II regime the swap curve with a prescribed Ultimate Forward Rate (UFR) is used when discounting insurance liabilities, adjusted for credit risk (CRA) and a Volatility Adjustment (VA). The VA moves along with the credit spreads, but still substantial basis risk remains because the VA is based on a reference portfolio instead of VIVAT's own asset portfolio, and also a 65% scaling factor is applied to determine the VA. VIVAT is overweighted in AAA rated European government bonds compared to the VA reference portfolio.

In 2018 the government bonds spreads and especially corporate bonds spread have widened in the reference portfolio of the VA, the applicable VA has increased from 4bps per year-end 2017 to 24bps per year-end 2018. The portfolio of VIVAT is currently more defensive than the VA Reference portfolio. As a consequence the spread impact to the assets was more limited than the decrease of the market value of insurance liabilities caused by the VA, increasing the Solvency II ratio of VIVAT substantially.

One-time Items (-/-23%)

One-time items decreased the Solvency II ratio with 23%, mainly explained by the following events:

- Re-risking.
  - Mainly due to the shift in the investment portfolio to more (US) credit investments, more Emerging Markets Debt and the start of a securities lending program has led to an increasing effect on the spread and counterparty default risk.
  - VIVAT by her subsidiary SRLEV has also entered a limited tactical spread position.
  - Furthermore, VIVAT and SRLEV have managed their interest rate risk slightly further increasing the interest rate risk. However, VIVAT's interest rate risk remains well hedged on a Solvency II ratio basis.
  - This decreases the Solvency II ratio in total by approximately 16%.
- Entering into a longevity reinsurance contract. This increases the Solvency II ratio by approximately 13% by decreasing longevity risk as part of the Life underwriting risk.
- Improved determination of risk margin and life underwriting rusk due to new investigation in homogenity of risk groups, has decreased the Solvency II ratio by approximately 8%.
- The UFR decrease. The eligible own funds decreased due to the decrease of the UFR from 4.20% per year-end 2017 with 15bps to 4.05% per 2018 year-end decreasing the Solvency II ratio by approximately 4%.
- Changes in models. The SCR equity increased mainly due to improved modelling of the risk and the SCR Counterparty Default increased due to new insight in determining the risk (legislation and modelling). The Solvency II ratio decreased by approximately 4%.

Tax and Tiering effects (+/+2%)

The movement is mainly explained by an increased Solvency Capital Requirement decreasing the tiering restriction to Tier 2 and Tier 3 capital.

Miscellaneous Movements or Other (+/+3%)

The most important drivers for the increase in Solvency II ratio of 3% in this category is portfolio development, including reflection of this in underwriting parameter updates and insurance results.

SRLEV

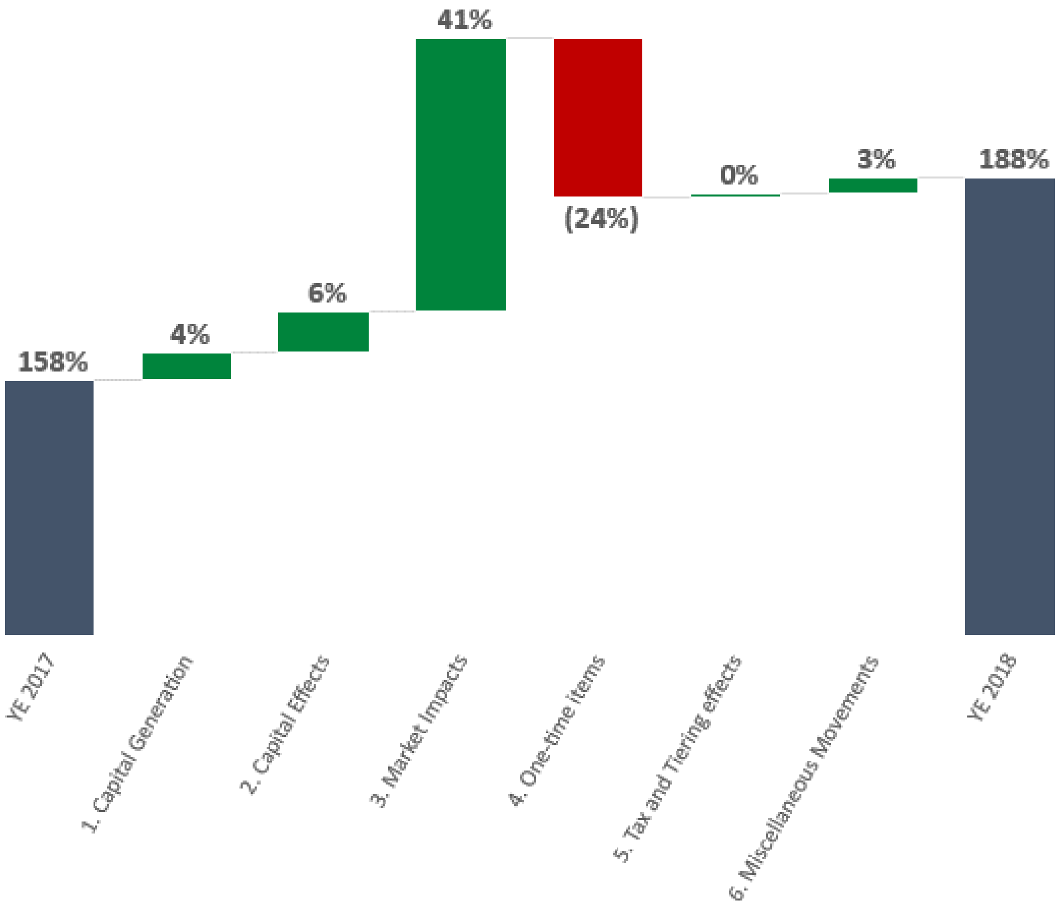


Figure 7: Analysis of Change Solvency Ratio SRLEV

The Solvency II ratio from SRLEV NV increased from 158% to 188% in 2018.

Capital Generation (+/+4%)

VIVAT is actively steering to improve organic capital generation amongst others by optimising her risk profile and re-risk. Re-risking will also decreasing spread volatility by better matching the Volatility Adjustment. SRLEV's organic capital generation is hampered by the UFR-drag and low due to low expected asset return caused by a low exposure to market risks.

Capital Effects (+/+6%)

The increase of the Solvency II ratio of 6% is mainly explained by a € 200 million Tier 1 capital injection of VIVAT to SRLEV. This increase of the eligible own funds is partly offset by coupon payments on subordinated loans.

Market Impacts (+/+41%)

The increase in Solvency II ratio of 41% is mainly explained by spread and Volatility Adjustment movement.

Under the Solvency II regime the swap curve with a prescribed Ultimate Forward Rate (UFR) is used when discounting insurance liabilities, adjusted for credit risk (CRA) and a Volatility Adjustment (VA). The VA moves along with the credit spreads, but still substantial basis risk remains because the VA is based on a reference portfolio instead of VIVAT's own asset portfolio, and also a 65% scaling factor is applied to determine the VA. VIVAT is overweighted in AAA rated European government bonds compared to the VA reference portfolio.

In 2018 the government bonds spreads and especially corporate bonds spread have widened in the reference portfolio of the VA, the applicable VA has increased from 4bps per year-end 2017 to 24bps per year-end 2018. The portfolio of VIVAT is currently more defensive than the VA Reference portfolio. As a consequence the spread impact to the assets was more limited than the decrease of the market value of insurance liabilities caused by the VA, increasing the Solvency II ratio of VIVAT substantially.

One-time items (-/-24%)

One-time items decreased the Solvency II ratio with 24%, mainly by events like:

- Re-risking.
  - Mainly due to the shift in the investment portfolio to more (US) credit investments, more Emerging Markets Debt and the start of a securities lending program has led to an increasing effect on the spread and counterparty default risk.
  - VIVAT by her subsidiary SRLEV has also entered a limited tactical spread position.
  - Furthermore, VIVAT and SRLEV have managed their interest rate risk slightly further increasing the interest rate risk.
  - However, SRLEV's interest rate risk remains well hedged on a Solvency II ratio basis.
  - This decreases the Solvency II ratio in total by approximately 18% .
- Entering into a longevity reinsurance contract. This increases the Solvency II ratio by approximately 14% by decreasing longevity risk as part of the Life underwriting risk.
- Improved determination of risk margin and life underwriting risk, due to new investigation in homogenity of risk groups, has decreased the Solvency II ratio by approximately 8%.
- The UFR decrease. The eligible own funds decreased due to the decrease of the UFR from 4.20% per year-end 2017 with 15bps to 4.05% per 2018 year-end decreasing the Solvency II ratio by approximately 4%.
- Changes in models. The SCR equity and the SCR Counterparty Default increased due to new insight in determining the risk(legislation and modelling). The Solvency II ratio decreased by approximately 5%

Tax and Tiering effects (+/+0%)

The movement is mainly explained by an increased Solvency Capital Requirement decreasing the tiering restriction to Tier 3 capital.

Miscellaneous Movements or Other (+/+3%)

The most important drivers for the increase in Solvency II ratio of 3% in this category is portfolio development, including reflection of this in underwriting parameter updates and insurance results.

Vivat Schadeverzekeringen

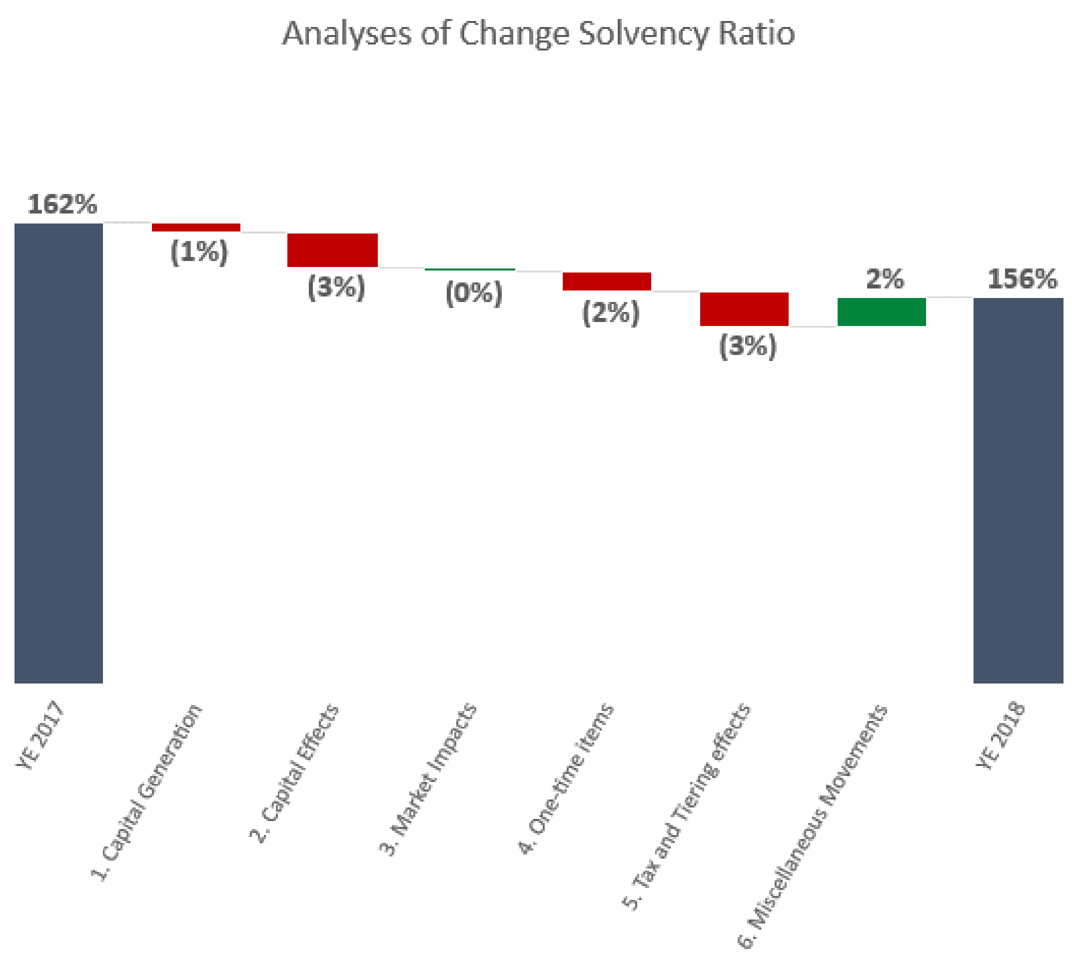


Figure 8: Analysis of Change Solvency Ratio VIVAT Schadeverzekeringen

The Solvency II ratio of VIVAT Schadeverzekeringen decreased from 162% to 156% in 2018. The main drivers of this movement are:

Capital Generation (-/-1%)

VIVAT is actively steering to improve organic capital generation amongst others by optimising her risk profile and re-risk. VIVAT Schade's organic capital generation is hampered by low expected asset return caused by a low exposure to market risks.

Capital Effects (-/-3%)

The decrease of the Solvency II ratio is explained by coupon payments on subordinated loans to VIVAT.

Market Impacts (+/+0%)

Market movements including the VA in total have limited impact to the Solvency II ratio.

One-time items (-/-2%)

One-time items decreased the Solvency II ratio with 2%, mainly by events like:

- Re-insurance adjustments. To become more in line with the expected developments on climate change, VIVAT has purchased additional reinsurance cover through an Annual Aggregate Excess of Loss treaty for 2019. The Annual Aggregate Excess of Loss treaty protects on an annual basis the retention of the catastrophe reinsurance programme and regular property programme against an increase in frequency, decreasing the Non-life underwriting risk (catastrophe risk) and increasing the solvency ratio by approximately 5%.
- Re-risking. The re-risking programme has led to an increasing effect on the SCR spread. This decreases the Solvency II ratio by approximately 4%.
- The eligible own funds decreased due to the decrease of the UFR from 4.20% per year-end 2017 with 15bps to 4.05% per 2018 year-end, decreasing the Solvency II ratio with approximately 1%.
- Changes in models. The Solvency II ratio of VIVAT Schadeverzekeringen is supported by improvements in determining the Risk Margin run-off pattern and improved modelling of the disability portfolio (transition to monthly model), increasing the Solvency II ratio in total with approximately 3%.
- Losses incurred by the January 2018 windstorm negatively impact profitability (-4%).

Tax and Tiering effects (-/-3%)

The movement is mainly explained by movements in the Deferred Tax Liability (DTL) and in the Loss Absorbing Capacity of Deferred Taxes. The DTL movement allocated to this category is explained by movements in the fiscal position and due to the by Senate approved changes to the corporate income tax-rate.

On 19th December 2018 the Senate has approved part of the ‘Belastingplan 2019’. Among others this bill includes the reduction of the rate in corporate income tax (“CIT Rate”). Concretely, it means that the rate goes to 22.55% with effect from 2020 and to 20.50% with effect from 2021.

Miscellaneous Movements or Other (+/+2%)

The most important drivers for the increase in Solvency II ratio of 2% in this category is portfolio development, including reflection of this in underwriting parameter updates and insurance results.

Proteq Levensverzekeringen

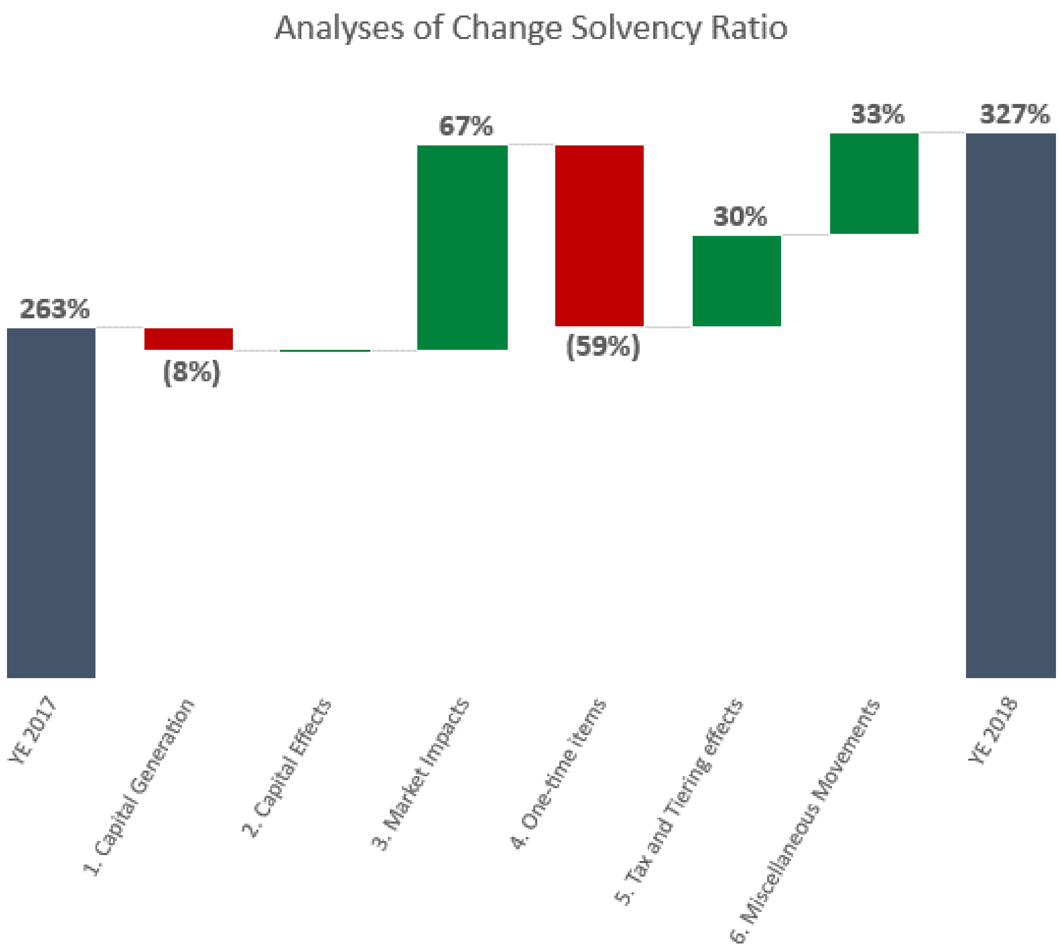


Figure 9: Analysis of Change Solvency Ratio Proteq Levensverzekeringen

The Solvency II ratio of Proteq Levensverzekeringen NV increased from 263% to 327% in 2018. The main drivers of this movement are:

Capital Generation (-/-8%)

VIVAT is actively steering to improve organic capital generation amongst others by optimising her risk profile and re-risk. Re-risking will also decreasing spread volatility by better matching the Volatility Adjustment. The closed book portfolio of Proteq Levensverzekeringen has been re-risked towards YE to increase next year's organic capital generation. The organic capital generation of Proteq Levensverzekeringen is hampered by the UFR-drag and low due to low expected asset return caused by a low exposure to market risks.

Capital Effects (+/+0%)

There have been no capital effects for Proteq Levensverzekeringen.

Market Impacts (+/+67%)

The increase in Solvency II ratio of 67% is mainly explained by swap spread and VA movement.

One-time items (-/-59%)

One-time items decreased the Solvency II ratio with 59%, mainly by executing the re-risking program increasing the spread risk and counterparty default risk decreasing the Solvency II ratio.

Tax and Tiering effects (+/+30%)

The movement is mainly explained by movements in the Deferred Tax Liability (DTL) and in the Loss Absorbing Capacity of Deferred Taxes (LACDT). The DTL movement allocated to this category is explained by movements in the fiscal position and due to the by Senate approved changes to the corporate income tax-rate (increasing the Solvency II ratio by approximately 12%). Due to a significant increase in Eligible Own Funds Proteq's net DTA position switched to a total net DTL position, subsequently leading to a LACDT (increasing the Solvency II ratio in total by approximately 18%).

Miscellaneous Movements or Other (+/+33%)

Driver for the increase in Solvency II ratio of 33% in this category is mainly caused by an expense assumption update, allocating less cost to the Proteq Portfolio. Next to this, portfolio development including reflection of this in underwriting parameter updates and insurance results mitigates the impact of the expense assumption change slightly.

Risk classification

VIVAT provides insight into the risks for the business itself and for its stakeholders to manage these risks within the indicated tolerance levels. This includes both behaviour related and financial aspects of Risk Management. To provide clarity in the communication and management of risks, the risk classification incorporates a comprehensive list of mutually exclusive risk types to which VIVAT is exposed or could be exposed to.

VIVAT has defined and structured different risk types, partly on the basis of applicable laws and regulations (such as Solvency II Standard Formula), and partly on own assessment of risks given VIVAT's risk profile. As part of its strategy, VIVAT deliberately takes Underwriting risks and Market risks aiming for returns. As a consequence, taking Counterparty risk and Liquidity risk may contribute to those returns. Compliance risk and Operational risks are inherent risks that do not provide more returns when taking more risk and have to be controlled and managed at a minimal level.

Strategic developments (governance, positioning, external developments) relate to future business developments and may eventually emerge as one of the main or sub risk types and are monitored in the ERM Report. In the risk assessment on the Operational Plans several internal and external strategic development scenarios are taken into account.

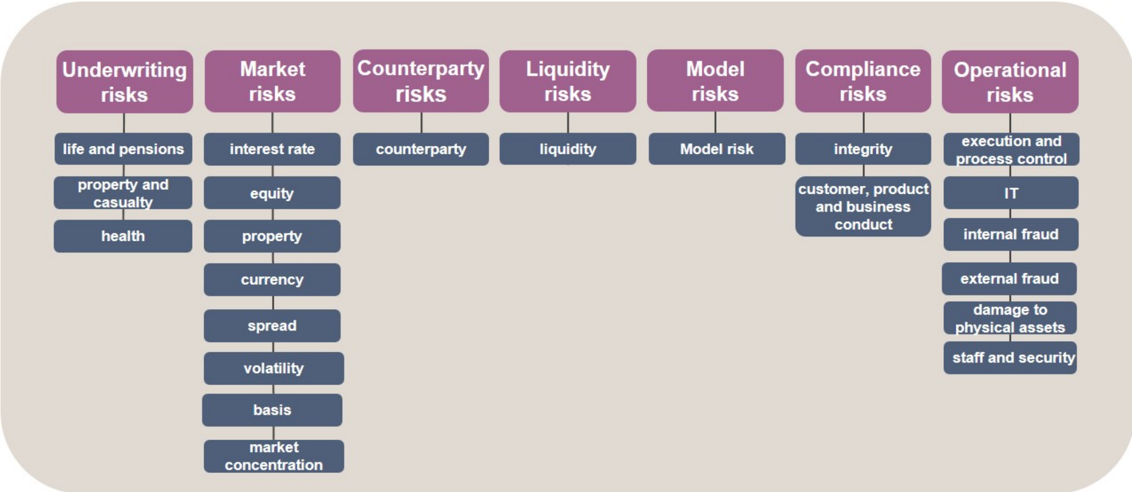


Figure 10: Risk classification

Vivat applies the Solvency II Standard Formula, not all of the risk categories are part of the Solvency Capital Requirement (SCR) calculation. The SCR calculation does not contain Liquidity and Compliance Risk. The tables below show a breakdown of the SCR of VIVAT and of its solo entities:

Solvency Capital Requirement at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	VIVAT
Life underwriting risk	1,358	-	25	1,376
Underwriting risk Non-Life	-	203	-	203
Underwriting risk Health	-	269	-	269
Market risk	1,028	42	21	1,133
Counterparty default risk	148	16	1	164
Diversification	-585	-168	-11	-952
Basic Solvency Capital Requirement	**1,949**	**362**	**36**	**2,194**
Operational risk	178	21	2	199
Loss-absorbing capacity of technical provisions	-	-	-	-
Loss-absorbing capacity of deferred taxes	-	-22	-2	-
Net Solvency Capital Requirement	**2,127**	**361**	**36**	**2,393**
Capital requirements of other financial sectors				19
Consolidated Group SCR				**2,412**

Solvency Capital Requirement at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	VIVAT
Life underwriting risk	1,501	-	26	1,520
Underwriting risk Non-Life	-	208	-	208
Underwriting risk Health	-	271	-	271
Market risk	742	29	15	836
Counterparty default risk	136	9	1	145
Diversification	-499	-160	-9	-881
Basic Solvency Capital Requirement	**1,880**	**357**	**33**	**2,099**
Operational risk	181	21	2	203
Loss-absorbing capacity of technical provisions	-	-	-	-
Loss-absorbing capacity of deferred taxes	-	-27	-	-
Net Solvency Capital Requirement	**2,061**	**351**	**35**	**2,302**
Capital requirements of other financial sectors				25
Consolidated Group SCR				**2,327**

The risk categories will be explained in the more detail in the next paragraph.

The main risk profile changes in 2018 for VIVAT and SRLEV relate to changes in life underwriting risk and market risk. The main risk profile changes of VIVAT Schadeverzekeringen relate to changes in market risks (spread risk). The risk profile change of Proteq Levensverzekeringen is mainly due an increase in market risk (spread risk).

Changes in the item "Diversification" is the result of changes in the underlying risk modules. Not all risks will materialize at the same time and at their full magnitude resulting in diversification between different risk types. Interest rate shocks can also have an impact on the Loss-absorbing capacity of technical provisions (LAC TP). Article 83 of the Delegated Regulations requires to report this impact separately from the SCR Interest rate scenario. Therefore the SCR Interest rate scenario does not change the value.

The Loss Absorbing Capacity of Deferred Taxes in the SCR is set at 0%, except for legal entities with a net Deferred Tax Liability (DTL). In these cases the Loss Absorbing Capacity of Deferred Taxes equals the net DTL-position.

Capital Requirements of other financials sectors refer to holdings which are subject to a different regime than Solvency II.

To give more insight in the risks the company is exposed to, sensitivities are determined on best effort basis for different underwriting and market risks in the next sections. For underwriting risks and spread risks the sensitivities shown are the estimated impact on own funds without recalculating the SCR after shock. For the other market risks the sensitivities shown are the estimated impact on own funds including the estimated impact on the SCR market and life underwriting risk after shock.

The way in which the risk categories are managed is discussed below.

C.1. Underwriting risk

C.1.1. Risks - general

The underwriting risk is the risk that the own funds, earnings or solvency will be threatened as a result of the inability to make payments (either now or in the future) from premium and/or investment income owing to incorrect and/or incomplete assumptions (mortality, longevity, disability, claims, policy holders' behavior, catastrophes, interest and expenses) used in the development of the product and the determination of its premium. A distinction is made between Life (including Pensions) and Non-Life (Property & Casualty and Disability). The interest rate risk related to insurance products forms part of the market risk.

C.1.2. Risk management process

VIVAT assesses new underwriting risks continuously and manages existing underwriting risks, for both new business and for the existing portfolio.

Operational Plan

Derived from the VIVAT strategy, the Operational Plan (OP) describes the planned development of the insurance portfolio together with the related capital requirement for the next three years, based on expected new business and the existing portfolio. The OP sets out in broad terms whether VIVAT wants to enter new markets, which forms of distribution will be used, whether new (forms of) insurance products will be developed, and which products will be adjusted or terminated. It also lays down possible measures relating to acceptance and the mitigation of claims.

Product Development, Pricing and Acceptance

In accordance with the OP, new or adjusted products are developed which follow the Product Approval and Review Process (PARP). Starting from the customer's interests the target group, coverage and terms and conditions are determined. This is the basis for the best estimate risk premium, taking into account options and guarantees, capital requirements and the internal pricing curve. Furthermore, criteria related to profitability and risk control measures (acceptance criteria, clauses, any reinsurance) must be met.

The Product Committee (PC), in which the Solvency II second line Key Functions are represented, is responsible for approval of new products, including the pricing. A selling product review is performed regularly, existing products follow a risk based product review calendar.

Technical Provisions

Under Solvency II the technical provisions (including provisions for saving mortgages) are measured using Solvency II parameters, taking into account current market estimates. Under IFRS a liability adequacy test on the technical provision is performed, if the carrying amount of the technical provision is inadequate, the provision is increased. With respect to economic parameters used, there are differences regarding the interest rate curve and the cost of capital. The difference in the interest rate curve development, due to the VA development that is only applicable for Solvency II, is a main driver for the development of the reconciliation of IFRS and Solvency II.

Parameter Study

For long-term policies (Life, Disability) evaluation of the underwriting parameters (e.g. mortality, lapses, disability, recovery) takes place by a parameter study. The aim of this study is to value the existing insurance portfolio and set the cost price of new Life insurance policies. For short-term policies the Non-Life underwriting parameters are evaluated every quarter, other parameters (like lapse) at least once a year. Thereby relevant information on portfolio developments is taken into account. At the Non-Life business, the tariff structure of each product is regularly assessed by means of analysis. Monitoring takes place on the basis of the combined ratio of each branch and distribution.

Portfolio Analysis

Portfolio analysis is aimed at optimising risks and returns within the risk policy structure. This can lead to new strategic insights in areas such as entering new markets or terminating products. The analysis is based on the impact of underwriting risks following from various measures: IFRS-based liability adequacy test (LAT), long term profitability, SCR and VNB. Based on the risk appetite, VIVAT mitigates underwriting risks primarily by means of diversification and reinsurance.

C.1.3. Life

Life includes SRLEV and Proteq Levensverzekeringen

C.1.3.1. Risk categories

The underwriting risk in the Life business includes the significant sub-risk categories of mortality risk, longevity risk, lapse risk, catastrophe risk and expense risk. It can also include disability and recovery risk to a limited degree. VIVAT is also exposed to interest rate risk in the context of guarantees for both IFRS and Solvency II.

Mortality Risk and Longevity Risk

The risk most typically associated with Life insurance policies is mortality and longivity risk. These risks mainly affect the duration and timing of the payment of the insured cash flows. Mortality risk indicates the risk for the company of the policyholder dying earlier than expected. In the case of a life benefit, the longevity risk for VIVAT is that the policyholder might live longer than expected (longevity risk). The financial impact of the difference between the date the policyholder is expected to die and the actual date of death can be substantial, particularly in the case of longevity risk.

To forecast the survival probabilities of the entire population, VIVAT uses the model published by the Netherlands Actuarial Association (Projection table AG2018) which combines mortality rates of several European countries with those of The Netherlands. The probabilities are reviewed at least once a year and updated if necessary to include the most recent observations. Once a year VIVAT also reviews and if required updates the em-pirical figures for portfolio mortality on the basis of research into observed mortality within the Life portfolio.

Disability-morbidity Risk

Other underwriting risks that affect the Life insurance portfolio is the risk of being (partly) incapacitated for work for a period or on a permanent basis. The financial impact is mostly dependent on the age, the sum insured and the disability percentage of the policy holder.

Lapse Risk

Other underwriting risks that affect the Life insurance portfolio are risks associated with policyholders' behavior, such as early surrender (the policyholder terminates the policy before the maturity date) or conversion to a paid-up status (the policyholder terminates the regular premium payment before the maturity date).

Life Expense Risk

VIVAT runs expense risk if actual costs turn out to be higher than the amounts received from the cost loadings included in the pricing calculation. This relates to changes in the level, trend or volatility of the costs related to the fulfilment of insurance or reinsurance contracts.

VIVAT uses a 'moderate going concern' assumption in its models. This means that it expects the portfolio to decline in size owing to sustainable profitable growth from new policies failing to keep pace with the expiry of existing policies. As a result, it will be harder to spread fixed costs over a declining total number of policies. This assumption is reflected in the projection parameters for the technical provision.

Life Catastrophe Risk

With respect to Life insurance, in the event of a catastrophe the risks will be concentrated primarily in the group insurance portfolio. Participants in a group contract often work at the same location or undertake joint activities, which brings about a concentration of risk. Such concentrations of risks have been partly offset through the use of reinsurance.

Interest Rate Guarantee Risk

In the case of traditional insurance policies, VIVAT bears the interest rate risk on the investments that are held to cover the obligations to policyholders. When a benefit or annuity payment is due, VIVAT pays the policy holder a predetermined nominal amount. In contrast, VIVAT does not run any interest rate risk on pure unit-linked contracts. However, VIVAT has issued interest rate guarantees for some unit-linked insurance policies, as a result of which it is exposed to an interest rate risk in respect of products of this type. A guaranteed minimum return on maturity or a guaranteed yearly return applies in the case of unit-linked investment policies with an interest rate guarantee.

In the case of Group insurance policies with separate accounts, it is the policyholder that, in principle, bears the market risk. The policyholder is the institution that concluded the contract to insure the pension commitments for its employees with VIVAT. VIVAT guarantees the payment of the insured pension rights. The value of the investments has to be at least sufficient to cover the provision for accrued pension rights that are guaranteed. Additional measures may also have been agreed contractually to compensate for investment losses up to a certain amount (e.g. the creation of an additional provision/buffer in the investment account). VIVAT is entitled to reduce the market risk if the additional provisions/buffers are insufficient. If the value of the investments (including any contractually agreed additional measures) turns out to be insufficient, the remaining deficit is for the risk of VIVAT.

The following table indicates which risks are associated with specific products for the Life insurance portfolio of VIVAT.

Products in the Life insurance portfolio (Solvency II)

Product	Product features		Risks per product					
	Guarantee	Profit-Sharing	Mortality	Longevity	Cata-strophe	Lapse	Expense	Disability
Savings-based mortgage	Mortgage interest		√		√	√	√	
Life annuity	Regular payment			√			√	
Term insurance	Insured capital	[1]	√		√	√	√	
Traditional savings	Insured capital	√	√	√	√	√	√	
Funeral insurance	Insured capital	√	√	√	√	√	√	
Individual insurance policies in investment units	[2]		√	√	√	√	√	
Group insurance policies in cash	Regular payment / Insured capital	√	√	√	√	√	√	√
Group insurance policies in investment units	[2]		√	√	√	√	√	√
Group insurance policies with separate accounts	Regular payment / Insured capital[3]			√	√	√	√	√

[1] Partly company profit-sharing
[2] In some insurance guaranteed minimum yield applies at maturity
[3] End of contract date contract contributory is not mandatory

C.1.3.2. Life insurance portfolio

The Life insurance portfolio contains individual (Individual Life) and Group insurance (Life Corporate) policies.

Individual policies are sold as policies with a fixed sum insured and policies with a benefit in units (unit-linked and universal life insurance). The traditional products were sold without or with profit sharing. The unit linked policies are without or with guarantees.

The Individual Life insurance portfolio mainly consists of unit-linked insurance policies, savings mortgage policies, endowments and other savings policies, term life policies, funeral policies and Life annuity insurance policies providing regular payments for a fixed period or for the remainder of the holder's life.

The Life Corporate portfolio consists of both traditional contracts where the investment risk is borne by the insurer, investment insurance (unit linked and universal life) and separate accounts, where the investment risk is borne by the customer. The separate accounts have an interest guarantee whereby at the current low interest rates this option has value for the customer.

The total portfolio is spread over policies with mortality risk and policies with longevity risk.

VIVAT sells individual Life insurance policies and annuities in the retail and SME markets in the Netherlands. With respect to new business, the focus is primarily on term Life insurance. These are sold via the labels Reaal and Zwitserleven by intermediaries and through direct channels. Furthermore, mortgage-related capital insurance is sold. The individual life insurance is aimed at private households.

VIVAT's corporate Life insurance portfolio focuses on the entire corporate market in the Netherlands.

Co-insurance Life

VIVAT has concluded a number of co-insurance contracts with one or more other insurers. In general, risk assessments are based on the information provided by the administrating company. In the case of co-insurance, each co-insurer is liable for its own part of the insurance. Every year, the leader of the contract draws up a report that VIVAT uses to monitor the development of the portfolio and determine the provisions.

C.1.3.3. Life reinsurance

The insurance business has a largely integrated reinsurance programme for the life and disability portfolio.

As per 2018, proportional reinsurance of the mortality risk is no longer in place and only the individual disability risk is reinsured. The retention for individual disability risks corresponds to € 1.5 million sum at risk per insured. For 2019, the appropriateness of the current structure of the reinsurance program for disability will be further assessed.

The catastrophe reinsurance contract for life and disability was concluded as an umbrella cover for the different sub portfolios together. The cover of the catastrophe reinsurance for life and disability amounts from € 15 million up to € 90 million.

To protect VIVAT for the risk of a mass lapse event, VIVAT had a non-proportional Mass Lapse Stop Loss reinsurance contract (indemnity based) in place. Due to new regulatory developments and, as a result of this, the limited effectiveness of the stop loss treaty, VIVAT is of the opinion that continuation of the mass lapse stop loss reinsurance treaty is no longer appropriate and decided to terminate the stop loss treaty as per ultimo 2018.

Finally, after a thorough and intensive investigation regarding the risk mitigation of longevity risk, VIVAT has succeeded to transfer part of the longevity risk through a full indemnity-based reinsurance agreement. With this reinsurance agreement the remaining longevity risk is in line with VIVAT’s internal risk appetite. The impact has been reflected in the 2018 SCR calculations.

C.1.3.4. Sensitivities and SCR

The value of the Life insurance portfolio is sensitive to changes in the underwriting parameters used for calculating the market value of liabilities. In order to obtain information on these sensitivities, the effects of changes in mortality rates, surrender rates (including conversions to non-contributory policies) and expense assumptions, including inflation, are calculated separately. The most material items have been disclosed.

The key sensitivities of IFRS equity, or the Solvency II ratio, to changes in the underwriting parameters are the sensitivities to longevity risk and expenses. Due to the long term nature of the Life insurance portfolio these sensitivities are very sensitive for interest rate movements.

The Solvency II ratio sensitivities for underwriting parameters are based on the estimated impact on own funds without recalculating the SCR after shock.

VIVAT
Sensitivity as a result of changes in technical parameters

	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
In € millions	**2018**	2017	**2018**	2017	**2018**	2017
10% increase in surrender rates (including non-contributory continuation)	37	4	37	4	2%	2%
10% lower mortality rates for all policies (longevity risk)	-172	-251	-172	-251	-9%	-14%
10% increase in expenses assumptions + 1% increase in inflation	-437	-434	-437	-434	-23%	-24%

SRLEV
Sensitivity as a result of changes in technical parameters

	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
In € millions	**2018**	2017	**2018**	2017	**2018**	2017
10% increase in surrender rates (including non-contributory continuation)	37	4	37	4	2%	1%
10% lower mortality rates for all policies (longevity risk)	-175	-254	-175	-254	-10%	-17%
10% increase in expenses assumptions + 1% increase in inflation	-422	-417	-422	-417	-25%	-27%

Proteq Levensverzekeringen
Sensitivity as a result of changes in technical parameters

	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
In € millions	**2018**	2017	**2018**	2017	**2018**	2017
10% increase in surrender rates (including non-contributory continuation)	0	0	0	0	1%	0%
10% lower mortality rates for all policies (longevity risk)	3	3	3	3	17%	9%
10% increase in expenses assumptions + 1% increase in inflation	-16	-19	-16	-19	-60%	-54%

Mortality risk
The capital requirement for life mortality risk is equal to the loss in basic own funds resulting from an instantaneous permanent increase of 15% in the mortality rates used for the calculation of the technical provisions. The increase in mortality rates will apply only to insurance policies for which the increase in mortality rates leads to an increase in technical provisions, without risk margin, being the best estimate provision.

Longevity Risk

The capital requirement for life longevity risk is equal to the loss in basic own funds resulting from an instantaneous permanent decrease of 20% in the mortality rates used for the calculation of the technical provisions. The conditions for the calculation are exactly the same as those specified in relation to life mortality risk, although in this case it concerns an increase in the best estimate provision in the event of a falling mortality rate. The groups whom this concerns will generally be those that are not affected by the life mortality risk.

For VIVAT and SRLEV the sensitivity for a longevity shock has decreased due to entering a longevity re-insurance contract.

Disability-morbidity risk

Please refer to section C.1.4. Non-life.

Lapse risk

The capital requirement for life lapse risk is equal to the largest of the following capital requirements:

- The capital requirement for the risk of a permanent increase in lapse rates.
  This is equal to the loss in basic own funds of insurance and reinsurance undertakings that would result from an instantaneous permanent increase of 50%.
- The capital requirement for the risk of a permanent decrease in lapse rates.
  This is equal to the loss in basic own funds of insurers and re-insurers that would result from an instantaneous permanent decrease of 50%.
- The capital requirement for mass lapse risk. This is equal to the loss in basic own funds that would result from a discontinuance of 40% of the policies.

The lapse down shock is the dominant shock for VIVAT and SRLEV. For Proteq Levensverzekeringen the mass lapse shock is dominant.

Life expense risk

The capital requirement for life-expense risk is equal to the loss in basic own funds that would result from the following combination of instantaneous changes:

- an increase of 10% in the amount of expenses taken into account in the calculation of the technical provisions;
- an increase of 1 percentage point in the cost-push inflation rate (expressed as a percentage) used for the calculation of the technical provision.

The above shock is applied to all VIVAT's continuing operating expenses. Only the 10% increase is applied on the management fee of the investment portfolio, because these expenses are not sensitive to inflation.

Revision risk

This risk is not present in the portfolio, the effect of the shock is set to 0.

Life catastrophe risk

The capital requirement for life catastrophe risk is equal to the loss in basic own funds resulting from an instantaneous permanent increase of 0.15 percentage points to the mortality rates in the following 12 months.

The increase in mortality rates will apply only to insurance policies for which the increase in mortality rates leads to an increase in technical provisions, without risk margin, being the best estimate provision.

Diversification

Not all risks will materialize at the same time and at their full magnitude resulting in diversification between different risk types.

The tables below show the SCR of the underwriting risk Life, In these calculations only the policies which are negatively affected by these sensitivities are taken into account.

SCR Life underwriting risk at 31 December 2018

In € millions	SRLEV	Proteq	VIVAT
Mortality risk	239	7	246
Longevity risk	825	1	826
Disability-morbidity risk	18	-	18
Lapse risk	357	4	358
Life expense risk	533	20	553
Life catastrophe risk	206	-	206
Diversification	-820	-7	-831
SCR Life underwriting risk	**1,358**	**25**	**1,376**

SCR Life underwriting risk at 31 December 2017

In € millions	SRLEV	Proteq	VIVAT
Mortality risk	256	6	262
Longevity risk	1,071	-	1,071
Disability-morbidity risk	22	-	22
Lapse risk	222	1	223
Life expense risk	581	23	604
Life catastrophe risk	193	-	193
Diversification	-844	-4	-855
SCR Life underwriting risk	**1,501**	**26**	**1,520**

VIVAT

The Solvency Capital Requirement for life underwriting risk decreased mainly due to a decrease of the longevity risk due a full indemnity reinsurance contract to transfer longevity risk that has been entered (a Quota Share Reinsurance agreement). Portfolio development including reflection of this in underwriting parameters updates are the main driver for the increase of lapse risk and decrease of expense risk.

SRLEV

The Solvency Capital Requirement for life underwriting risk decreased mainly due to a decrease of the longevity risk due a full indemnity reinsurance contract to transfer longevity risk that has been entered (a Quota Share Reinsurance agreement). . Portfolio development including reflection of this in underwriting parameters updates are the main driver for the increase of lapse risk and decrease of expense risk.

Proteq Levensverzekeringen

The life underwriting risk mostly decreased mainly due to decreases in expense risk. The decrease is mainly driven by updated insurance parameters (including expense parameters) and portfolio development.

C.1.4. Non-Life

For the division of risks into sub-risks in the Non-life insurance portfolios, VIVAT makes a distinction between Health underwriting risk and Non-Life underwriting risk.

The emphasis of this portfolio is on three segments: Fire, Motor and Disability. The insurance policies are mostly sold through authorized agents and distribution partners to retail and SME customers. In addition, sales are also effected via direct channels. The disability insurance products in the portfolio include both individual coverage (for self-employed persons) and group coverage for employees. Only individual insurance contracts are currently sold.

The health underwriting risk module consists of the following three submodules:

- SCR for the Health Non-SLT underwriting risk
- SCR for the Health SLT risk
- SCR for the Health catastrophe risk

The Health catastrophe sub-module relates to all health insurance policies (i.e. both SLT and Non-SLT). In the following two subparagraphs the Non-Life underwriting risk and the health underwriting risks are assessed. In the third subparagraph the important role reinsurance has on the risk profile of VIVAT Schadeverzekeringen N.V. is mentioned.

C.1.4.1. Disability

The classification of Life insurance risks also applies to these insurance policies, although the materiality of these risks is different. The Non-life insurer pays disability benefits that stem from the individual and group portfolios. The Life insurer pays disability benefits that relate to the cover that forms part of a Life insurance contract.

Disability risk, recovery risk and lapse risk

In the case of disability insurance, the main risks are the disability risk, recovery risk and lapse risk. The disability risk and recovery risk are risks that appear when a policyholder becomes unfit for work and receives benefits during the period this situation remains to exist. The risks relate to the amount, duration and timing of the payment of the insured cash flows. The disability risk is the risk that more policyholders than expected become disabled, or that policyholders become more severely disabled than expected. The recovery risk is the risk that fewer policyholders recover or that the policyholder recovers to a lesser extent than expected. The lapse risk is the risk associated with the consequences of cancelation by the policyholder before the envisioned end date of the policy.

VIVAT manages this risk by continuously monitoring the inflow, outflow and by promoting/offering reintegration pathways.

C.1.4.2. Property & Casualty

The risks of Property & Casualty (P&C) can be divided into risks related to claims, whether reported or not, that have already occurred (reserve risk), and risks related to future claims arising from current contracts (premium risk and catastrophe risk).

Reserve risk

Reserve risk is the risk that the accrued claims reserves are insufficient to settle all claims already incurred. VIVAT manages this risk by means of monitoring best estimate trends in the claims development based on claim year on a regular basis. VIVAT has assigned specialised departments for the handling and run-off of claims (including bodily injury claims). Experts in these departments handle claims on an item-by-item basis, make estimates of the size of the claim, and monitor the progress of claims settlement. The long-tailed claim areas at VIVAT are disability claims, bodily injury claims and liability claims.

A liability adequacy test on the (IFRS) premium and claims reserves is performed once a month (at the Life and Pensions business) or once every quarter (at the Non-Life Insurance business), or more frequently if this is deemed necessary. Any reserves that are inadequate are increased. The most recent insights as to parameters are involved here.

For short-term policies (P&C), the Non-life underwriting parameters are evaluated every quarter, other parameters (like lapse) at least once a year. In these evaluations relevant information on portfolio developments is taken into account. At the Non-life business, the tariff structure of each product is regularly assessed by means of analysis. Monitoring takes place on the basis of the combined ratio of each branch and distribution channel.

Premium risk

Premium risk is the risk that premiums pertaining to future exposure are insufficient to meet all corresponding claims and costs. VIVAT manages this risk by means of the product development, pricing and acceptance procedures as described in section C.1.2 Risk management process.

Catastrophe risk

Catastrophe risk is the risk of losses due to extreme or exceptional events. This includes both natural disasters and events caused by human actions. Geographically, the risk in the Non-life portfolio of VIVAT is almost entirely concentrated in the Netherlands. There is concentration of underwriting risks in the Fire segment, where storm risk is an important factor. In addition, the concentration of risks can occur in apartment buildings, city blocks and office buildings. The concentration of risks also occurs in the group accident portfolio and the group disability schemes. VIVAT reinsures catastrophe risks due to perils of nature (such as storms) or terrorism. Catastrophes resulting from acts of violence, nuclear incidents or floods are excluded under the standard policy conditions. Through participation in the nuclear insurance pool and the environmental insurance pool, specifically insured risks are shared with other insurers.

Co-Insurance

VIVAT Schadeverzekeringen NV is represented at the Rotterdam Insurance Exchange through its co-insurance unit. Risks in the Fire, Transport and Liability segments are underwritten. The focus is on the medium-sized and large business segments of the corporate insurance market.

C.1.4.3. Non-Life reinsurance

The use of reinsurance is an important role in managing the net risk profile of the Non-Life portfolio. The reinsurance program consists of reinsurance contracts per line of business and makes no specific distinction between the various distribution channels. In addition to the regular protection for the portfolios, VIVAT Schadeverzekeringen N.V. has concluded a catastrophe contract for covered natural perils (storm, hail) and the accumulation of losses due to one event (e.g. conflagration) within the fire portfolio.

The 2018 reinsurance program was largely a continuation of the program for 2017. From risk management and capital management considerations, the capacity of the catastrophe program for 2018 and 2019 is aligned with the Risk Appetite of VIVAT.

To become more in line with the expected developments on climate change, VIVAT has purchased additional reinsurance cover through an Annual Aggregate Excess of Loss treaty for 2019. The Annual Aggregate Excess of Loss treaty protects on an annual basis the retention of the catastrophe reinsurance programme and regular property program against an increase in frequency.

Non-life insurance retention

In € thousands		2019	2018	2017
Coverage:				
Property Catastrophe	per event	20,000	20,000	20,000
Property Fire	per risk	2,000	2,000	2,000
Property Annual Aggregate	per risk per risk/ event	5.000 10.000		
Motor Third Party Liability	per risk	2,500	2,500	2,500
General Third Party Liability	per risk	1,500	1,500	1,500
Personal Accident	per risk	1,000	1,000	750
Transport	per risk	1,000	1,000	1,000

The level of retention of the VIVAT Non-life reinsurance contracts is in line with the size of the underwriting portfolios and the principles of the Reinsurance Policy. The reinsurance program consists of reinsurance contracts per line of business and makes no specific distinction between the various distribution channels.

C.1.4.4. Sensitivities and SCR Non-life

The own funds of P&C Insurance are sensitive to results in the Non-life claims, disability and loss ratio's. The table below shows the sensitivity for different shocks. The IFRS net result sensitivity for an increase of claims of 10% is equal to the impact on IFRS shareholder equity and increased from minus € 29 million to minus € 31 million. In contrast to 2017 in 2018 the impact to Loss Absorbing Capacity is taken into account. This improved determination is the main driver for the increased sensitivity in the Solvency II ratio.

Sensitivity as a result of changes in parameters

In € millions	Solvency II ratio	
	2018	2017
Claims +10%	-13%	-8%
Disability +25% and Recovery -20%	-58%	-49%
Loss ratio current accident year +10%	-12%	-7%

Non-Life premium and reserve risk
The capital requirement for the premium and reserve underwriting risk is dependent on the standard deviation and volume of the premiums and outstanding reserves.

Non-Life Lapse risk
The capital requirement for the lapse risk is equal to the loss in basic own funds as a consequence of an instantaneous discontinuance of 40% of the insurance policies for which discontinuance would result in an increase of the best estimate provision. Compared to premium & reserve risk and the catastrophe risk this risk is limited.

Non-Life catastrophe risk
In calculating the SCR for the Non-Life portfolio the following main drivers are identified: premium & reserve risk, cat risk and lapse risk. Due to risk diversification between the risks the total risk is less than the aggregated results and thus a diversification effect originates. In the following table the net SCR outcome for each risk is given.

SCR underwriting risk Non-Life

In € millions	2018	2017
Non-Life premium and reserve risk	185	183
Non-Life lapse risk	9	4
Non-Life catastrophe risk	48	63
Diversification	-39	-42
SCR Non-Life underwriting risk	**203**	**208**

The increase in premium and reserve risk can be explained by portfolio development (increase of portfolio and run-off gains former accident years) and increases in claim reserves (due to a windstorm in January). The increase in lapse risk can be mainly explained by portfolio development including reflection of this in underwriting risk parameters (lower cost parameters and lower initial expected loss ratios). To become more in line with the expected developments on climate change, VIVAT has purchased additional reinsurance cover through an Annual Aggregate Excess of Loss treaty for 2019. The Annual Aggregate Excess of Loss treaty protects on an annual basis the retention of the catastrophe reinsurance programme and regular property program against an increase in frequency, decreasing the Non-life underwriting risk (catastrophe risk).

C.1.4.5. Sensitivities and SCR Health

The health underwriting risk relates to occupational disability policies and the casualty, sickness benefits and pet care portfolio. As the risk profiles of these insurance policies differ, a distinction is made in risks between:

- health insurance policies which provide for long-term benefits and thus resemble Life policies (Health SLT);
- health insurance policies which provide for short-term benefits and thus resemble Non-Life insurance (Health Non-SLT);
- risks relating to a mass accident, an accident concentration risk and a pandemic. This results in a third main risk module within Health and is the Health catastrophe risk (Health Cat).

SLT Mortality risk
This risk applies to the Health SLT active portfolio for which mortality rates may have a negative impact on the best estimate. For the Health SLT Inactive portfolio a shorter life will mean less future payments. The impact is marginal because the end date of the contract limits the mortality risk.

SLT Longevity risk
This risk only applies to Health SLT Inactive portfolio. The impact is marginal because the end date of the contract limits the longevity risk.

SLT Disability-morbidity risk
The capital requirement for morbidity risk (or incapacity for work risk) is equal to the loss in basic own funds that would result from the following combination of instantaneous permanent changes:
- an increase of 35% in the disability rates which are used in the calculation of technical provisions in the following 12 months;
- an increase of 25% in the disability rates which are used in the calculation of technical provisions in all months thereafter;
- a decrease of 20% in the rehabilitation rates for the calculation of the technical provision for all years.

The shock on disability applies to both the first year as well as risk after the first year and has major impact on both the Health SLT active portfolio as well as the Health SLT inactive portfolio. The parameters in the shock are at the core of the product and given the duration of the controls the impact of this shock is very significant in the Non-Life portfolio.

SLT Lapse risk
The high exposure to lapse is mostly driven by the expected future profits contained in the disability portfolio. The lapse risk is based on a formula of different type of shocks (see Life portfolio). The impact is mainly seen at the health SLT active portfolio. There is a (marginal) impact on the inactive portfolio, because disabled policy holders can rehabilitate.

SLT Expense risk
The impact of the expense risk shock is relatively limited for the disability portfolio.

SLT Revision risk
The capital requirement for revision risk is equal to the loss in basic own funds that would result from an instantaneous permanent increase of 4% in the amount of annuity benefits only on annuity insurance and reinsurance obligations where the benefits payable under the underlying policies could increase as a result of changes in the legal environment or in the state of health of the insured person. Due to the fact that disability claims are paid out in the form of an annuity, there is a sensitivity to this shock. However, it is limited.

The health SLT underwriting risk applies to occupational disability policies. Virtually the same sub-modules as defined for the Life underwriting risk (see section C.1.3) apply to the SLT health underwriting risk. Also virtually the same are the extent of shocks and the correlation assumptions between the shocks.

SCR Health SLT underwriting risk

In € millions	2018	2017
SLT Longevity risk	2	3
SLT Disability-morbidity risk	232	233
SLT Lapse risk	85	79
SLT Expense risk	18	22
SLT Revision risk	14	15
Diversification	-91	-90
SCR Health SLT underwriting risk	**260**	**262**

The change in SLT health lapse risk can be partly explained by a change in models due to new insight in determining the risk (transition to monthly model). Changes in the other risks can be mainly explained by insurance parameter updates, portfolio development and interest rate development (including VA).

SCR Health underwriting risk

In € millions	2018	2017
SCR Health SLT underwriting risk	**260**	**262**
Non-SLT premium reserve risk	15	15
Non-SLT lapse risk	3	3
Diversification	-2	-3
SCR Health Non-SLT underwriting risk	**16**	**15**
Health catastrophe risk	3	3
Diversification	-10	-9
Total health underwriting risk	**269**	**271**

Non-SLT SCR
Due to the limited size of the portfolio, the Non-SLT underwriting risk is limited.

C.2. Market risk

C.2.1. Risks - general

Market risks can potentially have a substantial financial impact on the value of the assets and liabilities of the insurance business. Unfavourable changes in market conditions have an impact on VIVAT’s earnings and/or own funds. To manage the mismatch between the assets and liabilities an ALM (Asset and Liability Management)-framework is in place. This framework is designed to bring about an investment strategy that optimises the relationship between risks and returns. The framework also ensures that VIVAT’s operations remain within the boundaries of its risk appetite.

The market risk is the risk arising from changes in the level or volatility of market prices of financial instruments which have an impact on the value of the assets and liabilities of VIVAT. The ALM-framework aims to properly reflect the structural mismatch between assets and liabilities, with respect to the duration thereof.

The following eight sub-market risks have been defined: interest rate risk, equity risk, property risk, spread risk, basis risk, market risk concentrations, currency risk and volatility risk. VIVAT can achieve its financial objectives by managing these risks adequately. It does this by reducing losses due to movements in the level and/or volatility of market prices of financial assets, liabilities and financial instruments.

VIVAT monitors and mitigates market risk in close cooperation with ACTIAM, the asset manager of VIVAT. For mitigation, instruments such as interest rate swaps, futures, FX forwards, interest rate swaptions and fixed income investments are used.

C.2.2. Risk management process ALM

The ALM-policy covers the management of market risk, counterparty default risk and liquidity risk.

The starting point for the ALM policy is the ALM study, which is drawn up annually. The ALM study seeks to find an optimum between risk and return within the preconditions that apply with regards to solvency, laws and regulations. This ALM study is used as a basis for defining a Strategic Asset Allocation (SAA), which is in turn used to translate specific investment activities into an investment plan and investment mandates for ACTIAM, taking into account the risk tolerances in the Risk Appetite Statements (RAS), solvency ratio, the tax position and the long-term risk exposure. In order to spread the risk, the risk is spread across a range of risk drivers, asset classes and sectors. When finalising the SAA, specific attention is paid to the availability of sufficient expertise in the segments in which investments are held. All investments are monitored by means of reports on performance and capital.

Investments are made in accordance with the prudent person principle and in the interest of the policyholders. The prudent person principle forms part of the ALM policy. Investments are made exclusively in assets and instruments which risks are properly identified, measured, monitored, managed, controlled and reported.

Sensitivity Analyses and Stress Tests

Stress tests provide information on how sensitive investments and liabilities are to interest rate risk and other market risk. These risks are quantified (and monitored) on a regular basis.

For interest rate risk several parallel and non-parallel shocks are defined. For market risk a number of combined scenarios is determined with (different) simultaneous shocks to the various sub-market risks.

These market risk scenarios are monitored and reported on a regular basis, and if deemed necessary adjustments are made to existing risk exposures based on overlay hedging tools. This evaluation is supported by metrics for yield curve risk and non-linear interest rate risk. In this manner, VIVAT manages market risk from a holistic balance sheet perspective.

This approach reflects the sensitivity of the entire statement of financial position (of fixed cash flows, options, risk margin and required capital) drawn up on a Solvency II basis.

C.2.3. SCR Market risk

Exposure to market risk is measured under the Solvency II regime using adverse movements in financial variables. The main driver of market risk is the Solvency Capital Requirement for spread risk and to lesser extent the Solvency Capital Requirements for Equity and interest rate risk.

The relevant types of market risk in Solvency II are displayed in the table below:

SCR Market risk at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	VIVAT
Interest rate risk	498	16	14	487
Equity risk	231	7	-	216
Property risk	84	-	-	119
Spread risk	642	33	11	686
Currency risk	40	-	-	184
Diversification	-467	-14	-4	-559
SCR market risk	**1,028**	**42**	**21**	**1,133**

SCR Market risk at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	VIVAT
Interest rate risk	239	12	14	224
Equity risk	204	12	-	196
Property risk	82	-	-	117
Spread risk	471	17	2	489
Currency risk	31	-	-	175
Diversification	-285	-12	-1	-365
SCR market risk	**742**	**29**	**15**	**836**

VIVAT

The main drivers for the SCR market risk increase are an increase in the interest rate risk, an increase in the spread risk and an increase in the equity risk.

The spread risk increased mainly due to the re-risking program. In 2018, the investment portfolio has been shifted to more US credit investments and Emerging Market Debt which will have an expected positive impact on capital generation. However, also an immediate increase on the spread risk.

The interest rate risk for VIVAT and SRLEV mainly increased due to a slightly adjusted interest-rate hedge position and a limited tactical swap spread position. Although the tactical swap spread position increases the interest rate risk under the Solvency II legislation, VIVAT's interest rate risk remains well hedged on a Solvency II ratio basis.

The equity risk increased mainly due to new insight in determining the risk (modelling).

SRLEV

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The equity risk increased mainly due to new insight in determining the risk (modelling).

VIVAT Schadeverzekeringen

The main drivers for the SCR market risk increase are an increase in the interest rate risk and an increase in the spread risk. The spread risk increased mainly due to the re-risking program. The interest rate risk mainly increased due to the improved modelling of the disability portfolio slightly decreasing the sensitivity of the liabilities and increasing the interest risk.

Proteq Levensverzekeringen

The main driver for the SCR market risk increase is an increase in the spread risk mainly due to re-risking.

C.2.3.1. Interest rate risk

Interest rate risk is a key component of VIVAT's market risk profile. Interest rate risk arises when the interest rate sensitivities of the assets and liabilities are not completely equal and it is expressed as movements in the capital position if market rates change. Moreover, the expected fixed cash flows from technical provisions are matched with fixed-income investments as much as possible. The profit-sharing and return guarantees to policyholders are an additional source of interest rate risk. Due to the long term nature of the Life and Pension insurance portfolio it is very sensitive to interest rate movements. This sensitivity is partly mitigated by the use of interest rate derivatives to hedge the guarantees and profit-sharing in the Life insurance portfolio.

VIVAT uses a scenario based approach to control the sensitivity of solvency to market conditions, such as interest rates and spreads. The key solvency metric to express the risk is based on the regulatory solvency reported to the Dutch Central Bank (DNB). This method is chosen because VIVAT has decided to use regulatory solvency as the principle factor in managing market risks.

From this perspective also the, over 2018 prescribed UFR of 4.05% by EIOPA introduces a risk. Over the course of time, the positive valuation effect of the UFR reduces, which puts downward pressure on the trend in solvency in the future. EIOPA decided to yearly decrease the UFR starting in 2018 with 0.15% per year with a starting point of 4.2%, per 1 January 2019 the applicable UFR will decrease to 3.9%. This will have a negative impact on solvency.

The tables below show the sensitivity of the IFRS result, IFRS equity and Solvency II ratio to changes in interest rates as a result of a decrease or an increase by 0.5% of the interest rates (maintaining the UFR at 4.05%), decreases in the UFR of 0.15% and 0.5% and the impact of the VA on the Solvency II ratio.

Under IFRS the impact of different UFR is slightly different than under Solvency II due to tiering and the VA (not applicable under IFRS).

VIVAT

Sensitivity VIVAT

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
	2018	2017	**2018**	2017	**2018**	2017
Interest +50 bps	-80	-41	-95	-41	6%	6%
Interest -50 bps	100	69	116	69	-6%	-9%
UFR -15 bps	-67	-58	-67	-58	-3%	-7%
UFR -50 bps	-224	-198	-224	-198	-12%	-15%
Excluding VA	-	-	-	0	-41%	-11%

SRLEV

Sensitivity SRLEV

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
	2018	2017	**2018**	2017	**2018**	2017
Interest +50 bps	-65	-51	-65	-51	7%	5%
Interest -50 bps	84	68	84	68	-6%	-10%
UFR -15 bps	-65	-56	-65	-56	-4%	-4%
UFR -50 bps	-216	-190	-216	-190	-13%	-18%
Excluding VA	-	-	-	-	-46%	-12%

VIVAT Schadeverzekeringen

Sensitivity VIVAT Schadeverzekeringen

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
	2018	2017	**2018**	2017	**2018**	2017
Interest +50 bps	-8.3	-2.7	-20.8	-2.7	4.1%	5.3%
Interest -50 bps	9.5	2.8	22.5	2.8	-4.2%	-5.9%
UFR -15 bps	0.0	0.0	0.0	0.0	-0.1%	-0.5%
UFR -50 bps	0.0	-0.6	0.0	-0.6	-0.3%	-0.8%
Excluding VA	-	-	-	-	-5.7%	-1.0%

Proteq Levensverzekeringen

Sensitivity Proteq Levensverzekeringen

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
	2018	2017	**2018**	2017	**2018**	2017
Interest +50 bps	-5	-4	-5	-4	5%	19%
Interest -50 bps	6	5	6	5	-6%	-21%
UFR -15 bps	-2	-2	-2	-2	-12%	-8%
UFR -50 bps	-8	-8	-8	-8	-41%	-33%
Excluding VA	-	-	-	-	-69%	-9%

VIVAT's interest rate hedging policy aims to ensure that obligations towards policyholders are fulfilled in both the short term and the long term. In addition, it aims to enable its providers of capital to receive a reasonable return (in terms of market value) that is in line with VIVAT's risk exposure and to stabilize the solvency capital. VIVAT manages its interest rate risk by stabilizing the Solvency II ratio after an up or down interest rate shock, taking the UFR of 4.05% into account. This generally results in a negative own funds impact for interest rate up movements and a positive own funds impact for interest down movements.

In 2018 the government bonds spreads and especially corporate bonds spread have widened in the reference portfolio of the VA, the applicable VA has increased from 4bps per year-end 2017 to 24bps per year-end 2018. As a consequence the 'excluding VA' sensitvity increased

The capital requirement for interest rate risk in the standard formula of Solvency II is determined on the basis of two scenarios in which the risk free yield curve is exposed to shocks affecting both assets and liabilities. The first scenario is ‘interest rate up’ and the second ‘interest rate down’. The capital requirement for interest rate risk is defined by the scenario which has the most negative impact on basic own funds. The sign of the SCR interest rate shock (up or down) has to be determined based on the net SCR interest rate risk in accordance with SII legislation. Per YE 2017, in some sensitivities the down Shock for VIVAT is leading while in the base the up shock was leading, resulting in a changed and lower diversification benefit in SCR Market risk according to the Solvency II regulations of the standard formula (due to changed applicable correlation matrix). For UFR -50 bps and Interest -50bps this was the case, explaining the difference in sensitivity 2017 versus 2018.

Under IFRS, as from YE 2017, part of the disability provisions is valued on current interest rate and therefore is sensitive to interest rates changes.

SCR Interest rate risk at 31 December 2018

In € millions	SRLEV	VIVAT Schade[1]	Proteq	VIVAT
SCR interest up shock	-498	-16	-5	-487
SCR interest down shock	-107	-	-14	-110
SCR interest rate risk	**498**	**16**	**14**	**487**

[1] Positive own funds impacts are set to zero

SCR Interest rate risk at 31 December 2017

In € millions	SRLEV	VIVAT Schade[1]	Proteq	VIVAT
SCR interest up shock	-239	-12	-5	-224
SCR interest down shock	-232	-	-14	-246
SCR interest rate risk	**239**	**12**	**14**	**224**

[1] Positive own funds impacts are set to zero

The interest rate risk for VIVAT and SRLEV mainly increased due to a slightly adjusted interest-rate hedge position and a limited tactical swap spread position. Although the tactical swap spread position increases the interest rate risk under the Solvency II legislation, VIVAT's interest rate risk remains well hedged on a Solvency II ratio basis.

The interest rate risk of VIVAT Schadeverzekeringen mainly increased due to the improved modelling of the disability portfolio slightly decreasing the sensitivity of the liabilities and increasing the interest rate risk. The interest rate risk of Proteq Levensverzekeringen mainly changed due to market and portfolio development.

C.2.3.2. Equity risk

The IFRS-based equities classification also includes participations in funds that invest in other types of securities like money market funds and other (non-investment grade) fixed income funds. The ALM policy and the market sensitivities are adjusted to reflect the underlying risk under Solvency II and IFRS for a more economic approach ("look through"), including the impact of the shock on the liabilities. VIVAT periodically examines the impact of changes in the equity markets on the result and on own funds. Scenario analysis are used for this purpose, in line with the situation applying in the case of interest rate risk.

The tables below show the results of this analysis at the reporting date net of taxation. Upward effects on equity are processed in the revaluation reserve and do not impact earnings. A downward effect on equity does impact the net result in case of an impairment (for the accounting policies on impairments see section 6.1.5 in the Annual Report for Accounting policies regarding the statement of financial position).

VIVAT

Sensitivity VIVAT

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
	2018	2017	**2018**	2017	**2018**	2017
Equities +10%	33	21	49	37	1.6%	1.0%
Equities -10%	-51	-32	-49	-37	-1.6%	-1.0%

SRLEV

Sensitivity SRLEV

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
	2018	2017	**2018**	2017	**2018**	2017
Equities +10%	33	21	46	33	1%	1%
Equities -10%	-51	-32	-46	-33	-1%	-1%

VIVAT Schadeverzekeringen

Sensitivity VIVAT Schadeverzekeringen

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
	2018	2017	**2018**	2017	**2018**	2017
Equities +10%	0	0	2	3	1%	1%
Equities -10%	0	0	-2	-3	-1%	-1%

The SCR for equity risk is equal to the loss in market value of the basic own funds in the event of a sudden shock to equities including a so-called symmetric adjustment. This adjustment corrects the equity shock for the difference between the current level of global equity prices and a long-term average and can vary between a minus 10% adjustment and a plus 10% adjustment.

SCR for equity risk consists of type 1 and type 2 equities. Type 1 equities are equities listed in regulated markets which are members of the EEA or OECD. Type 2 equities are equities listed in countries other than members of the EEA and/or OECD, non-listed equities, private equities, hedge funds, commodities and other alternative investments.

The SCR for equity risk is defined as the aggregation of the capital requirement for type 1 equities and the capital requirement for type 2 equities, allowing a correlation of 0.75 between types 1 and 2.

A transitional arrangement can be applied to type 1 equities in order to reduce the standard capital charge. VIVAT does not apply this transitional arrangement.

The table below shows the SCR for equity risk:

SCR Equity risk at 31 December 2018

In € millions	SRLEV	VIVAT Schade	VIVAT
Type 1 equities	153	-	153
Type 2 equities	93	7	76
Diversification	-15	-	-13
Equity risk	**231**	**7**	**216**

SCR Equity risk at 31 December 2017

In € millions	SRLEV	VIVAT Schade	VIVAT
Type 1 equities	161	1	143
Type 2 equities	53	11	65
Diversification	-10	-	-12
Equity risk	**204**	**12**	**196**

The equity risk for VIVAT and SRLEV increased mainly due to improved determination of the shock for Individual Unit Linked assets (modelling). Equity risk for VIVAT Schadeverzekeringen decreased mainly due to selling her subsidiary in CED Holding BV and due to a decreased valuation of a strategic participation.

SRLEV and VIVAT Schadeverzekeringen report on an unconsolidated basis, resulting into a classification of net asset value (mainly property) to type 2 strategic equity risks for several subsidiaries (which are listed in Annex I). This results in a higher equity charge for SRLEV than VIVAT (consolidated). The opposite effect occurs when calculating the amount of property risk.

The SCR for type 1 originates for a great part from contracts where the investment risk is born by the policyholder (unit linked and collective investment undertakings).

C.2.3.3. Property risk

Property risk is defined as the sensitivity of the value of assets and liabilities to changes in the level or volatility of the market prices of real estate.

The IFRS-based equities classification also includes participations in funds that invest in other types of securities. The ALM policy and the market sensitivities are adjusted to reflect the underlying risk under Solvency II and IFRS based on an economic approach ("look through"). VIVAT periodically examines the potential impact of changes in the property markets on the net result and on shareholders' equity based on scenario analysis in line with the situation applying in the case of interest rate risk. The table below shows the indicative results of this analysis at the reporting date net of taxation.

VIVAT

Sensitivity VIVAT

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
	2018	2017	**2018**	2017	**2018**	2017
Property +10%	36	33	38	35	1.6%	1.4%
Property -10%	-36	-33	-38	-35	-1.6%	-1.4%

SRLEV

Sensitivity SRLEV

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio	
	2018	2017	**2018**	2017	**2018**	2017
Property +10%	25	33	27	35	1.3%	2.0%
Property -10%	-25	-33	-27	-35	-1.3%	-2.4%

The SCR for property risk is equal to the loss in the basic own funds that would result from an instantaneous decrease of 25% in the value of property. Property consists of direct property (e.g. buildings and investments in owner-occupied properties) and indirect interests in property (through investment funds). VIVAT applies the look-through approach in determining the SCR for property risk also taking the effect of any leverage on the Net Asset Value of property funds into account.

The table below shows the SCR for property risk:

SCR Property risk

In € millions	2018	2017
Property risk SRLEV	84	82
Property risk VIVAT	**119**	**117**

Property risk of VIVAT and SRLEV slightly increased due to the changes in the value of property.

The main difference between SRLEV and VIVAT regarding the SCR for property risk is that SRLEV is based on unconsolidated figures whereas VIVAT is based on consolidated figures.

C.2.3.4. Spread risk

Spread risk is defined as the sensitivity of the value of assets and liabilities to changes in the level or volatility of the credit spread above the risk-free interest rate term structure. The spread risk for the insurance business arises in the fixed-income investment portfolio, which includes securitizations, loans, corporate and government bonds that are sensitive to changes in credit risk surcharges. Increasing credit risk surcharges have a negative effect on the market value of underlying bonds.

Credit risk surcharges are also a source of basis risk in the valuation of insurance liabilities. The basis risk relates to the risk of a mismatch between the interest rate used in the valuation of the liabilities and the interest rate used for the asset portfolio. This basis risk mainly emanates from the risk that movements in the interest rate on the EU government bonds held in portfolio will not be synchronous with movements in the swap rate.

The swap curve (including UFR) is currently used when discounting insurance liabilities under IFRS. A change in the swap curve has a direct impact on the value of the insurance liabilities. This leads to volatility in the available capital, as the interest rate used for the valuation of the investment portfolio differs from the relevant swap curve for the insurance liabilities.

Under the Solvency II regime the swap curve with a prescribed Ultimate Forward Rate (UFR) is used when discounting insurance liabilities, adjusted for credit risk (CRA) and a Volatility Adjustment (VA). The VA moves along with the credit spreads, but still substantial basis risk exists because the VA is based on a reference portfolio instead of VIVAT's own asset portfolio, and also a 65% scaling factor is applied to determine the VA. For managing market risks a number of combined scenarios is determined with (different) simultaneous shocks to risk categories. In this scenario based approach among others credit spreads, volatility (interest rate volatility and equity volatility) and best estimates for the VA are taken into account.

While interest rate risk regarding the Solvency II ratio sheet is well matched, there remains significant volatility as the credit risk profile of VIVAT differs from the profile implied by the Volatility Adjustment (VA). In 2018, as part of re-risking program, the investment portfolio has been shifted to more US credit investments and emerging market debts decreasing the risk. Additional and similar to 2017, the basis risk was further mitigated during 2018 by replacing long German and Dutch government bonds by swaps combined with short government bonds. The basis risk is still material, in case of lower spreads for high quality bonds (e.g. German and Dutch) and higher spreads for riskier bonds, the Solvency II Ratio in general increases.

An increase of credit spreads will directly have a negative short-term effect on IFRS equity and net result, in the long run, spreads are expected to be realized, mitigating this short term negative effect. Under Solvency II an increase of credit spreads also leads to an increase of the Volatility Adjustment impacting the value of the liabilities. VIVAT assumes that an increase of all credit spreads of 50 bps leads to an increase of the VA of 24 bps, an increase of 50 bps on corporates to an increase of the VA of 13 bps and an increase of 50 bps on government bonds to an increase of the VA of 11 bps. The change of the VA has no impact on the value of the liabilities under IFRS.

VIVAT
Sensitivity VIVAT

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio[1]	
	2018	2017	**2018**	2017	**2018**	2017
Credit spreads Government Bonds +50 bps	-370	-506	-379	-506	1%	-18%
Credit spreads Corporates/Mortgages +50 bps	-111	-111	-118	-111	16%	13%
All Credit spreads +50 bps	-481	-617	-496	-617	17%	-5%

[1] An increase of credit spreads also leads to an increase of VA, impacting the value of the liabilities.

The changed government bond sensitivity, per 2018 compared to 2017, can be mainly explained by:

- A decreased government bonds exposure. By replacing long duration German and Dutch government bonds for swaps combined with short duration government bonds the exposure decreased in 2018. The decreased exposure leads to a decreased IFRS and Solvency II sensitivity for shocks to government bonds.
- The applicable VA shock in this sensitivity increased from 9 bps in 2017 to 11 bps in 2018 (due to update VA calibration). As a consequence of this increased VA shock the Solvency II sensitivity of 2018 decreased compared to 2017.
- In 2017 the leading interest rate risk scenario changed from 'interest rate up' in the basis to 'interest rate down' for the sensitivity. In 2018 the leading interest rate risk scenario remains in the 'interest rate up' scenario for the basis as well as for the sensitivity. This leads to an additional negative effect (by lower diversification benefits) per 2017 compared to 2018 for the Solvency II sensitivity.

SRLEV
Sensitivity SRLEV

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio[1]	
	2018	2017	**2018**	2017	**2018**	2017
Credit spreads Government Bonds +50 bps	-344	-473	-344	-473	2%	-15%
Credit spreads Corporates/Mortgages +50 bps	-110	-109	-110	-109	18%	18%
All Credit spreads +50 bps	-454	-582	-454	-582	20%	3%

[1] An increase of credit spreads also leads to an increase of VA, impacting the value of the liabilities.

VIVAT Schadeverzekeringen

Sensitivity VIVAT Schadeverzekeringen

In € millions	IFRS net result		IFRS Shareholders' equity		Solvency II ratio[1]	
	2018	2017	**2018**	2017	**2018**	2017
Credit spreads Government Bonds +50 bps	0	-10	-8	-10	0%	-2%
Credit spreads Corporates +50 bps	0	-2	-4	-2	2%	1%
All Credit spreads +50 bps	0	-13	-12	-13	2%	-1%

[1] An increase of credit spreads also leads to an increase of VA, impacting the value of the liabilities.

Proteq Levensverzekeringen

Sensitivity Proteq Levensverzekeringen

In € millions	IFRS net result		IFRS shareholders' equity		Solvency II ratio[1]	
	2018	2017	**2018**	2017	**2018**	2017
Credit spreads Government Bonds +50 bps	-26	-26	-26	-26	-66%	-64%
Credit spreads Corporates/Mortgages +50 bps	-1	0	-1	0	64%	20%
All Credit spreads +50 bps	-28	-26	-28	-26	-42%	-48%

[1] An increase of credit spreads also leads to an increase of VA, impacting the value of the liabilities.

Solvency Capital Requirement for spread risk

The SCR for spread risk is determined by calculating the impact on the eligible own funds due to the volatility of credit spreads over the term structure of the risk-free rate. The required capital for spread risk is equal to the sum of the capital requirements for bonds, loans and structured products. The capital requirement takes into account the market value, the modified duration and the credit quality category.

SCR Spread risk at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	VIVAT
Bonds and loans	606	33	11	650
Securitisation positions	36	-	-	36
Spread risk	**642**	**33**	**11**	**686**

SCR Spread risk at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	VIVAT
Bonds and loans	424	16	2	441
Securitisation positions	47	1	-	48
Spread risk	**471**	**17**	**2**	**489**

In 2018, as part of re-risking program, the investment portfolio has been shifted to more US credit investments and Emerging Market Debt which will have an expected positive impact on capital generation, however also an immediate increase on the Solvency Capital requirement for spread risk. Re-risking is the main driver for the increase in spread risk, European sovereigns and sub-sovereigns are excluded from spread risk in the standard formula (replacement of long term government bonds does not affect the spread risk).

C.2.3.5. Concentration risk

Concentration risk is defined as all risk exposures associated with a potential loss that is significant to endanger the solvency or financial position of insurance and reinsurance undertakings.

A concentration risk charge is prescribed under Solvency II when the issuer exposure exceeds a certain percentage threshold of the asset base depending on the credit rating of the issuer and the type of investment. The SCR for concentration risk is calculated on the basis of single name exposure. This means that undertakings which belong to the same corporate Group are treated as a single name exposure.

VIVAT and its insurance entities still hold substantial investments in German and Dutch government bonds and supranational issuers which are excluded from (the Solvency II scope of) concentration risk. As of 31 December 2018, the applicable Solvency II thresholds have not been exceeded and as a result no concentration risk charge was applicable to VIVAT or its insurance entities.

C.2.3.6. Currency risk

Currency risk is defined as the sensitivity of the value of assets, liabilities and financial instruments to changes in the level or volatility of exchange rates. The currency risk of VIVAT is caused by a combination of investments and liabilities in foreign currencies that are not perfectly matched.

With respect to fixed-income investments, VIVAT's policy is to permit only very limited currency risk. Given this, the currency risk on fixed-income investments denominated in foreign currency is, in principle, hedged with currency swaps.

Currency risk also arises in relation to the equity investments of VIVAT. This currency risk, after netting the currency risk in other non-fixed-income investments and liabilities, is structurally hedged using forward currency contracts or currency swaps if the net exposure without applying look through principle exceeds € 10 million. A currency hedge bandwidth of 98-102% has been agreed for external mandates, within which operations may be carried out.

The effects of changes in foreign exchange markets on the net result, own funds and solvency are measured periodically using scenario analysis. The Solvency II currency exposure is determined using the look through principle regarding investment funds. This results in slightly higher currency exposure.

The SCR for currency risk is equal to the loss in the basic own funds that would result from an instantaneous change in the value of the foreign currency against the local currency. For each foreign currency this involves taking the maximum of the impact on the basic own funds of a 25% increase or 25% decrease in the value of the currency. The total SCR for currency risk is then obtained by the sum of the 'individual' currencies.

SCR Currency risk

In € millions	2018	2017
Currency risk SRLEV	40	31
Currency risk VIVAT Schadeverzekeringen	-	-
Currency risk VIVAT	**184**	**175**

The currency risk can almost fully be explained by in foreign currency denominated subordinated notes. This exposure is fully hedged on a Eligible Own Funds and P&L basis, but impacts the Solvency Capital Requirement. In the Solvency II regime the capital requirement for currency risk is determined on the assets over liabilities, not taken into account the subordinated notes in foreign currency. The movement is caused by regular development.

C.2.3.7. Volatility risk

The volatility risk is the risk of losses due to changes in volatility (parameters) and is measured and presented separately. It is addressed in the market sub risks as described before. VIVAT and subsidiaries are sensitive to volatility on both sides of the balance sheet. Embedded options on the liability side and swaptions as hedges on the asset side. Because of the hedges, the residual volatility risk is not material.

C.2.3.8. Diversification

Not all risks will materialize at the same time and at their full magnitude, resulting in diversification between different risk types. Solvency II prescribes a correlation matrix for the diversification effect in the SCR Market Risk module in order to aggregate the results of the types of market risks. This leads to a lower amount of total Market Risk compared to the sum of the individual market risk types. Solvency II furthermore prescribes that a downward SCR interest rate shock will be more correlated with an equity, spread and property shock compared to an upward interest rate shock.

At 31 December 2018, VIVAT, SRLEV and VIVAT Schadeverzekeringen had a net balance sheet exposure to an upward interest rate shock, whereas Proteq Levensverzekeringen was exposed to an downward interest rate shock. This has led to lower diversification benefits for Proteq Levensverzekeringen compared to the other entities.

C.3. Counterparty default risk (credit risk)

C.3.1. Risks - general

VIVAT defines counterparty default risk as the risk of potential losses due to an unexpected payment default of the counterparties and debtors of insurance and reinsurance undertakings within the next twelve months.

The SCR Counterparty Default Risk covers risk-mitigating contracts, such as reinsurance arrangements, insurance securitisations, repos, (unsecured) savings parts, derivatives, retail mortgages and receivables from intermediaries, as well as any other credit exposures not covered by the definition of SCR Spread Risk.

For each counterparty, the overall credit default risk exposure of the insurance or reinsurance undertaking concerned to that counterparty is measured, irrespective of the legal form of its contractual obligations to that undertaking. Its calculation also takes into account collateral or other security held by or for the account of the insurance or reinsurance undertaking and the risks associated therewith.

Besides the calculation of SCR Counterparty Default Risk, VIVAT has developed a complementary Counterparty Risk Policy for internal use. This risk is measured as Loss At Default (LAD) and Stress Loss (SL) and combines instruments/exposures that are in scope for both SCR Concentration Risk and SCR Counterparty Default Risk. Appropriate internal LAD and SL limits have been incorporated in the ALM policy and must be adhered to.

VIVAT uses this methodology to aggregate and monitor all types of exposures to various types of individual counterparties, such as (sub)sovereigns, financials and corporates. The periodic Counterparty Risk reports are discussed by the Investment Committee for VIVAT and subsidiaries SRLEV, VIVAT Schadeverzekeringen and Proteq Levensverzekeringen, and appropriate measures are taken when limits are exceeded.

C.3.2. Risk management process

The VIVAT manages and verifies counterparty default risk within the set frameworks. Investments may be sold when deemed necessary, risk mitigating contracts or clauses are drawn up in cooperation with ACTIAM and Legal Affairs. The counterparty default risk at VIVAT is measured by means of measuring the exposure to individual parties and, as the case may be, aggregating exposures with similar characteristics.

For each type of credit risk, the roles, powers and responsibilities of officers and committees, including tiered decision-making powers, are recorded in the policy documents for the relevant type of credit risk.

Fixed-income investment portfolio

The counterparty default risk within the interest-bearing investment portfolios of VIVAT is the risk that an issuer of a bond or a debtor of a private loan does no longer meet its obligations. The strategic allocation along the various investment grade categories within the interest-bearing portfolio is determined in the context of ALM and laid down in mandates with the asset managers.

Derivatives exposure

The counterparty default risk related to the market value of the derivatives held by VIVAT with a counterparty is managed by means of a Credit Support Annex (CSA) agreement in accordance with standard industry practice. These agreements provide that the underlying value of the derivatives must be posted as collateral in liquid instruments, such as cash and government bonds, to cover the counterparty default risk.

Reinsurance

VIVAT pursues an active policy with respect to the placement of reinsurance contracts, using a panel consisting of reinsurers with solid ratings. The general policy is that reinsurers should have a minimum rating of A-. However, given the long-term nature of the underlying business, the current casualty panel and the panel for life and disability reinsurance contracts consists of reinsurers with at least an A rating. Continuity and diversification within the panels of reinsurers is an important principle of VIVAT's Reinsurance Policy.

Mortgage portfolio

VIVAT is exposed to counterparty default risk on its mortgage portfolio. Part of this portfolio is guaranteed by the National Mortgage Guarantee Fund (NHG). The average Loan to Value ratio has improved due to amortisation of the outstanding mortgage balance and an increase in Dutch housing prices in 2014-2018. The market value of the portfolio has decreased due to scheduled amortisation and prepayments.

Mortgages by security type

In € millions	2018	2017
Mortgages < 75% of foreclosure value	771	831
Mortgages > 75% of foreclosure value <100%	339	269
Mortgages > 100% of foreclosure value	65	250
Mortgages with National Mortgage Guarantee	920	1,052
Residential property in the Netherlands	**2,095**	**2,402**
Fair value adjustment	125	166
Total residential property in the Netherlands	**2,220**	**2,568**

C.3.3. SCR Counterparty default risk

The counterparty default risk module reflects the possible loss as a consequence of bankruptcies or a reduction in the credit standing of counterparties over a 12-month period. The SCR for the counterparty default risk is determined by aggregating the capital requirements related to type 1 and type 2 exposures.

Counterparty default risk at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	VIVAT
Type 1 exposures	93	13	1	106
Type 2 exposures	65	4	-	69
Diversification	-10	-1	-	-11
SCR counterparty default risk	**148**	**16**	**1**	**164**

Counterparty default risk at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	VIVAT
Type 1 exposures	33	5	1	39
Type 2 exposures	109	4	-	114
Diversification	-6	-	-	-8
SCR counterparty default risk	**136**	**9**	**1**	**145**

In 2018 counterparty default risk type 2 for VIVAT, SRLEV and VIVAT Schadeverzekeringen decreased mainly due to a policy change for taking into account the savings part of the mortgages, i.e. lower net mortgage exposure. The counterparty default risk type 1 increased mainly due to starting a securities lending program and due to new insight in determining the risk (legislation and modelling). For Proteq Levensverzekeringen counterparty default risk increased mainly by starting a security lending program partly offset due to new insight in determining the risk (legislation and modelling).

Type 1 exposures are exposures that are expected to involve low diversification effects and for which the counterparty is likely to have an external rating. Solvency II treats the following as type 1 exposures:
- risk-mitigation contracts, including reinsurance arrangements, special purpose vehicles (SPVs), insurance securitisations and derivatives;
- cash at bank;
- deposits with ceding undertakings;
- commitments received by an insurance or reinsurance undertaking which have been called up but are unpaid;
- legally binding commitments which the insurer has provided or arranged and which may create payment obligations depending on the credit standing of a counterparty.

The capital requirement for counterparty default risk on type 1 exposures is a percentage of the total losses given-default on all type 1 exposures, the percentage is dependent on the variance between the type 1 exposures, the higher the variance the lower the percentage.

The loss-given default (LGD) on a single-name exposure is equal to the sum of the LGDs on each of the underlying exposures to counterparties belonging to the relevant single-name exposure.

Type 2 exposures consist of all exposures to which the capital requirement for spread risk is not applicable and which are not of type 1. In general, these are diversified exposures which do not have an external rating. Solvency II explicitly mentions the following exposures in the context of type 2:
- receivables from intermediaries;
- policyholder debtors;
- mortgage loans which meet a set of requirements.

SRLEV holds various saving mortgages, financed both internally and externally. The majority of the portfolio represents savings mortgages with cession/retrocession arrangements and pledged collateral for which no spread is included in the market valuation and no SCR CDR is calculated. Currently, together with other insurance companies, SRLEV is in discussion with DNB regarding the valuation and the treatment of these savings mortgages in the SCR. Since the discussion is ongoing and no conclusions are reached at the moment SRLEV applied the valuation method and treatment in the SCR in line with previous year.

The capital requirement for credit risk on type 2 exposures is equal to the loss in the basic own fund as defined by EIOPA.

Diversification
Not all risks will materialize at the same time and at their full magnitude resulting in diversification between different risk types.

C.4. Liquidity risk

C.4.1. Risks - general

Liquidity risk is defined as the risk that VIVAT would have insufficient liquid assets to meet its financial obligations in the short term, in a going concern situation or in times of a stress situation, or if obtaining the necessary liquidity would mean incurring unacceptable costs or losses.

The liquidity risk is monitored and managed both at consolidated level and at legal entity level.

C.4.2. Risk management process

The policy of VIVAT is to have more liquidity available than it is required to hold based on internal risk management minimum levels. The objective of the internal risk management minimum levels is to ensure that VIVAT is able to fulfill its obligations towards policyholders and all legal obligations.

The liquidity risk policy uses three sources of liquidity:
1. the cash position
2. the liquidity buffer
3. the liquidity contingency policy.

Cash Position
The first source of liquidity concerns the cash position. This position is built up from the cash management process from investments (managed by ACTIAM) and cash management process from underwriting and operating activities. In the investments cash management process all cash flows from investments are managed by our asset manager (ACTIAM).

VIVAT has taken into account that all obligations to policyholders must be respected and that these obligations will be paid throughout the underwriting and other operating cash management process. If at any time these obligations exceed the premium income additional cash will be transferred from the investment cash management process. Otherwise, when premiums exceed the payments in the operational cash management process, cash will be transferred to the investments cash management process, for the purpose of the investing excess cash (temporarily).

Liquidity Buffer
The second source is the liquidity buffer. Together with the cash position, the liquidity buffer forms the overall liquidity position of the entity. The liquidity buffer is a good indicator for the overall liquidity position of VIVAT and takes into account all available assets and the impact of prescribed shocks in a stress situation. Monitoring of this buffer accounts for an important part of the daily activities of VIVAT.

Liquidity Contingency Policy

The last source of liquidity relates to a situation in which the normal liquidity and buffers turn out to be insufficient. In case of such a contingency, VIVAT has implemented a Crisis Management Team (CMT) structure and a predefined set of potential management actions. The CMT must take timely action in rapidly deteriorating liquidity circumstances in order to avoid a bankruptcy that could occur in the worst case and/or to settle all of the obligations under the insurance portfolio in an orderly manner.

C.4.3. Exposure

The required liquidity is determined based on absorbing shocks in a stress situation. The shocks are applied on prescribed risk categories. These risk categories are mass lapse (Life insurance), storm-/hail damage (Non-life insurance) and interest rate movements. In total, the liquidity buffer is sufficient to cover a severe liquidity stress scenario.

Expected Profit Included in Future Premiums

The Expected Profit Included in Future Premiums (EPIFP) is defined as the profit that is included in the future premiums. In summary, the legislation indicates that the determination of the EPIFP should be based on the assumption that future premiums are no longer received as from the reporting date, regardless of any contractual obligations of the policyholder. Based on this, the EPIFP represents the difference between the best estimate provision without profitable future premiums (but including non-profitable future premiums) and the normal best estimate.

Expected Profit Included in Future Premiums

In € millions	2018	2017
SRLEV	1,078	1,253
VIVAT Schadeverzekeringen[1]	189	206
Proteq Levensverzekeringen	16	17
VIVAT[1]	**1,283**	**1,476**

[1] Of which € 17 million relates to the Non-Life business (2017: € 15 million).

C.5. Non-financial risk (including operational risk)

C.5.1. Risks - general

The Non-Financial Risk department (NFR), as second line Risk department, monitors and provides advice to management on compliancy risk and operational risk.

Compliance risk

Compliance risk is the risk that an organisation could suffer legal or regulatory sanctions, material financial loss, or loss of reputation as a result of non-compliance with laws, regulations, rules, self-regulatory standards, codes and unwritten rules that apply to its activities.

Non-compliance with integrity- and conduct related rules can lead to regulatory action, financial loss or damage to the reputation of VIVAT, for example fines, compensation, disciplinary action, imprisonment or exclusion proceedings.

Laws and regulations within scope consist among others of those laws and regulations under which the supervisory authorities (Authority for the Financial Markets (AFM), Dutch Central bank (DNB), Authority for Consumers and Markets (ACM) and Data Protection Authority (AP) supervise aspects related to nonfinancial risks, such as the Dutch Financial Supervision Act (Wft), the Dutch Money Laundering and Terrorist Financing (Prevention) Act (*Wwft*), the Dutch Sanctions Act, as well as relevant European laws such as Solvency II, AIFMD and guidance from the Dutch Association of Insurers and other relevant bodies.

Operational risk

Operational risk represents the risk of an economic loss, a negative reputational or supervisory impact resulting from inadequate or failed internal processes, people and systems, or from external events. Operational risks include the risk of a material misstatement in VIVAT's financial reporting and legal risks, but excludes strategic and business risks. Operational risk events can lead to adverse consequences beyond a pure financial loss. The assessment of possible reputational impacts following an operational event is an explicit part of the operational risk management process.

Operational risks are inherent in all of VIVAT's insurance products, activities, processes and systems and the management of operational risk is a fundamental element of VIVAT's risk management framework. VIVAT recognises the following types of operational risk: Execution & Process Control risk, IT risk, Internal Fraud risk, External Fraud risk, Damage to physical assets risk and Staff & security risk. Model risk is considered a separate risk.

C.5.2. Risk management process

In managing non-financial risks VIVAT follows the risk management process as set out in Section B.4. The Risk Control Framework consists of five key tasks.

Risk Identification

VIVAT systematically analyses Compliance and Operational Risks in order to make the risks transparent. This will enable VIVAT to control and manage its exposure within the risk tolerance limits in an efficient way. Risk identification is performed through risk assessments and, top-down and bottom-up risk analysis.

Risk Measurement

VIVAT uses a methodology to measure its operational risks based upon the combination of the likelihood of occurrence and the impact upon occurrence of the risk. This methodology is referred to as the risk rating procedure. The risk rating procedure is an assessment of the risk exposure VIVAT is facing at a certain moment in time, and an approach to assess the needs for controls, corrective actions and/or additional controls.

Risk mitigation

NFR supports and challenges the first line in the recognition and mitigation of Non-Financial Risks. For this, it carries out research, monitors control measures and informs management. This includes an integrated incident overview, the Non-Financial Risk Appetite KRI scores, and the effectiveness of management and process controls to draw attention to relevant issues in the field of internal control. NFR facilitates the business in training & awareness on Compliance and Operational Risks.

Risk Monitoring

The objective of risk monitoring is to ensure that the internal control over the business processes remain effective and within the risk tolerance. Controls are designed to detect shortcomings in the control over processes. This is assessed through regular testing of the first line. Internal Control assesses through its monitoring activities whether the test results provide a reliable basis for the assessment of the level of control. NFR also monitors the progress of the implementation of laws and regulations and also on design, existence and operational effectives of the first line responsibility to implement laws and regulations.

Risk Reporting

In line with the VRC frequency NFR reports developments in non-financial risks and own observations in a Non-Financial Risk report, which provides a comprehensive overview of the major Non- Financial Risks and incidents within VIVAT. The Non-Financial Risk report is combined with the Financial Risk, Model Risk and Actuarial Function reports into the Enterprise Risk Management Key Take Aways.

C.5.3. Developments

In 2018 VIVAT has focused on new opportunities and sustainability towards our clients. The strategic ambition to become an innovative insurer has led to several initiatives in products, services, methodologies and processes. This dynamic and change oriented environment, the announced strategic reorientation of Shareholder, new and changed legislation, combined with a continued focus on cost reduction and revenue models could influence operational and compliance risks. These risks are addressed, managed and monitored within the VIVAT risk framework to maintain a sound and controlled organisation.

C.5.4. Exposure to non-financial risks

As important part of VIVAT risk framework, during 2018 VIVAT further improved the Integrated Control Framework consisting of process and management controls. Continuous attention on the quality of process and control design, testing of effectiveness of controls, reporting and analysis tooling and process ownership enables the organisation to manage and monitor Compliance and Operational Risks in an efficient and effective manner. Based on the monitoring of all risk types, in this paragraph the main developments and risk events are described. VIVAT's management is of the opinion that action plans and programmes are in place to sufficiently address and mitigate these risks.

Compliance Risk

Owing to the great complexity of the legislation concerning Solvency II, IFRS, GDPR, ILM, IDD, PRIIPS and Supply Chain Responsibility, changes to the pension legislation (Law Improved Premium Scheme), legislation may not be implemented in good time as a result of which VIVAT would not be compliant and would inter alia suffer reputational damage as a result. As an insurer Sanctions risks are limited but not-nonexistent. Especially related to co-assurance and authorised agent activities full compliance to the Sanctions Law is under pressure. Following regulator findings shortcomings are being addressed through a dedicated programme.

Risks (including reputational risk) are not fully excluded in the non-accruing investment-linked policy file, owing to the combined effects of continuing media exposure, political opinion, court judgements and inaction on the part of customers. Initiated activation efforts were judged sufficient by the regulator and are continuously addressed through VIVAT's aftercare programme.

Due to new legislation both in the Netherlands and in the EU (General Data Protection Regulation) privacy risks should be taken into account. Special precautions are in order to avoid data breaches when personal data is transferred to third parties, especially to parties in countries outside the EU that do not provide an adequate level of protection. An implemented broad privacy programme and local Privacy Champions safeguard full attention to VIVAT's compliancy with the privacy regulation. VIVAT appointed a Data Protection Officer within the Compliance department.

Operational Risk

Execution and Process Control Risk

In 2018 execution and process risk was influenced by the number of change projects, system conversions and strategic initiatives within the organisation. Aiming at realisation of (short term) results, often making use of the same available capacity within the organisation puts pressure on quality. This is influencing risk management and risk taking at first line. Furthermore human factors, such as dealing with news on strategic re-orientation of VIVAT will be different for each individual employee, but may cause distraction from work and change of focus on personal priorities.

Further improving the quality of process design was an important topic addressed in 2018, resulting in good progress in order to further incorporate automated controls within the ICF framework and new quality of design standards checklist are introduced. Strategic projects aiming at an increased level of (modular) process automation and straight through processing will contribute to mitigation of operational risks.

The committee structure within VIVAT assures that new legislation, risk reports and findings, incidents, follow up on actions are addressed in Operational Risk and Compliance committees in the first line and at VIVAT board level.

In the event of operational incidents, they are reported transparently and addressed with root cause analysis and monitoring of structural improvements. Process Key Control testing and review on Management controls was properly in place at both first and second line, enhancing the control environment.

Information Technology Risk

In order to be more efficient, VIVAT defined the target IT landscape and non-target systems are made redundant. This rationalisation will continue in 2019. Besides, the IT focus is on innovations like new and modern apps. The IT organisation has implemented the Agile way of working and Continuous Delivery, to improve on efficiency and to decrease time-to-market. VIVAT is aware that these developments require high standards of change management within the IT department to maintain an IT landscape that is in control and is managing IT risks. VIVAT is aware of the increasing strategic importance of collecting, managing and use of data, taking into account relevant legislation, e.g. GDPR. VIVAT has implemented a sustainable design for Data Governance to manage and monitor the diverse data related initiatives.

Outsourcing / Cloud Computing

VIVAT is shifting away from handling IT matters itself in favour of outsourcing in areas of the consumer value chain where VIVAT is less distinctive. VIVAT assesses how the required functionalities in that value chain can be purchased or outsourced as components. VIVAT performs risk assessments for new outsourcing initiatives, the results of which are reflected in the contracts with outsourcing partners.

During 2018 further improvements are made in structurally embedding legal requirements regarding outsourcing in our procurement procedures and integrated control framework. A good supplier management is set up to in order to maintain the desired level of control over outsourcing.

Cybercrime Risk

Fighting cybercrime is a key priority for a financial organisation like VIVAT. Cyber criminals are always trying to compromise financial companies, for example with ransomware. In 2018 no major incidents related to cybercrime occurred within VIVAT. Cybercrime will remain high on the agenda of the VIVAT management. Appropriate organisational and technological measures have been taken in order to be able to tackle the cybercrime risks, like the cooperation with the National Cyber Security Center and other major Dutch insurance companies. Also in 2019 new measures will be implemented to stay in control over the cybercrime risk.

Staff and Security Risk

Due to active monitoring in 2018, the sick leave percentage has shown a strong decrease. Nevertheless, VIVAT will continue to monitor sick leave and will further enhance the level of control by changing to a new health service partner and dedicated case management. Furthermore, with regard to social safety, VIVAT conducted an employee survey in 2018, as well as a RIE (Risk Inventory and Evaluation) with a plan of action.

Model risk

In 2018, VIVAT completed its model inventory and by that increased overview and insight into its model landscape. Within the Risk Model Landscape programme important steps towards lower model risk are taken by converting important SCR- and ALM-tooling. Model risk is further reduced by the follow-up of large numbers of second line findings, especially for reporting models, resulting in a more efficient and reliable valuation of underwriting and market risks and the determination of the solvency ratio. Ongoing model validations on reporting, (asset) valuation and pricing models, following a risk based approach, further increased model insight and provides guidance towards lower model risk.

C.5.5. SCR Operational Risk

Operational risk is the risk of losses caused by weak or failing internal procedures, weaknesses in the action taken by personnel, weaknesses in systems or because of external events. This takes into account legal risks, but risks that are a consequence of strategic decisions or reputational risks are disregarded. The technical provision for own risk is part of the calculation of the SCR operational risk.

The basic capital requirement for operational risk is calculated by taking the maximum of (a) the capital requirement for operational risks on the basis of earned premiums and (b) the capital requirement for operational risks on the basis of technical provisions and adding 25% of the expenses incurred in respect of unit linked business.

SCR Operational risk

In € millions	2018	2017
SRLEV	178	181
VIVAT Schadeverzekeringen	21	21
Proteq Levensverzekeringen	2	2
VIVAT	**199**	**203**

The development for operational risk can be mainly explained by regular portfolio development.

C.6. Other material risks

There are no other material risks to be disclosed.

C.7. Any other information

No other disclosures are applicable.

D. Valuation for Solvency purposes

General

The IFRS balance items have been mapped in accordance with the Solvency II classifications and therefore can differ in classification from the published IFRS consolidated financial statements 2018 of VIVAT.

In € millions	IFRS	Policy differences	Sectorial Rules and D&A	Statutory accounts valuation	Solvency II valuation
> Assets					
Goodwill and intangible assets	0	0	0	0	0
Deferred tax assets	465	0	0	465	406
Property, plant & equipment held for own use	62	0	0	62	62
Investments	32,302	0	-4	32,299	32,313
Assets held for index-linked and unit-linked contracts	11,989	0	-257	11,732	11,795
Loans and mortgages	9,414	0	0	9,414	10,898
Reinsurance recoverables	160	-327	0	-167	-163
Receivables	307	0	-11	296	296
Cash and cash equivalents	275	0	-5	270	270
Any other assets, not elsewhere shown	700	-347	-330	22	22
Total assets	**55,674**	-674	-607	**54,393**	**55,900**
Liabilities					
- Non-Life	728	0	0	728	705
- Life	*33,171*	*-327*	*0*	*32,844*	*33,305*
- Index-linked and unit-linked	*12,384*	*0*	*-203*	*12,181*	*12,795*
Technical provisions	**46,283**	**-327**	**-203**	**45,753**	**46,805**
Contingent liabilities	0	0	0	0	0
Provisions other than technical provisions	26	0	0	26	26
Pension benefit obligations	548	0	0	548	548
Deposits from reinsurers	85	0	0	85	86
Deferred tax liabilities	0	0	0	0	0
Derivatives	602	0	0	602	602
Debts owed to credit institutions	2,001	0	0	2,001	2,197
Payables	1,019	0	-74	945	945
Subordinated liabilities	1,184	0	0	1,184	1,177
Any other liabilities, not elsewhere shown	686	-347	-329	9	9
Total liabilities	**52,433**	-674	-607	**51,153**	**52,394**
Excess of assets over liabilities	**3,241**	0	0	**3,241**	**3,505**

In case the Solvency II measurement is equal to the IFRS measurement we refer to paragraph 6.1 of the Annual Report of VIVAT NV 2018. In respect of the IFRS measurement, one change in accounting policies was processed in the Annual Report of VIVAT NV 2018. IFRS 15, the new standard on recognition of revenue on contracts with customers, was implemented, but this had no impact on total equity or net income.

The IFRS balance sheet total in the Annual Report 2018 of VIVAT of € 55,674 million differs by € 1,281 from the total statutory accounts value in the SII balance sheet of € 54,393 million.

The difference of the IFRS balance sheet versus the statutory accounts value in the Solvency II balance sheet is explained by policy differences and applying sectorial rules and D&A.

Policy differences

The difference of € 674 million between the IFRS balance sheet and the Statutory accounts value stems from consolidation and presentation differences between Solvency II and IFRS.

The difference under Any other assets and Any other liabilities is caused by the investments and liabilities for account of third parties regarding the ACTIAM Responsible Index Funds (€ 347 million). Given that VIVAT is the largest investor in these funds, it has 'control' over the relevant activities of these funds. Through the application of IFRS 10, VIVAT has to fully consolidate these funds, as a result of which the minority share of third parties (other investors in these funds) is also included in the balance sheet as an investment. The counterpart on the liabilities side are the liabilities towards third parties arising from these investments. Under Solvency II, where IFRS 10 is not applied for consolidation, these investments are recognized in the balance sheet in proportion to the participation in the funds.

The reclassification of € 327 million between Technical provisions life and Reinsurance recoverables is due to the new Longevity reinsurance contract. Under Solvency II the negative reinsurance recoverable regarding the longevity contract is netted with the other reinsurance recoverables and presented on the balance sheet. Under IFRS the reinsurance recoverable regarding the longevity contract is presented under the Technical provisions life and therefore netted with the corresponding technical provision.

Sectorial Rules and D&A

The differences of € 607 million between the IFRS balance sheet and the Statutory accounts value stems from the deconsolidation of subsidiaries Actiam NV (Actiam) and Zwitserleven PPI NV (PPI) and the treatment of N.V. Pensioen ESC (ESC) under D&A (Deduction and Aggregation).

D.1. Assets

In case the Solvency II measurement is equal to the IFRS measurement we refer to paragraph 6.1 of the Annual Report of VIVAT NV 2018. In respect of the IFRS measurement, one change in presentation was processed for a specific pool of mortgages. These mortgage are transferred from ‘Investments for account of policyholders’ to the 'Loans and Receivables' within the Investments own risk. The adjustment in the presentation is recognized in the consolidated statement of financial position and notes of VIVAT NV for the year 2018, the comparative figures are adjusted accordingly.

D.1.1. Goodwill and intangible assets

Under the Solvency II regime, intangible assets can only be recognized on the balance sheet, if the intangible asset: a) can be traded separately and b) there is an active market for similar assets. The intangible assets on the VIVAT IFRS consolidated balance sheet do not meet the aforementioned criteria.

D.1.2. Deferred tax assets and liabilities

In the Solvency II balance sheet, all items are measured at their market value, which can be estimated either through mark-to-market or mark-to-model techniques. As in the Solvency II balance sheet unrealized gains and losses are recognised, the corresponding deferred tax liability or asset is recognized simultaneously. For calculating the amount of deferred taxes, local income tax regulations apply;

In 2018, a law was adopted that lowers the Dutch corporate income tax rate to 22.55% in 2020 and to 20.50% in 2021. The deferred tax position at 31 December 2018 is calculated reflecting these reduced rates for temporary differences that are expected to reverse in financial years in which these rates apply.

A deferred tax asset (DTA) is the amount of income taxes recoverable in the future arising from deductible temporary differences between the carrying amount of an asset or liability and its tax base. VIVAT has recognised no deferred tax assets arising from the carryforward of unused tax losses.

A deferred tax liability (DTL) is the amount of income tax payable arising from taxable differences between the carrying amount of an asset or liability and its tax base.

VIVAT is with her subsidiaries, SRLEV, VIVAT Schadeverzekeringen, Proteq Levensverzekeringen, Zwitserleven PPI and ACTIAM a so called fiscal unity (fiscale eenheid).

The adjustment in the deferred tax is calculated using the determined reduced rates of all market value adjustments in the Solvency II balance sheet.

From IFRS to Solvency II tax position at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
IFRS tax position	478	-3	-1	-9	465
Tax adjustments for:					
Difference in the valuation of assets	-323	-	-	3	-320
Difference in the valuation of technical provisions	275	-20	-1	-31	223
Difference in the valuation of other liabilities	7	1	-	30	38
SII tax position	**437**	**-22**	**-2**	**-7**	**406**

From IFRS to Solvency II tax position at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
IFRS tax position	475	-4	2	17	491
Tax adjustments for:					
Difference in the valuation of assets	-451	-	-	4	-447
Difference in the valuation of technical provisions	589	-25	2	-26	539
Difference in the valuation of other liabilities	12	2	-	23	37
SII tax position	**625**	**-27**	**4**	**18**	**620**

For a further explanation of the IFRS tax position we refer to section 6.3 Note 8 Deferred Tax in the Annual Report of VIVAT NV 2018.

The underlying method of calculating the deferred tax assets and liabilities is the same for IFRS and for Solvency II; the tax value of assets and liabilities is compared with the amounts recognised in the balance sheet. Under IFRS the tax value of assets and liabilities is compared to the amounts recognised and measured based on IFRS. Respectively, under Solvency II, the tax values of assets and liabilities are compared to the amounts recognised and measured based on Solvency II.

D.1.3. Investments

The table below shows the value of the investments broken down by Solvency II and IFRS valuation.

Breakdown of investments at 31 December 2018

	SRLEV		VIVAT Schade		Proteq		Other		VIVAT	
In € millions	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	**IFRS**
Property (other than for own use)	267	267	–	–	–	–	134	134	**401**	**401**
Holdings in related undertakings, including participations	108	117	2	2	–	–	-82	-91	**28**	**28**
Equities	–	–	30	30	–	–	1	1	**31**	**31**
Bonds	24,960	24,944	1,102	1,102	524	524	-430	-413	**26,156**	**26,157**
Collective Investments Undertakings	3,595	3,595	425	425	41	41	70	70	**4,131**	**4,131**
Derivatives	1,053	1,053	23	23	–	–	–	–	**1,076**	**1,076**
Deposits other than cash equivalents	485	470	1	1	4	4	–	–	**490**	**475**
Investments	**30,468**	**30,446**	**1,583**	**1,583**	**569**	**569**	**-307**	**-299**	**32,313**	**32,299**

Breakdown of investments at 31 December 2017

	SRLEV		VIVAT Schade		Proteq		Other		VIVAT	
In € millions	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	**IFRS**
Property (other than for own use)	245	245	–	–	–	–	135	135	**380**	**380**
Holdings in related undertakings, including participations	84	96	12	4	–	–	-89	-100	**7**	**-**
Equities	–	–	36	36	–	–	1	1	**37**	**37**
Bonds	25,445	25,427	1,302	1,302	549	549	-360	-342	**26,936**	**26,936**
Collective Investments Undertakings	2,847	2,847	178	178	7	7	66	66	**3,098**	**3,098**
Derivatives	741	741	19	19	–	–	–	–	**760**	**760**
Deposits other than cash equivalents	535	513	1	1	6	6	9	10	**551**	**530**
Investments	**29,897**	**29,869**	**1,548**	**1,540**	**562**	**562**	**-238**	**-230**	**31,769**	**31,741**

The Property (other than for own use) in the category Other relate to property held on consolidated level. Holdings in related Undertakings in the category Other relate to the elimination of investments in associates on consolidated level. The Bonds in the category Other are due to the single consolidation of SRLEV. SRLEV presents notes as funding to a subsidiary, on the group level (VIVAT) the underlying mortgages are presented. The amount of Collective Investments Undertakings in Other relate to an investment in liquidity funds by VIVAT.

Valuation

All investments are measured at market value under IFRS and Solvency II, except the deposits other than cash equivalents. These are valued at amortized costs under IFRS instead of market value under the SII-regime.

Valuation at 31 December 2018

In € millions	Quoted market price	Quoted market price for similar assets	Alternative valuation method	Total
Property (other than for own use)	–	–	401	**401**
Holdings in related undertakings, including participations	–	–	28	**28**
Equities	–	–	31	**31**
Bonds	24,891	532	733	**26,156**
Collective Investments Undertakings	3,583	–	548	**4,131**
Derivatives	–	–	1,076	**1,076**
Deposits other than cash equivalents	–	–	490	**490**
Investments	**28,474**	**532**	**3,307**	**32,313**

Valuation at 31 December 2017

In € millions	Quoted market price	Quoted market price for similar assets	Alternative valuation method	Total
Property (other than for own use)	–	–	380	**380**
Holdings in related undertakings, including participations	–	–	7	**7**
Equities	–	–	37	**37**
Bonds	25,734	476	726	**26,936**
Collective Investments Undertakings	2,681	–	417	**3,098**
Derivatives	–	–	760	**760**
Deposits other than cash equivalents	–	–	551	**551**
Investments	**28,415**	**476**	**2,878**	**31,769**

Property (other than for own use)

Property other than for own use is in general investment properties. Investment property mainly consist of offices and retail properties. For more on the valuation of property other than for own use, see section D. 4.1.1.

Holdings in related undertakings, including participations

The holdings in related undertakings of VIVAT consist of the associates Actiam NV, Zwitserleven PPI NV and N.V. Pensioen ESC.

Change in Presentation

Within the 2017 SFCR Actiam and PPI were consolidated on the balance sheet of VIVAT. To recognize these subsidiaries in accordance with Solvency II method 1: sectoral rules, the assets and liabilities are eliminated from the balance sheet and the participations of VIVAT in these subsidiaries are recognized. This differs from the IFRS consolidated balance sheet of VIVAT. Please refer to colomn "Sectorial Rules and D&A" in section D. Valuation for Solvency purposes for the impact of the deconsolidation.

To recognize ESC accordance the Solvency II method D&A (Deduction and Aggregation) the assets and liabilities are eliminated from the balance sheet and the participation of VIVAT in the subsidiary ESC is recognized. This differs from the IFRS consolidated balance sheet of VIVAT.

The holdings in related undertaking, including participations are attributable to SRLEV € 108 million (2017: € 84 million), VIVAT Schadeverzekeringen € 2 million (2017: € 12million) and Other € -82 million (2017: € -89 million).

For a detailed overview of the related subsidiaries of VIVAT, SRLEV, VIVAT Schadeverzekeringen and Proteq Levensverzekeringen see Annex I.

Equities

Equities relate mainly to unlisted participations which are considered strategic by VIVAT. For a more detailed description of the market risk related to equities and the distinction between type 1 and type 2 equities, see section C.3.3. The equities are attributable to VIVAT Schadeverzekeringen € 30 million (2017: € 36 million) and Other € 1 million (2017: € 1 million).

Bonds

The table below provides a breakdown of bonds:

Breakdown of bonds at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	Total
Government Bonds	17,444	864	473	410	**19,191**
Corporate Bonds	5,983	230	51	–	**6,264**
Structured notes	25	1	–	–	**26**
Collateralised securities	1,508	7	–	-840	**675**
Bonds	**24,960**	**1,102**	**524**	**-430**	**26,156**

Breakdown of bonds at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	Total
Government Bonds	18,581	948	494	566	**20,589**
Corporate Bonds	4,998	338	55	–	**5,391**
Structured notes	25	1	–	–	**26**
Collateralised securities	1,841	15	–	-926	**930**
Bonds	**25,445**	**1,302**	**549**	**-360**	**26,936**

The column 'Other' € -430 million (2017: € -360 million) concern government bonds of VIVAT holding € 410 million (2017: € 566 million) and the elimination of collateralised securities € 840 million (2017: € 926 million). These collateralised securities constitute the intra-group notes issued by the Share Debt Programme 1 BV to finance a portfolio of mortgages and purchased by SRLEV.

The table below provides a breakdown of bonds by sector:

Breakdown of bonds by sector at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT	Percentage
Sovereign	17,444	864	473	410	19,191	73%
Financial sector	3,021	157	–	–	3,178	12%
Non financial sector	3,298	76	51	–	3,425	13%
Mortgage backed securities	1,197	5	–	-840	362	1%
Total	**24,960**	**1,102**	**524**	**-430**	**26,156**	**100%**

Breakdown of bonds by sector at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT	Percentage
Sovereign	18,581	948	494	566	20,589	76%
Financial sector	3,467	150	29	–	3,646	14%
Non financial sector	1,925	193	26	–	2,143	8%
Mortgage backed securities	1,472	11	–	-926	558	2%
Total	**25,445**	**1,302**	**549**	**-360**	**26,936**	**100%**

In 2018 the next steps have been made into re-risking the portfolio by divesting fixed-income investments primarily German and Dutch government bonds. A substantial transition took place from sovereign bonds to corporate bonds.

The table below provides a breakdown of bonds by rating:

Breakdown of bonds by rating at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT	Percentage
AAA	13,572	701	459	410	15,142	58%
AA	3,364	117	13	–	3,494	13%
A	3,825	115	19	–	3,959	15%
BBB	2,619	147	24	–	2,790	11%
< BBB	736	22	9	–	767	3%
Not rated	844	–	–	-840	4	0%
Total	**24,960**	**1,102**	**524**	**-430**	**26,156**	**100%**

Breakdown of bonds by rating at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT	Percentage
AAA	15,088	777	493	413	16,771	62%
AA	3,931	265	17	153	4,366	16%
A	2,988	106	18	–	3,112	12%
BBB	2,312	152	21	–	2,485	9%
< BBB	34	2	–	–	36	0%
Not rated	1,092	–	–	-926	166	1%
Total	**25,445**	**1,302**	**549**	**-360**	**26,936**	**100%**

Government Bonds

Government Bonds consists mainly of bonds issued by European governments. The vast majority of the governments bond are Dutch, German and bonds of European and other international institutions. Only a small part of the portfolio consists of bonds issued by Japan, Spain and Italy. The table below shows the breakdown of government bonds by geographic area.

Breakdown of government bonds by geographic area

In € millions	2018		2017	
Germany	7,441	39%	7,143	35%
Netherlands	5,913	31%	6,381	31%
Austria	983	5%	1,688	8%
International institutions	940	5%	1,057	5%
France	797	4%	1,055	5%
Belgium	603	3%	634	3%
Ireland	498	3%	504	2%
Japan	493	3%	493	2%
Spain	436	2%	482	2%
Italy	350	2%	431	2%
United States	125	1%	381	2%
Other	612	3%	340	2%
Total	**19,191**	**100%**	**20,589**	**100%**

Corporate Bonds

Corporate Bonds consists of bonds issued by European, Australian and American companies which are active in different sectors (e.g. financial services, industry, public administration and defense).

Collective Investments Undertakings

The Collective Investments Undertakings amount to € 4,131 million (2017: € 3,098 million) and are largely consisting of different investment funds among others money market funds € 2,467 million (2017: € 2,259 million) and debt funds € 872 million (2017: € 664 million). The Collective Investments Undertakings are attributable to SRLEV € 3,595 million (2017: € 2,847 million), VIVAT Schadeverzekeringen € 425 million (2017: € 178 million), Proteq Levensverzekeringen € 41 million (2017: € 7 million) and Other € 70 million (2017: € 66 million).

Derivatives

The table below provides a breakdown of derivatives:

Breakdown of derivatives at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Total
Call Options	122	–	**122**
Put Options	64	–	**64**
Swaps	854	23	**877**
Forwards	13	–	**13**
Derivatives	**1,053**	**23**	**1,076**

Breakdown of derivatives at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Total
Call Options	149	–	**149**
Put Options	62	–	**62**
Swaps	512	19	**531**
Forwards	18	–	**18**
Derivatives	**741**	**19**	**760**

Derivatives are primarily held to hedge the market risk. For more information on the measurement and valuation of derivatives see section D.4.1.1.

Deposits other than cash equivalents

The deposits other than cash equivalents amounts to € 490 million (2017: € 551 million). The difference of € 15 million (2017: € 21 million) between the Solvency II value and the IFRS value is due to difference in valuation. The deposits other than cash equivalents under IFRS are measured at amortized costs and under the SII-regime at market value.

D.1.4. Assets held for index-linked and unit-linked contracts

The assets held for index-linked and unit-linked contracts amount to € 11,795 million (2017: € 13,220 million) and include investments under unit-linked policies and separate investment deposits for corporate pension contracts.

The main differences of € 63 million (2017: € 79 million) between the IFRS valuation and the Solvency II valuation are caused by the revaluation of the assets related to the saving mortgages for the part that is reported as unit-linked. Regarding the savings elements of savings-linked mortgages the following valuation method is applied: for the valuation of the asset, the cash flows of the savings part have been projected until the interest reset using the fixed mortgage interest rate. The value of the assets is calculated as the present value of the cash flows of the assets during this fixed interest period using the swap curve increased with a spread related to the remaining risk (dependent on the counterparty and underlying collateral) in the asset for discounting.

D.1.5. Loans and mortgages

The loans and mortgages amount to € 10,898 million (2017: € 11,591 million). The difference of € 1,484 million (2017: € 1,693 million) between the Solvency II value and the IFRS value is due to difference in valuation. The loans and mortgages are under IFRS measured at amortized cost or nominal value and under the SII-regime at market value.

The Mortgages Valuation Model consists of two parts: the projection of the expected future cash flows, where prepayment is also taken into account, and the determination of the spread on top of the risk-free interest rate curve (Swap mid-price) for the purpose of discounting the cash flows. This spread will be obtained based the consumer tariffs for the available fixed interest rate terms. Then the consumer tariffs are adjusted for expected prepayment. There is a discount for the origination costs and price offer risk and an add-on for mortgages which are non-linear or non-annuity.

Loans and mortgages at 31 December 2018

In € millions	SRLEV		Other		VIVAT	
	SII	IFRS	SII	IFRS	SII	IFRS
Mortgages to individuals	1,424	1,272	839	823	2,263	2,095
Private loans linked to savings mortgages	5,657	4,752	-	-	5,657	4,752
Other loans and mortgages	3,026	2,604	-51	40-	2,975	2,564
Loans on policies	3	3	-	-	3	3
Total	**10,110**	**8,631**	**788**	**783**	**10,898**	**9,414**

Loans and mortgages at 31 December 2017

In € millions	SRLEV		VIVAT Schade		Other		VIVAT	
	SII	IFRS	SII	IFRS	SII	IFRS	SII	IFRS
Mortgages to individuals	1,697	1,491	-	-	925	907	2,622	2,398
Private loans linked to savings mortgages	6,098	5,054	-	-	-	-	6,098	5,054
Other loans and mortgages	2,878	2,438	51	51	-62	47-	2,867	2,442
Loans on policies	4	4	-	-	-	-	4	4
Total	**10,677**	**8,987**	**51**	**51**	**863**	**860**	**11,591**	**9,898**

D.1.6. Reinsurance recoverables

The difference of € 4 million (2017: € -7 million) in the reinsurance recoverables is caused by an adjustment to market value calculation under the SII-regime. See also section D.2. for an explanation of the technical provisions.

D.1.7. Any other assets, not elsewhere shown

This item comprises the assets that are not recognised as the items in the Solvency II balance sheet described above. These assets comprise mainly the accrued interest on amounts receivable that are not recognized as investments.

D.2. Technical provision

The effects of significant changes in estimates in respect of the IFRS measurement are disclosed in the notes to the consolidated financial statements relating to the items concerned as presented in the Annual Report of VIVAT NV 2018. The most significant changes in estimates concern the insurance liabilities (refer to note 6.3.16 'Insurance Liabilities').

Breakdown of technical provisions at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	Total
Best estimate (Gross)	44,353	893	421	-493	45,174
Risk Margin	1,469	136	26	-	1,631
Total technical provisions (Gross)	**45,822**	**1,029**	**447**	**-493**	**46,805**

Breakdown of technical provisions at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	Total
Best estimate (Gross) before reclassification	45,987	889	437	-243	47,070
Risk Margin	1,671	172	30	-	1,873
Total technical provisions (Gross)	**47,658**	**1,061**	**467**	**-243**	**48,943**

D.2.1. Technical provisions SRLEV

The gross technical provisions of SRLEV in the balance sheet decreased in 2018 with € 836 million to an amount of € 45,822 million. Excluding the risk margin and the recoverables from reinsurance the gross best estimate decreased in 2018 with € 1,634 million to an amount of € 44,353 million.

The table below provides an overview of the technical provisions of SRLEV.

Breakdown technical provisions Life SRLEV (Net) at 31 December 2018

In € millions	Insurance with profit participation	Index-linked and unit-linked	Other life insurance	Total
Best estimate (Gross)	13,375	12,507	18,471	**44,353**
Best estimate (Recoverable from reinsurance)	162	-	75	**237**
Best estimate (net)	**13,537**	**12,507**	**18,546**	**44,590**
Risk Margin	376	288	805	**1,469**
Technical provisions Solvency II	**13,913**	**12,795**	**19,351**	**46,059**
Technical provisions IFRS (net)[1]	14,043	12,703	18,375	**45,121**
Differences	**-130**	**92**	**976**	**938**

[1] The IFRS technical provisions in the balance sheet amount to € 44,507 million (excluding ESC). The difference with the technical provisions IFRS net in this specification is due to the recoverables from reinsurance (€ -250 million) and surplus investments (€ -364 million).

Breakdown technical provisions Life SRLEV (Net) at 31 December 2017

In € millions	Insurance with profit participation	Index-linked and unit-linked	Other life insurance	Total
Best estimate (Gross)	13,998	13,654	18,335	**45,987**
Best estimate (Recoverable from reinsurance)	-8	1	-84	**-91**
Best estimate (net)	**13,990**	**13,655**	**18,251**	**45,896**
Risk Margin	456	353	862	**1,671**
Technical provisions Solvency II	**14,446**	**14,008**	**19,113**	**47,567**
Technical provisions IFRS (net)[1]	14,201	13,812	17,605	**45,618**
Differences	**245**	**196**	**1,508**	**1,949**

1 The IFRS technical provisions in the balance sheet amount to € 45.302 million (excluding ESC). The difference with the technical provisions IFRS net in this specification is due to the recoverables from reinsurance (€ 91 million) and surplus investments (€ -407 million).

During 2018 part of the paid-up group insurance policies in investment units were transferred from the index and unit linked portfolio to the other life insurance portfolio.

The table below shows a breakdown of the technical provisions of SRLEV per Line of Business.

Breakdown technical provisions Life SRLEV per Line of Business (Net) at 31 December 2018

	Best estimate		Risk Margin	SII	IFRS
In € millions	Gross	Net	Net	Net	Net[1]
Savings-based mortgages	5,450	5,382	65	5,447	4,532
Life annuity	4,050	4,050	219	4,269	4,255
Term insurance	87	87	232	319	246
Traditional savings	5,492	5,482	105	5,587	5,562
Funeral insurance	967	967	48	1,015	1,036
Individual insurance policies in cash	**16,046**	**15,968**	**669**	**16,637**	**15,631**
Individual insurance policies in investment units	4,417	4,417	132	4,549	4,444
Group insurance policies in cash	15,800	16,115	512	16,627	16,787
Group insurance policies in investment units	8,090	8,090	156	8,246	8,259
Total	**44,353**	**44,590**	**1,469**	**46,059**	**45,121**

1 The IFRS technical provisions in the balance sheet amount to € 44,507 million (excluding ESC). The difference with the technical provisions IFRS net in this specification is due to the recoverables from reinsurance (€ -250 million) and surplus investments (€ -364 million).

Breakdown technical provisions Life SRLEV per Line of Business (Net) at 31 December 2017

	Best estimate		Risk Margin	SII	IFRS
In € millions	Gross	Net	Net	Net	Net[1]
Savings-based mortgages	5,834	5,748	93	5,841	4,740
Life annuity	4,056	4,056	211	4,267	4,181
Term insurance	-39	-39	201	162	95
Traditional savings	6,032	6,022	85	6,107	5,989
Funeral insurance	988	988	52	1,040	1,027
Individual insurance policies in cash	**16,871**	**16,775**	**642**	**17,417**	**16,032**
Individual insurance policies in investment units	4,904	4,905	144	5,049	4,923
Group insurance policies in cash	15,462	15,466	676	16,142	15,774
Group insurance policies in investment units	8,750	8,750	209	8,959	8,889
Total	**45,987**	**45,896**	**1,671**	**47,567**	**45,618**

[1] The IFRS technical provisions in the balance sheet amount to € 45.302 million (excluding ESC). The difference with the technical provisions IFRS net in this specification is due to the recoverables from reinsurance (€ 91 million) and surplus investments (€ -407 million).

Methods and assumptions

The main components of calculating the technical provisions are the used methods and assumptions. VIVAT uses a general actuarial market approach taking into account the contract boundaries of the insurance contract. The material methods and assumptions that are used in the calculation of the technical provisions of Life are described in section D.4.1.1.

Differences valuation Solvency II and IFRS

As per year-end 2018, the liability adequacy test results in a deficit making market consistent valuation of the technical provisions mandatory under IFRS 4. Under Solvency II the technical provisions are also market consistent measured. The differences between Solvency II and IFRS valuation are than confined to:

Standard modelsegmentation	IFRS Technical provision (gross)	SII Technical provision (gross)
SRLEV	1. Market consistent valuated technical provision, except for saving mortgages which is at nominal value	1. Market consistent valuated technical provision
	2. Swap curve with UFR for discounting	2. By EIOPA prescribed curve: swap curve adjusted for credit risk (Volatility Adjustment) and with UFR for discounting
	3. As a result of internal research the Cost of Capital (CoC) is 4%	3. According to SII-requirements the CoC is 6%

As shown in the table 'Breakdown technical provisions Life SRLEV per Line of Business (Net)' the difference between the Solvency II and IFRS value is € 0.9 billion. This difference is mainly caused by the valuation of savings mortgages from nominal value to Solvency II market value (€ 0.9 billion). Volatility Adjustment had a large impact. The differences in Cost of Capital percentage and curve have only small effects.

Level of Uncertainty

Uncertainty arises from risks SRLEV is exposed to. SRLEV has defined and structured different risk types, partly on the basis of current legislation and regulations (SII Standard Formula), and partly on the basis of own assessment of risks. With regards to the valuation of technical provisions VIVAT recognizes model risk, covering uncertainty in the models, the parameters and in the data. The risks related to these uncertainties are mitigated by complying to Risk Policy (RP) procedures and processes for the development of models, the estimation of parameters and the use of data. According to this policy, model validations and second line reviews or assessments are performed. Next to that, at least once a year model risk is also assessed at Group and legal entity levels, during the regular Own Risk Solvency Assessment (ORSA) process, when the appropriateness test is executed.

Impact Volatility Adjustment

SRLEV applies the Volatility Adjustment for discounting cash flows to determine the best estimate and in determining the capital requirement under the SCR. The following table shows the impact of this Volatility Adjustment on the financial position and own funds of SRLEV:

Impact of applying Volatility Adjustment at 31 December 2018

In € millions	VA = 24 bp	VA = 0 bp	Impact
Technical provisions (Gross)	45,822	46,781	959
Basic own funds	4,118	3,350	-768
Eligible own funds to meet SCR	4,000	3,029	-971
SCR	2,127	2,127	-
MCR	957	957	-
Solvency II ratio	188%	142%	-46%

Impact of applying Volatility Adjustment at 31 December 2017

In € millions	VA = 4 bp	VA = 0 bp	Impact
Technical provisions (Gross)	47,658	47,821	163
Basic own funds	3,562	3,439	-123
Eligible own funds to meet SCR	3,246	3,093	-153
SCR	2,061	2,131	70
MCR	927	959	32
Solvency II ratio	158%	145%	-13%

Matching Adjustment

SRLEV does not apply a Matching Adjustment as referred to in Article 77 of Directive 2009/138/EC.

Risk-free yield curve

SRLEV does not apply a risk-free yield curve and transition deductions as referred to in Article 308 of Directive 2009/138/EC.

Transition deductions

SRLEV does not apply a transition deductions as referred to in Article 308 of Directive 2009/138/EC.

Material changes in assumptions

There have been no material changes in the relevant assumptions underlying the calculation of technical provisions.

Significant simplified methods

No significant simplified methods were used to calculate the technical provisions.

Reinsurance

For a further explanation of Life reinsurance see section C.1.3.3.

D.2.2. Technical provisions VIVAT Schadeverzekeringen

The technical provisions of VIVAT Schadeverzekeringen (including recoverables from reinsurance and the risk margin) decreased from € 978 million in 2017 to € 955 million in 2018. This is a decrease of € 23 million. Excluding the reinsurance recoverables and the risk margin results in a movement of the gross best estimate from € 889 million in 2017 to € 893 million in 2018 resulting in a total increase of € 4 million.

The insurance liabilities within VIVAT Schadeverzekeringen will compensate the insured or a third party in the event of damage caused by an uncertain event. These non-life insurance contracts mainly have a period of one year of coverage. Payments to be made after the occurrence of the insured event are either fixed (e.g. contractual benefit in case of disability) or related to the extent of the economic loss (in accordance with the indemnity principle) suffered by the policyholder or a third party.

The insurance liabilities within VIVAT Schadeverzekeringen are split in Non-Life, Health Non-SLT and Health SLT segments, in line with the insurance lines of business as defined by Solvency II. These segments are measured separately and technical provisions are calculated per homogeneous risk group. Within Non-Life, the homogeneous risk groups Motor, Transport, Fire, Liability and Other are covered. Income protection due to Accidents as well as Medical expenses are covered within Health Non-SLT where Disability insurance (AOV) is covered within Health SLT.

Breakdown technical provisions Non-Life (Net) at 31 December 2018

In € millions	Non-Life	Health (similar to Non-Life)	Health (similar to Life)	Total
Best estimate (Gross)	644	21	228	**893**
Best estimate (Recoverable from reinsurance)	-39	-	-35	**-74**
Best estimate (net)	**605**	**21**	**193**	**819**
Risk Margin	38	2	96	**136**
Technical provisions Solvency II	**643**	**23**	**289**	**955**
Technical provisions IFRS (net)	664	22	365	**1,051**
Differences	**-21**	**1**	**-76**	**-96**

Breakdown technical provisions Non-Life (Net) at 31 December 2017

In € millions	Non-Life	Health (similar to Non-Life)	Health (similar to Life)	Total
Best estimate (Gross)	662	19	208	**889**
Best estimate (Recoverable from reinsurance)	-43	-	-40	**-83**
Best estimate (net)	**619**	**19**	**168**	**806**
Risk Margin	39	2	131	**172**
Technical provisions Solvency II	**658**	**21**	**299**	**978**
Technical provisions IFRS (net)	696	22	361	**1,079**
Differences	**-38**	**-1**	**-62**	**-101**

Breakdown technical provisions Non-Life per Line of Business (Net) at 31 December 2018

	Best estimate		Risk Margin	SII	IFRS
In € millions	Gross	Net	Net	Net	Net
Motor insurance	350	341	21	**362**	366
Marine, aviation and transport insurance	38	36	2	**38**	42
Fire and other damage to property insurance	117	105	5	**110**	119
General liability insurance	135	119	9	**128**	127
Other	4	4	1	**5**	10
Technical provision Non-Life (excluding health)	**644**	**605**	**38**	**643**	**664**
Health Non SLT	21	21	2	**23**	22
Technical provision Health (similar to Non-Life)	**21**	**21**	**2**	**23**	**22**
Health SLT	228	193	96	289	365
Technical provision Health (similar to Life)	**228**	**193**	**96**	**289**	**365**
Technical provision	**893**	**819**	**136**	**955**	**1,051**

Breakdown technical provisions Non-Life per Line of Business (Net) at 31 December 2017

In € millions	Best estimate Gross	Net	Risk Margin Net	SII Net	IFRS Net
Motor insurance	365	352	20	**373**	383
Marine, aviation and transport insurance	36	35	2	**36**	39
Fire and other damage to property insurance	109	103	6	**109**	132
General liability insurance	141	118	9	**128**	132
Other	11	11	2	**12**	10
Technical provision Non-Life (excluding health)	**662**	**619**	**39**	**658**	**696**
Health Non SLT	19	19	2	**21**	22
Technical provision Health (similar to Non-Life)	**19**	**19**	**2**	**21**	**22**
Health SLT	208	168	131	**299**	361
Technical provision Health (similar to Life)	**208**	**168**	**131**	**299**	**361**
Technical provision	**889**	**806**	**172**	**978**	**1,079**

Methods and assumptions

The main components of calculating the technical provisions are the used methods and assumptions. VIVAT uses a general actuarial market approach taking into account the contract boundaries of the insurance contract. The material methods and assumptions that are used in the calculation of the technical provisions of Non-Life, Health Non-SLT and Health SLT are described in section D.4.1.1.

Differences valuation Solvency II and IFRS

There is a number of important differences in measuring the technical provisions between best estimate under SII and provisions under IFRS regulation. The most important differences are shown in the table below.

Standard model segmentation	IFRS Technical provision (gross)	SII Technical provision (gross)
Non-Life and Health NSLT	1. Claim provision determined on claim by claim basis	1. Claim provision determined on claim by claim basis
	2. IBNR provision on estimated claim development including risk margin	2. Best estimate IBNR provision on actual claim development excluding risk margin
	3. Provision claim handling estimated by cost parameters applied to claim provisions	3. Best estimate claim handling provision
	4. Provision investment costs nil	4. Best estimate investment costs provision
	5. Risk margin included in IBNR provision	5. Risk margin based on SCR
	6. No discounting	6. Technical provision based on discounted cash flows
Health SLT	1. Claim provision determined on claim by claim basis and fixed interest rate	1. Best estimate present value of future incoming and outgoing cash flows (SLT method). EIOPA interest curve.
	2. IBNR provision on estimated claim development including risk margin	2. IBNR provision nil
	3. Provision claim handling estimated by cost parameters applied to claim provisions	3. Best estimate claim handling provision
	4. Provision investment costs nil	4. Best estimate investment costs provision
	5. Risk margin included in IBNR provision	5. Risk margin based on SCR
	6. Discounting in claim provision, IBNR provision and provision claim handling.	6. Technical provision based on discounted cash flows

Level of Uncertainty

Uncertainty arises from risks VIVAT Schadeverzekeringen is exposed to. VIVAT Schadeverzekeringen has defined and structured different risk types, partly on the basis of current legislation and regulations (SII Standard Formula), and partly on the basis of own assessment of risks. With regards to the valuation of technical provisions VIVAT recognizes model risk, covering uncertainty in the models, the parameters and in the data. The risks related to these uncertainties is mitigated by complying to Risk Policy (RP) procedures and processes for the development of models, the estimation of parameters and the use of data. According to this policy, model validations and second line reviews or assessments are performed. Next to that, at least once a year model risk is also assessed at group and legal entity levels, during the regular Own Risk Solvency Assessment (ORSA) process, when the appropriateness test is executed.

Impact Volatility Adjustment

VIVAT Schadeverzekeringen applies the Volatility Adjustment for discounting cash flows to determine the best estimate and in determining the capital requirement under the SCR. The following table shows the impact of this Volatility Adjustment on the financial position and own funds of VIVAT Schadeverzekeringen:

Impact of applying Volatility Adjustment at 31 December 2018

In € millions	VA = 24 bp	VA = 0 bp	Impact
Technical provisions (Gross)	1,029	1,042	13
Basic own funds	564	555	-9
Eligible own funds to meet SCR	564	555	-9
SCR	361	370	9
MCR	119	120	1
Solvency II ratio	156%	150%	-6%

Impact of applying Volatility Adjustment at 31 December 2017

In € millions	VA = 4 bp	VA = 0 bp	Impact
Technical provisions (Gross)	1,061	1,063	2
Basic own funds	570	569	-1
Eligible own funds to meet SCR	570	569	-1
SCR	351	353	2
MCR	114	114	-
Solvency II ratio	162%	161%	-1%

Matching Adjustment

VIVAT Schadeverzekeringen does not apply a Matching Adjustment as referred to in Article 77 of Directive 2009/138/EC.

Risk-free yield curve

VIVAT Schadeverzekeringen does not apply a risk-free yield curve and transition deductions as referred to in Article 308 of Directive 2009/138/EC.

Transition deductions

VIVAT Schadeverzekeringen does not apply a transition deductions as referred to in Article 308 of Directive 2009/138/EC.

Material changes in assumptions

There have been no material changes in the relevant assumptions underlying the calculation of technical provisions.

Significant simplified methods

No significant simplified methods were used to calculate the technical provisions.

Reinsurance

For a further explanation of Non-Life reinsurance see section D.1.6.

D.2.3. Technical provisions Proteq Levensverzekeringen

The table below provides us an overview of the technical provisions of Proteq Levensverzekeringen.

Breakdown technical provisions Life Proteq Levensverzekeringen (Net) at 31 December 2018

In € millions	Insurance with profit sharing	Other life insurance	Total
Best estimate (Gross)	290	131	**421**
Best estimate (Recoverable from reinsurance)	-	-	**-**
Best estimate (net)	**290**	**131**	**421**
Risk Margin	14	12	**26**
Technical provisions Solvency II	**304**	**143**	**447**
Technical provisions IFRS (net)	312	142	**454**
Differences	**-8**	**1**	**-7**

Breakdown technical provisions Life Proteq Levensverzekeringen (Net) at 31 December 2017

In € millions	Insurance with profit sharing	Other life insurance	Total
Best estimate (Gross)	300	137	**437**
Best estimate (Recoverable from reinsurance)	-	-	**-**
Best estimate (net)	**300**	**137**	**437**
Risk Margin	17	13	**30**
Technical provisions Solvency II	**317**	**150**	**467**
Technical provisions IFRS (net)	313	146	**459**
Differences	**4**	**4**	**8**

Proteq Levensverzekeringen mainly has Funeral insurance.

Level of Uncertainty

Uncertainty arises from risks Proteq Levensverzekeringen is exposed to. Proteq Levensverzekeringen has defined and structured different risk types, partly on the basis of current legislation and regulations (SII Standard Formula), and partly on the basis of own assessment of risks, With regards to the valuation of technical provisions VIVAT recognizes model risk, covering uncertainty in the models, the parameters and in the data. The risks related to these uncertainties is mitigated by complying to Risk Policy (RP) procedures and processes for the development of models, the estimation of parameters and the use of data. According to this policy, model validations and second line reviews or assessments are performed. Next to that, at least once a year model risk is also assessed at Group and legal entity levels, during the regular Own Risk Solvency Assessment (ORSA) process, when the appropriateness test is executed.

Differences valuation Solvency II and IFRS

Per ultimo 2016 the liability adequacy test results in a deficit making market consistent valuation of the technical provisions mandatory under IFRS 4. Under Solvency II the technical provisions are also market consistent valuated. The differences between Solvency II and IFRS valuation are than confined to:

Standard modelsegmentation	IFRS Technical provision (gross)	SII Technical provision (gross)
Proteq	1. Market consistent valuated technical provision	1. Market consistent valuated technical provision
	2. Swap curve with UFR for discounting	2. By EIOPA prescribed curve for discounting
	3. As a result of internal research the CoC is 4%	3. According to SII-requirements the CoC is 6%

The difference between the Solvency II and IFRS value of € 7 million is mainly caused by difference in the Cost of Capital percentage. The difference in curve has only a small effect.

Impact Volatility Adjustment

Proteq Levensverzekeringen applies the Volatility Adjustment for discounting cash flows to determine the best estimate and in determining the capital requirement under the SCR. The following table shows the impact of this Volatility Adjustment on the financial position and own funds of Proteq Levensverzekeringen:

Impact of applying Volatility Adjustment at 31 December 2018

In € millions	VA = 24 bp	VA = 0 bp	Impact
Technical provisions (Gross)	447	464	17
Basic own funds	119	106	-13
Eligible own funds to meet SCR	119	106	-13
SCR	36	41	5
MCR	13	14	1
Solvency II ratio	331%	259%	-72%

Impact of applying Volatility Adjustment at 31 December 2017

In € millions	VA = 4 bp	VA = 0 bp	Impact
Technical provisions (Gross)	467	470	3
Basic own funds	92	90	-2
Eligible own funds to meet SCR	92	90	-2
SCR	35	35	-
MCR	14	14	-
Solvency II ratio	263%	257%	-6%

Matching Adjustment

Proteq Levensverzekeringen does not apply a Matching Adjustment as referred to in Article 77 of Directive 2009/138/EC.

Risk-free yield curve

Proteq Levensverzekeringen does not apply a risk-free yield curve and transition deductions as referred to in Article 308 of Directive 2009/138/EC.

Transition deductions

Proteq Levensverzekeringen does not apply a transition deductions as referred to in Article 308 of Directive 2009/138/EC.

Material changes in assumptions

There have been no material changes in the relevant assumptions underlying the calculation of technical provisions.

Significant simplified methods

No significant simplified methods were used to calculate the technical provisions.

D.3. Liabilities

In case the Solvency II measurement is equal to the IFRS measurement we refer to the Annual Report of VIVAT NV. In respect of the IFRS measurement, a changes in presentation was processed for a specific pool of mortgages, refer to D.1. “Assets”. The related insurance liability was previously recognized as “Investments and Insurance liabilities for account of policyholders”. Since VIVAT NV has been exposed to the financial risks arising from this pool of mortgages, the related insurance liabilities needed to be classified to 'Insurance liabilities for general account'. The adjustment in the presentation is recognized in the consolidated statement of financial position and notes of VIVAT NV for the year 2018, the comparative figures are adjusted accordingly.

D.3.1. Contingent liabilities

For the definition of contingent liabilities Solvency II refers to IFRS. Under Solvency II it is required to recognise contingent liabilities on the balance sheet if they are material. On the basis of the analysis of VIVAT, there are no contingent liabilities included in the Solvency II balance sheet at the end of 2018.

Under Solvency II, VIVAT has not measured the contingent liability relating to unit- linked policies in calculating the own funds as no reliable estimate can be made of the outcome. This is consistent with the measurement under IFRS.

For further information about off-balance sheet items, see section D.5.2.

D.3.2. Pension benefit obligations

Breakdown of pension benefit obligations 2018

In € millions	SRLEV	VIVAT Schade	Other	VIVAT
Present value of defined benefit obligations	194	28	380	602
Fair value of plan assets	-23	-3	-47	-73
Effect of asset ceiling	1	-	3	4
Present value of the net liabilities	**172**	**25**	**336**	**533**
Reclassification pension commitments under Technical Provisions	-159	**-**	159	**-**
IAS 19 surplus after reclassification	**13**	**25**	**495**	**533**
Other employee benefit commitments	-	-	14	**14**
Total	**13**	**25**	**509**	**547**

Breakdown of pension benefit obligations 2017

In € millions	SRLEV	VIVAT Schade	Other	VIVAT
Present value of defined benefit obligations	206	29	405	641
Fair value of plan assets	-23	-3	-46	-73
Effect of asset ceiling	1	-	1	2
Present value of the net liabilities	**184**	**26**	**360**	**570**
Reclassification pension commitments under Technical Provisions	-165	-	165	**-**
IAS 19 surplus after reclassification	**19**	**26**	**525**	**570**
Other employee benefit commitments	-	-	15	**15**
Total	**19**	**26**	**540**	**585**

The net present value of the defined benefit obligations € 602 million (2017: € 641 million) is calculated on basis of the prescribed IFRS discount rate. The insured rights are taken into account for the SCR calculation, using the SCR results of the pension commitments under technical provisions, based on Solvency II assumptions.

The column 'Other' € 509 million (2017: € 540 million) includes the pensioen benefit obligations of VIVAT NV € 336 million (2017: € 360 million) and the reclassification of the pension commitments from the technical provisions of SRLEV € 159 million (2017: € 165 million).

Pension benefit obligations other than mentioned in the financial statements do not exist. We refer to section 6.3 Note 17 Provisions for Employee Benefits in the Annual Report VIVAT NV 2018. In this section the main actuarial parameters and sensitivity of the present value of pension obligations are explained also.

D.3.3. Debts owed to credit institutions

The table below provides an overview of the debts owed to credit institutions:

Debts owed to credit institutions at 31 December 2018

	SRLEV		VIVAT Schade		Proteq		Other		VIVAT	
In € millions	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	**IFRS**
Borrowings	-	-	-	-	-	-	654	644	654	644
Due on demand	632	632	17	17	-	-	-	-	649	649
Deposits and certificates	-	-	-	-	-	-	-	-	-	-
Private loans	894	708	-	-	-	-	-	-	894	708
Total	**1,526**	**1,340**	**17**	**17**	**-**	**-**	**654**	**644**	**2,197**	**2,001**

Debts owed to credit institutions at 31 December 2017

	SRLEV		VIVAT Schade		Proteq		Other		VIVAT	
In € millions	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	**IFRS**
Borrowings	–	–	–	–	–	–	642	642	642	642
Due on demand	398	398	16	16	–	–	–	–	414	414
Deposits and certificates	525	525	–	–	–	–	–	–	525	525
Private loans	903	703	–	–	–	–	–	–	903	703
Total	**1,826**	**1,626**	**16**	**16**	**-**	**-**	**642**	**642**	**2,484**	**2,284**

Borrowings
On May 17th 2017 VIVAT NV issued € 650 million of senior notes. The € 650 million senior notes have a fixed coupon at 2.375% per annum and a maturity of seven years. The difference of € 10 million between the IFRS figures and the Solvency II figures is due to different measurement methods (at amortised cost under IFRS and at market value under Solvency II).

Due on demand
The amount of € 649 million (2017: € 414 million) due on demand relates to cash collateral. The market value of the derivatives portfolio increased with € 350 million. Vivat receives cash and non-cash collateral which explains the increase for the year.

Deposits and certificates
Deposits and certificates relate to liabilities under repurchase agreements. This agreement expired and has not been renewed in 2018.

Private loans
The private loans of € 894 million (2017: € 903 million) relates to the saving components of mortgages. The difference of € 186 million (2017: € 200 million) between the IFRS figures and the Solvency II figures is due to different measurement methods (at nominal value under IFRS and at market value under Solvency II).

D.3.4. Other liabilities

Due to deconsolidation of Actiam, PPI and ESC column no differences between SII and recalculated IFRS in accordance with SII consolidation structure.

D.4. Alternative methods for valuation

D.4.1. Solvency II reporting framework

D.4.1.1. Solvency II accounting principles

VIVAT, incorporated and established in the Netherlands, is a public limited liability company incorporated under the laws of the Netherlands. VIVAT is a wholly owned subsidiary of Anbang Group Holdings Co. Limited with a registered office at Hong Kong, People's Republic of China, ultimate parent of which is Anbang Insurance Group Co., Ltd. with its headquarters in Beijing, People's Republic of China. VIVAT Verzekeringen is the trade name of VIVAT NV. VIVAT holds 100% of the shares in SRLEV, VIVAT Schadeverzekeringen and Proteq Levensverzekeringen.

In the consolidated Solvency II (SII) balance sheet the name 'VIVAT' is used when discussing the consolidated activities of VIVAT, its insurance entities and other entities.

The main accounting policies used in the preparation of the consolidated SII balance sheet are set out in this section.

General accounting policies

The following policies have been applied in the course of preparing SII consolidated balance sheet:

> Going concern basis: VIVAT's business will be continued for the foreseeable future.
> Accrual basis: the effects of transactions and other events and circumstances on a reporting entity's economic resources and claims in the periods in which those effects occur, even if the resulting cash receipts and payments occur in a different period.
> Materiality concept: information is viewed as material if omitting it or misstating it could influence decisions that users make on the basis of SII consolidated balance sheet. Materiality of an item depends on its amount, nature or combination of both.

Functional currency and reporting currency

The SII consolidated balance sheet has been prepared in millions of euros (€). The euro is the functional and reporting currency of VIVAT. All financial data presented in euros is rounded to the nearest million, unless stated otherwise. Counts are based on unrounded figures. Their sum may differ from the sum of the rounded figures.

Further details on the accounting policies applied to the conversion of transactions and translation of items in the statement of financial position denominated in foreign currencies are provided in the section below entitled 'Foreign currencies'.

Foreign currencies

Upon initial recognition, transactions in foreign currencies are converted into euros against the exchange rate at the transaction date. Items in the SII consolidated balance sheet denominated in foreign currencies are translated into euros at the exchange rate applicable at the reporting date.

Accounting based on transaction date and settlement date

All purchases and sales of financial instruments that have been settled in accordance with standard market practices are recognised at the transaction date, i.e. the date on which VIVAT commits itself to buying or selling the asset or liability. All other purchases or sales are recognised as forward transactions until they are settled.

Offsetting financial instruments

Financial assets and liabilities are offset and their net amounts are reported in SII consolidated balance sheet, if a legally enforceable right to set off the recognised amounts exists, as well as an intention to settle the items on a net basis, or to settle the asset and the liability simultaneously. If these conditions are not met, amounts are not offset

Estimates and assumptions

The preparation of SII consolidated balance sheet requires VIVAT to make estimates based on complex and partially subjective assumptions. These estimates have a significant impact on the reported amounts of assets and liabilities and the contingent assets and liabilities at the reporting date. In this process, management judges situations on the basis of available information and financial data that could potentially change in the future. Although estimates are made to the best of the management's knowledge, actual results may differ from these estimates and the use of other assumptions or data can lead to materially different results.

Estimates and underlying assumptions are reviewed on a regular basis. The resulting impact on accounting estimates is recognised in the period in which the estimate is revised or in the period of revision and future periods if the revision impacts both the reporting period and future periods. The main accounting policies involving the use of estimates concern the methods for determining liabilities arising from insurance contracts, the provisions for bad debts, the fair value of assets and liabilities, and impairments.

Fair value of assets and liabilities

Assets and liabilities are recognized and measured in accordance with the Solvency II regulations.

Assets are measured at the amount for which they could be exchanged between knowledgeable, willing parties in an arm's length transaction. Liabilities are measured at the amount for which they could be settled between knowledgeable, willing parties in an arm's length transaction. In determining the fair value, Solvency II applies the principles of IFRS 13 (with the exception of own credit rate adjustment for financial liabilities).

The fair value of non-financial assets is determined based on the "highest and best use" concept. This concept takes into account the economic benefits, that would be generated either by best use of the asset by VIVAT or by selling the asset to another party. Furthermore, the "highest and best use" concept is based on the use of the asset that is physically, legally and financially viable. The fair value of a non-financial asset based on the "highest and best use" concept is determined regardless of the actual VIVAT's intention to utilise the asset.

The fair value of financial instruments is based on a hierarchy that categorises the inputs to the valuation techniques used to measure fair value.

The fair value hierarchy gives the highest priority to quoted, unadjusted prices in active markets for identical assets or liabilities and the lowest priority to alternative valuation models:

- Quoted market price in active markets for the same assets (QMP)
  Quoted prices from exchanges, brokers or pricing institutions are observable for all financial instruments in this valuation category. In addition, these financial instruments are traded on an active market, which allows the price to accurately reflect current and regular market transactions between independent parties. The investments in this category mainly concern listed equities and bonds, including investment funds on behalf of policyholders, underlying investments of which are listed.
- Quoted market price in active markets for similar assets (QMPS)
  This category includes financial instruments for which no quoted prices are available but fair value of which is determined using models where the parameters include available market inputs. These instruments are mostly privately negotiated derivatives and private loans. This category also includes investments whose prices have been supplied by brokers but for which the markets are inactive. In these cases, available prices are largely supported and validated using market inputs, including market rates and actual risk premiums related to credit rating and sector classification.
- Alternative valuation methods (AVM)
  The financial instruments in this category have been assessed individually. The valuation is based on

management's best estimate, taking into account most recently known prices. In many cases analyses prepared by external valuation agencies are used. These analyses are based on data unobservable in the market, such as assumed default rates associated with certain ratings.

Solvency II presentation of assets and liabilities

SII requires the balance sheet template to be used. VIVAT presents its assets and liabilities according to these standards.

Assets

Goodwill and intangible assets

VIVAT does not recognise goodwill or other intangible assets in the Solvency II consolidated balance sheet.

Deferred tax assets (and liabilities)

Deferred tax assets and liabilities are recognised for tax losses carried forward and for temporary differences between the tax bases of assets and liabilities and their amounts recognised in Solvency II balance sheet. This is based on the tax rates applicable at the reporting date and the tax rates that will apply in the period in which the deferred tax assets or tax liabilities are settled.

Deferred tax assets and liabilities are measured at the undiscounted amount expected to be received or paid. Deferred tax assets are only recognised if sufficient taxable profits are expected to be available in the near future against which these temporary differences can be settled. Deferred taxes are recognised for temporary differences between the carrying amount and the value for tax purposes.

Deferred tax assets are assessed at the reporting date; if it is no longer likely that the related taxable profit will be achieved, the asset is reduced to its recoverable value.

The deferred tax assets and deferred tax liabilities are presented on a net basis.

Property, plant and equipment held for own use

This balance sheet item comprises owner-occupied property, IT equipment and other property and equipment.

Owner-occupied property

Owner-occupied property mainly comprises offices (land and buildings) and is measured at fair value (revaluation model) based on annual valuations performed by external, independent appraisers with adequate professional expertise and experience in the specific location and categories of properties.

According to the revaluation model the asset is measured at its fair value less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

Owner-occupied property is measured at fair value on an unlet or (partially) let basis, depending on the situation. The purpose of a valuation is to determine the value for which the asset would be sold in an orderly transaction between market participants at the measurement date. The capitalisation method is used to determine this value. This method uses an expected return at inception and the market rental value to determine the fair value of an asset. Gains and losses on owner-occupied property include lease incentives, discount rates and expected vacancy, making allowance for the location, quality, age and liquidity of the property in question.

IT equipment and other property and equipment

IT equipment and other property and equipment is measured at fair value determined based on the highest and best use by VIVAT (amount of economic benefits generated by VIVAT utilising the asset).

Repair and maintenance expenses incurred after the acquisition of an asset that increase or extend the future economic benefits of assets in relation to their original use are capitalised.

Assets are depreciated on a straight-line basis over their useful lives, taking into account any residual value.

Investments

This balance sheet item comprises the following items:

> Property (other than for own use)
> Participations
> Equities
> Bonds
> Collective investments undertakings
> Derivatives
> Deposits other than cash equivalents

Property (other than for own use)

Investment property, comprising retail properties and offices, residential properties and land, is held to generate long- term rental income or capital appreciation or both. If a property qualifies as part investment property and part owner- occupied property, it is recognised within property and equipment, unless the owner-occupied part makes up less than 20% of the total number of square metres.

Investment property is measured at fair value, including transaction costs, upon initial recognition. Investment property qualifies as a long-term investment and is measured at fair value, i.e. its value in a (partially) let state. The fair value is based on valuations performed every year by independent external appraisers with adequate expertise and specific experience in property locations and categories.

The purpose of a valuation is to determine the value for which the asset would be sold in an orderly transaction between market participants at the measurement date. The capitalisation method is used to determine this value. This method uses an expected return since inception and the market rental value to determine the fair value of an asset. Gains and losses on investment property include lease incentives, discount rates and expected vacancy, but allowance is made for location, quality, age and liquidity of the property as well.

Participations

This item comprises the subsidiaries and associates of VIVAT, that are not consolidated in the Solvency II consolidated balance sheet. These participations are recognised and measured according to the (adjusted) equity method.

Equities

The listed equities are measured at fair value based on quoted prices in an active market for the same assets The unlisted equities are measured at fair value based on available market information (quoted market prices in active markets for similar assets). If these data are not available, the fair value is determined based on alternative valuation methods.

Bonds

On the Solvency II balance sheet bonds are divided into following categories:

- government bonds
- corporate bonds
- structured notes
- collateralised securities

The fair value of government bonds and corporate bonds is based on quoted prices in an active market for the same assets. If there is no active market, the fair value is derived from quoted market prices in active markets for similar assets.

As there is generally no active markets for structured notes and collateralised securities, their fair value is determined based on from quoted market prices in active markets for similar assets. If the data is not available, the fair value is determined based on alternative valuation methods.

The fair value of the bonds includes the accrued interest.

Collective investment undertakings

This item comprises investments in investment fund units, the fair value of these funds is determined based on alternative valuation methods.

Derivatives

Derivatives are recognised at fair value upon inception. The fair value of the derivatives is based on a present value model or an option valuation model (alternative valuation methods). VIVAT recognises derivatives with a positive market value as assets and derivatives with a negative market value as liabilities.

Deposits other than cash equivalents

These assets concern receivables from banks with a remaining maturity of one month or more and the saving components of mortgages. The fair value of the amounts receivable with the maturity of less than 12 months is assumed to equal their nominal value. The fair value of saving components of mortgages is determined with alternative valuation models.

Assets held for index-linked and unit-linked funds

This item corresponds to the investments for account of policyholders, that are measured at fair value, which is determined based on quoted prices in an active market for the same assets. If there is no active market, the fair value is derived from quoted market prices in active markets for similar assets. If the data is not available, the fair value is determined based on alternative valuation models.

Loans and mortgages

On the Solvency II balance sheet loans and mortgages are divided into following categories:

- loans on policies
- loans & mortgages to individuals
- other loans & mortgages

The fair value of the loans & mortgages includes the accrued interest.

Loans on policies
This item corresponds to the loans issued with life insurance policies as collateral. Since there is no active market for these loans, the fair value is either derived from quoted market prices in active markets for similar assets. If the data is not available, the fair value is determined based on alternative valuation methods.

Loans and mortgages to individuals
The mortgages are measured at fair value, determination of which is based on alternative valuation models. These models rely primarily on the customer interest rates on the primary market. These interest rates are corrected for miscellaneous surcharges such as surcharges for price rate risks and origination costs. The adjustments for prepayments are taken into account in the cash flow projection and an add-on for interest-only mortgages also taken into account. This method is referred to as the top-down approach.

Other loans & mortgages
Since this item comprises loans and mortgages, for which there is no active market, the fair value is either derived from quoted market prices in active markets for similar assets. If the data is not available, the fair value is determined based on alternative valuation methods.

Reinsurance recoverables
For the valuation of the best estimate provision reinsurance the cash flows are measured separately and are not offset against the best estimate provision of the insurance obligations. The credit default risk is based on the expected loss of reinsurance cover in case of bankruptcy of the reinsurer. When determining the risk margin, the credit default risk relating to reinsurance is also taken into account.

Life
The insurance risks corporate life contracts are primarily mitigated on the basis of surplus reinsurance with a retention limit. The duration of the reinsurance contract is one year. The reinsurer participates in premium and claim in the same proportion as the retention to the reinsured amount. For the best estimate of this surplus reinsurance contract the future cash flows of this contract are estimated by using realized premium and claims in the last five years.

The individual life contracts are primarily reinsured on a proportional basis. For these contracts the best estimate reinsurance is determined as a percentage of the best estimate for the underlying insurance technical provision.

For the disability coverage within SRLEV and Non-Life portfolio there is a catastrophe excess of loss reinsurance contract. The best estimate for excess-of-loss reinsurance takes into account that VIVAT does not expect to benefit from or loose to the reinsurer.

Non-Life and Health Non-SLT
The insurance risks are mitigated on the basis of excess-of-loss reinsurance risk with a variable retention per line of business. In addition to the regular reinsurance of the portfolios there is a catastrophe reinsurance contract to cover claims arising from natural perils (storm, hail) and accumulation of risk in the fire portfolio.

The best estimate provision reinsurance is determined based on a simplified method, according to which this best estimate under Solvency II is assumed to equal its IFRS value, taking the counterparty risk into account.

Health-SLT

The insurance risks are mitigated on the basis of quota share ratio (QSR) at policy level. That means that the reinsurer's share is equal to the amount of the insured amount depending on the proportion between retention and the total exposure.

The best estimate provision reinsurance is calculated as the present value of the incoming and outgoing reinsured cash flows arising from the existing reinsurance contracts. The cash flows are determined on a policy-by-policy approach and based on the reinsurance percentage resulting from the reinsurance contract. This percentage is applied to both the outgoing gross premiums, as to the outgoing gross claims. It takes into account the reduction of credit default risk. For the estimation of the reinsured cash flow, the contractual redemption scheme after a period of 6 years disablement is not taken into account.

Insurance & intermediaries receivables

This item comprises current receivables corresponding to insurance activities of VIVAT as well as receivables from intermediaries. As these assets have a short-term character, these are measured at their nominal value, since it is assumed to be equal to their fair value.

Reinsurance receivables

This item comprises current past due receivables corresponding to reinsurance companies. Depending on the short- or longer term character of these assets, they are measured at their nominal value or calculated using the expected future cashflows, the interest rate curve and relevant spread. Amounts receivable or owed but not past due have been included in cash inflows that form the basis for measurement of the gross technical provisions and the share of reinsurers in technical provisions.

Receivables (trade, not insurance)

This item comprises miscellaneous amounts receivable. Bearing in mind short-term the character of these assets, they are measured at their nominal value, since it is assumed to equal their fair value.

Cash and cash equivalents

This item comprises cash and cash equivalents including bank balances and demand deposits with a remaining maturity of less than one month. Bearing in mind the short-term character of these assets, they are measured at their nominal value, since it is assumed to equal their fair value.

Any other assets, not elsewhere shown

This item comprises the assets that are not recognised as the items in the Solvency II balance sheet described above. These assets comprise mainly the accrued interest on amounts receivable that are not recognized as investments and the investments of Zwitserleven PPI. The accrued interest is measured at its nominal value, which is assumed to equal its fair value. The fair value of the investments of Zwitserleven PPI is determined in the same way as the fair value of other investments (refer to the section “Investments” for more information).

Liabilities
Technical provisions

Under Solvency II the item technical provision comprises the best estimate and the risk margin.

Best estimate (BE)
Under Solvency II, the BE is determined by the present value of the expected value of all future cash flows, including options and guarantees and expenses arising from the insurance contract.

BE includes all the options and guarantees embedded in the products, including discretionary profit sharing (based on VIVAT's discretion), non-discretionary profit sharing (based on objective standards that have to be met), indexation on disability insurance, unit linked guarantees and the paid-up option for separate accounts. The value of the options embedded in the insurance contracts may be split into net asset value (IVOG) and time value (TVOG).

Future cash flows are based on realistic and appropriate underwriting parameters such as mortality, disability, policyholders' behavior, claims handling and all expenses (including investment costs) arising from the settlement of the insurance contracts, taking into account expected future developments with a material impact on existing policies.

The cash flows are discounted with the specific yield curve set by EIOPA with a Volatility Adjustment and the ultimate forward rate. VIVAT only uses the curve for the euro, since there are no material insurance liabilities in foreign currencies. The risk-free interest rate under Solvency II is based on interest rate swap rates for the euro, adjusted for credit risk. For the periods for which swap rates are no longer available in liquid and transparent market, the yield curve is extrapolated using the so-called ultimate forward rate; a long-term forecast of the real interest rate, taking into account the expected inflation.

Life
The BE concerning Life is the present value of all cash flows arising from existing contracts in the Life portfolio. The cash flow projections are made for the individual and for group contracts. The Individual Life contracts include savings mortgage insurance, annuities, saving insurance policies, term insurance policies and funeral expenses insurance policies. The Group insurance comprises primarily the collective pension contracts (including traditional, unit-linked and separate accounts).
The expected future cash flows include future expected benefits, expected premiums, recurring expenses as well as cash flows corresponding to contractual profit-sharing (where applicable). For parameters such as mortality, longevity, costs or lapse, the best estimate assumptions are made and applied to the cash flow projections.

Non-Life and Health non-SLT
For Non-Life and Health non-SLT insurance contracts the distinction is made between premium and claims provisions. The gross premium provision is the sum of the present value of all cash flows arising from current contracts or related to future insurance coverage. This includes expected premiums, expected future claim payments relating to provided coverage and estimated costs associated with those premium revenues and claim payments.

When detailed data is not available, the cash flows are estimated using parameters that are set at an aggregate level (by line of business and distribution channel). The main parameters are the expected loss ratios, premiums and the provision for unearned premiums.

The claim provision comprises the best estimates of IBNR (modelled based on miscellaneous methods; mainly chain ladder methods, expected ratio methods or Bornhuetter-Ferguson) and cost provision (future costs arising from existing insurance contracts including claim handling costs and investment costs).

Health SLT

The BE concerning Health SLT is the present value of all cash flows arising from existing contracts in the disability portfolio, determined according to the methods that are similar to techniques used in valuing Life-portfolios (Similar to Life Techniques: SLT). Existing contracts also include all current claims.
The expected future cash flows include future expected benefits, recurring costs, claim handling costs, commissions and premiums. The BE cash flows are estimated using realistic risk factors including disability and recovery, lapse rates, mortality and costs. The entire disability portfolio is divided into underlying portfolios so that the portfolio-specific risks are taken into account. Most parameters are determined based on portfolio data. Where appropriate, indexation is determined according to the CBS wage index and U-yield.

Risk margin

Under Solvency II a risk margin is an addition to the BE provision. The risk margin can be seen as a compensation for the capital required to carry non-hedgeable risks arising from an insurance contract. The risk margin is such as to ensure that the value of the Technical Provision is equivalent to the amount that another insurer would be expected to require in order to take over the insurance liabilities until their maturity.

The risk margins are determined using the Cost of Capital method (CoC). Each year the projection of the Solvency Capital Requirement (SCR) takes place by applying the shocks according to the standard model. The risk margins per year are determined by multiplying the SCR with a CoC rate of 6% and discounted using the interest rate structure set by EIOPA.

Parameters

The value of the insurance liabilities is determined with miscellaneous parameters which can be subdivided into non-economic and economic parameters. Under the non-economic parameters there are insurance underwriting and expense parameters. The chance an insured event takes place is estimated with use of underwriting parameters. To meet the obligation towards the policyholders, costs are incurred. These are contained in expense parameters for cash flow projections. The cash flows are discounted with use of economic parameters. In addition, the economic parameters also determine the funds returns and profit-sharing returns, such as the u-yield. Inflation, which mainly applies to the development of costs, also falls under the economic parameters. The rules for setting and changing these parameters are in accordance with VIVAT parameter governance.

Non-economic parameters

Life underwriting parameters are population mortality, insured mortality, lapse and disability.

Population mortality

VIVAT uses the population mortality forecast of Het Koninklijk Actuarieel Genootschap (AG). In the years in which the AG table is not published, on the basis of new observations VIVAT itself investigates a suitable prognosis table. VIVAT has reconstructed the AG method. In the intervening years, both European data and Dutch data are added. From this research follows a proposal for a new prognosis table which must be approved before it can be used. It is also possible that it is concluded that the last known AG prognosis table is still appropriate. This generic prognosis table is adjusted at a maximum of once a year after the availability of new figures with regard to mortality and possible adjustments of population mortality models.

Insured mortality

In addition to the generic prognosis table, the mortality assumption also consists of a component per sub-portfolio within the Life insurance business. With this component, for each age the (percentage) distance

is determined between insured mortality (in the specific sub-portfolio) and population mortality. It is assumed that this distance does not change during the entire projection. A distinction is made according to the following factors:
> Internal homogeneous risk group
> Age
> Sex
> Smoking / no smoking
> Expired duration from the start date

For most Individual Life products, the insured mortality is determined on the basis of own perception. Exception are the annuities where the insured mortality can be equated with the nationally determined insured mortality of the CVS. For Corporate Life products market figures (CVS) are available and used. It is checked annually whether the observed perception fits within the confidence interval for the market figures. If this is not the case, it is still possible to opt for the use of own observations.

Lapse
The most important forms of lapse are:
> Surrender (including partial surrender)
> Paid-up (including premium reduction, therefore partial paid-up)

The surrender and paid-up parameters are annually derived from experience figures. The entire policy history is taken into account. The figures resulting from the established methodology are assessed in consideration of possible trend breaks or incidents. If necessary, the figures to be used are adjusted on the basis of expert judgment. For the lapse parameters a distinction is made according to the following factors:
> Internal homogeneous risk group
> Age
> Premium payment / no premium payment
> Expired duration from the start date
> Well / no profit sharing
> Subgroup / label

On the basis of research it is assessed whether a specific cohort has sufficient exposure to give it separate lapse parameters and which of the above-mentioned variables are significant. In the analysis of lapse influences of economic and other special circumstances on the behavior of policyholders should be taken into account. If there is a link between the lapse rates and the elements mentioned then this mechanism must be included in the models. If there is no connection between the lapse rates and the elements mentioned, this must be demonstrated.

Partner frequencies
The partner frequencies were revised in 2017 after a long period of time. The partner frequencies currently applied in the projections are based on Het Centraal Bureau voor de Statistiek (CBS) figures. It is not possible to base the partner frequencies on own insurance experience because insufficient data is available.

Disability
The disability parameters of SRLEV are based on own insurance experience data. Due to the unavailability of detailed data the recovery rates are based on market data which is corrected with an overall percentage derived from own data. The disability and recovery parameters are assessed annually.

Underwriting parameters for Non-Life are mainly run off patterns and loss ratios, and for disability insurance disability, recovery and lapse. The best estimate assumptions are substantiated by research into the own portfolio and relevant market data. The parameters are assessed annually. In the assumptions no implicit margins are taken into account.

The costs included in the Best Estimate provision are divided into operating costs and investment costs. The operating costs include all costs, including internal invoicing, that are made within the entity. The investment costs include all fees that are paid to the asset manager.

Operating costs
Based on an Activity Based Costing (ABC) model, the operating costs, excluding the one-off costs, are split into:
- Acquisition costs and continuous costs;
- Fixed and variable costs;
- Product groups and / or products;
- Costs for premium-paying and paid-up policies.

In the projection of these costs, inflation, synergy and costs of shrinking markets are taken into account.

Investment management expenses
The Solvency II legislation prescribes that the technical provision should include all expenses that will be incurred in servicing insurance obligations. Among these costs are the investment management expenses which are incurred by asset managers for managing the assets of VIVAT's legal entities. Solvency II also prescribes that these investment management expenses should be at arm's length.

Investment management expenses are taken into account in the technical provisions when they relate to assets backing the technical provision. Assets which can be assigned to own funds are excluded from the technical provision calculation. Direct investment management expenses in the form of management and administration costs are included in accordance with the contract conditions between VIVAT's legal entities and ACTIAM and between VIVAT's legal entities and external managers. In case of indirect investment management expenses these costs are deducted from the external funds and not taken into account since these fees are taken into account in the net asset value calculation of the fund itself.

VIVAT extensively analyzed all investment management expenses per asset category and per legal entity (SRLEV, VIVAT Schadeverzekeringen and Proteq Levensverzekeringen). For each individual asset class VIVAT's legal entities addressed that al investment management expenses are at arm's length. Also a thorough assignment exercise was done by assigning assets to either the technical provision or own funds. In general the assets which were assigned to the own funds have on average an higher return and higher investment management expenses.

The investment costs are measured in basis points which are projected in VIVAT's legal entities technical provision calculation.

Economic parameters
The yield curve for valuing technical provisions is determined in accordance with the Solvency II regulations. The administration costs are adjusted for inflation.

Uncertainty in cash flows

The models used by VIVAT for estimating the best estimate cash flows meet the requirements of the Solvency II Level 2 directives and follow a model validation process. The uncertainty concerns in particular the parameters applied. The cash flow projection, which is used for the calculation of the Best Estimate, explicitly or implicitly takes into account all the uncertainties in the cash flows, including the following, if relevant:

- uncertainty in the timing, frequency and severity of insured events;
- uncertainty in the size of the eligible costs;
- uncertainty in the expected future developments, as set put above, to the extent that this is practicable;
- uncertainty in the policyholder behavior;
- dependence between two or more causes of uncertainty;
- dependence on cash flows of the conditions prior to the date of the cash flow.

Contingent liabilities

Contingent liabilities are defined as:

- a possible obligation arising from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events or
- a present obligation, payment of which is not probable.

VIVAT recognises contingent liabilities on the balance sheet, if they are material. Valuation of contingent liabilities is based on the probability weighted cash-flow method using the basic risk-free interest rate term structure.

The contingent liabilities are presented on the Solvency II consolidated balance sheet if they can be measured reliably, meaning that timing, amount and probability of the outflow of economic benefits can be estimated reliably. If the liability cannot be measured reliably, it is not recognised, instead it is reported in the section 5.7 Off-balance sheet items. Contingent liabilities are subject to continuous assessment.

Provisions other than technical provisions

General

Provisions are recognised if there is a legally enforceable or constructive obligation arising from events in the past, the settlement of the obligation is likely to result in an outflow of economic benefits, and a reliable estimate of the obligation can be made.

Provisions are measured at the present value of the expected future cash flows.

Restructuring provision

The restructuring provision consists of expected severance pay and other costs that are directly related to restructuring programs. These costs are recognised as an addition to the provision in the period in which a legally enforceable or constructive obligation to make payments arises. No provision is recognised for costs or future operating losses from continuing operations.

VIVAT recognises restructuring provision if it has demonstrably committed itself, either through a constructive or legally enforceable obligation, to:

- terminating the employment contracts of current employees in accordance with a detailed formal plan without the option of the plan being withdrawn; or
- paying termination benefits as a result of an offer to encourage voluntary redundancy. Benefits that fall due after more than twelve months after the reporting date are discounted.

Legal provisions

VIVAT recognises a provision for the estimated liability with respect to ongoing legal proceedings. The provision comprises an estimate of the legal fees and payments due in the course of the legal proceedings, to the extent that it is more likely than not that an obligation exists at the reporting date. The provision is recognised if the obligation can be reliably estimated.

Pension benefit obligation

This item comprises the provision for employees' pension benefits as well as other long term employee benefits.

Pension benefits

VIVAT's main pension scheme is a defined contribution scheme administrated by Stichting Pensioenfonds SNS REAAL. New staff is included in this scheme. In addition, a number of defined benefit plans were acquired from of insurance companies in the past. The members of those schemes are referred to as deferred members or retirees.

Defined contribution scheme

According to this pension scheme, defined contributions are paid to separate entities, primarily to Stichting Pensioenfonds SNS REAAL, an independent pension fund. Besides the defined contributions, VIVAT has no obligation to make additional payments to the scheme to make up for deficits resulting from actuarial or investment risk.

Defined benefit schemes

A number of defined benefit schemes for (former) employees still exist. The net liability related to these schemes is represented by the difference between the present value of the future liabilities to pay the participants' pensions (gross pension entitlements) and the value of the qualifying assets of these schemes. Qualifying assets are investments relating to pension funds or insurance contracts with insurance companies other than VIVAT.

Other long-term employee benefits

This item refers to jubilee benefits and to discounts granted for bank and insurance products to (former) employees after the date of their retirement. The amount of the obligation is based on the present value of the discounts offered after the retirement date, taking into account actuarial assumptions about mortality and interest. Furthermore, an obligation for reimbursement of medical expenses is recognised. A liability for the expected expenses of these reimbursements during the period of employment is recognised according to the methods used to determine the defined pension schemes. To qualify for these benefits, an employee's contract is required to run until his or her retirement age and it is to span a specified minimum period.

Deposits from reinsurers

VIVAT enters reinsurance programmes to provides protection against underwriting risks arising in the miscellaneous insurance portfolios. The share of reinsurance companies in the technical provisions is accounted for as reinsurance recoverables and mirrored by deposits from reinsurers. These deposits represent the amount payable to reinsurers arising from reinsurance contract and may become payable on demand. The fair value of this deposits is determined based on the value of reinsurance recoverables.

Deferred tax liabilities

Refer to the section "Deferred tax assets (and liabilities)" under "Assets".

Derivatives

Refer to the section “Financial instruments - derivatives” under Assets.

Debts owed to credit institutions

This item comprises unsubordinated debts to credit institutions, including the amounts payable arising from sale and repurchase agreements and cash collaterals.

The debts owed to credit institutions are measured at their nominal value, since it is assumed to equal their fair value.

Insurance and intermediaries payables

This item comprises current payables corresponding to insurance activities of VIVAT as well as payables to intermediaries. Bearing in mind short-term character of these assets, these are measured at their nominal value, since it is assumed to be equal to their fair value.

Reinsurance payables

This item comprises current payables to reinsurance companies. Depending on the short- or longer term character of these payables, they are measured at their nominal value or calculated using the expected future cashflows and interest rate curve.

Payables (trade, not insurance)

This item comprises miscellaneous amounts payable. Short-term employee benefits including salaries, short paid leave, profit-sharing and bonus schemes are also presented as this item. Bearing in mind short-term character of these assets, these are measured at their nominal value, since it is assumed to equal their fair value.

Subordinated liabilities

Subordinated debt includes the subordinated bonds and private loans issued by VIVAT.

The fair value of subordinated debt is determined by discounting the cash flows at the interest rate based on the swap rate observable in the market and a risk premium. The risk premium is determined based on the difference between the coupon interest rate of the subordinated loan and the swap rate at issue date. This premium remains constant over time.

In accordance with Solvency II VIVAT does not adjust the fair value of the subordinated loans with the changes in own credit risk, as subordinated debt are considered to be funding (core capital) and not an investment. The own credit risk is mainly used by investors interested in the market price of a financial instrument.

Value of the loans includes accrued interest.

Any other liabilities, not elsewhere shown

This item comprises the liabilities that cannot be recognised in the items in the Solvency II balance sheet described above. These liabilities comprise mainly the accrued interest on short-term amounts payable and the liabilities to participants of Zwitserleven PPI. The accrued interest is measured at its nominal value, which is assumed to equal its fair value. The fair value of the liabilities of Zwitserleven PPI is determined as the fair value Zwitserleven PPI’s investments (refer to the section "Investments" for more information).

D.4.1.2. Subsidiaries and scope of consolidation

To determine the capital requirements at consolidated level, VIVAT applies the 'Accounting consolidation based method', according to which the capital requirements are calculated based on the Solvency II consolidated balance sheet.

Group companies

According to Solvency II the Group is defined as a parent company and its participations: subsidiaries and the entities in which the parent or its subsidiaries hold a participation, as well as undertakings linked to each other by:

- management on a unified basis pursuant to a contract or provisions in the memorandum or articles of association
- participation in the administrative, management or supervisory bodies.

The Group is based on the establishment of a strong and sustainable financial and operational relationship among those undertakings. This establishment may have legal as well as constructive character. The method according to which the Group companies are accounted for in the consolidated Solvency II balance is determined by the influence exercised by the parent company as well as the activities of the Group company.

Since SRLEV, Proteq and VIVAT Schadeverzekeringen are wholly owned subsidiaries of VIVAT, VIVAT can indirectly exercise the influence on all participations of SRLEV and VIVAT Schadeverzekeringen. As a result, all these participations are included in the consolidation scope, as if they were direct participations of VIVAT.

Full consolidation

Under Solvency II full consolidation has to be applied to the subsidiaries of the parent company that are:

- insurance or reinsurance companies
- insurance holding companies
- ancillary services undertakings

Subsidiaries are the participations, on which VIVAT might directly or indirectly exercise the dominant influence:

- participations in which VIVAT directly or indirectly holds more than one half of the voting rights;
- entities, in which VIVAT does not hold majority voting rights, but that are managed by VIVAT on a unified basis pursuant to a contract or provisions in the memorandum or articles of association;
- entities, in which VIVAT does not hold majority voting rights, but the administrative, management or supervisory bodies of which comprise the same people as VIVAT;
- entities on which VIVAT might exercise dominant influence in a different way.

The consolidation also encompasses the proportional share of the other undertakings according to the relevant sectoral rules in relation to holdings in related undertakings which are investment fund managers or institutions for occupational retirement provisions. The consolidation is applied from the date on which VIVAT gains dominant influence until the date this influence ceases. The other types of subsidiaries are not consolidated under Solvency II – they are accounted for based on equity method (refer to the section below).

Adjusted equity method

Participations at the adjusted equity method are initially measured at their acquisition price (including transaction costs) and subsequently increased with VIVAT's share of equity of these participations. Equity of the related participations is determined according to Solvency II principles.

The adjusted equity method is applied to the subsidiaries of VIVAT that do not qualify to be fully consolidated (refer to the section above) as well as entities in which VIVAT has significant influence, but in which no dominant influence can be exercised. The existence of the significant influence is assumed as:

- representation on the board of directors or equivalent governing body of the investee
- participation in the policy-making process
- material transactions between the investor and the investee
- interchange of managerial personnel
- provision of essential technical information

The participations are recognised in the Solvency II consolidated balance sheet from the date on which VIVAT gains dominant or significant influence until the date this influence ceases. The application of the adjusted equity method depends on the activities of the entity:

- participations in associated insurance companies and associated companies providing ancillary services are accounted for with adjusted equity method based on Solvency II principles;
- if the application of adjusted equity method is impracticable for the companies not operating in finance industry, the IFRS equity method may be used after eliminating the goodwill and the intangible assets that cannot be sold.

Elimination of Group transactions

The Solvency II consolidated balance sheet is prepared net of any intra-group transactions.

Consolidation process

The consolidation process constitutes the part of the larger control framework within VIVAT's accounting and as such is a subject to detailed testing to ensure the correctness of the work performed. The intra group transactions, due to the presence of specific national and international legislation along with exposure to certain risks, are also strictly controlled and monitored by a number of internal and external stakeholders.

Within the 2017 SFCR Actiam and PPI were consolidated on the balance sheet of VIVAT. To recognize these subsidiaries in accordance with Solvency II method 1: sectoral rules the assets and liabilities are eliminated from the balance sheet and the participations of VIVAT in these subsidiaries are recognized.

To recognize ESC accordingly the Solvency II method D&A the assets and liabilities are eliminated from the balance sheet and the participation of VIVAT in the subsidiary ESC is recognized.

D.4.1.3. Events after the Reporting Date

In the first quarter of 2019, SRLEV purchased a Dutch mortgage portfolio for an amount of € 780 million as part of the re-risking activities.

D.5. Any other information

D.5.1. Balance sheet

Balance sheet at 31 December 2018

Assets	SRLEV		VIVAT Schade		Proteq		Other[1]		VIVAT	
In € millions	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	**IFRS**
Goodwill and intangible assets	–	–	–	–	–	–	–	–	**-**	**-**
Deferred tax assets	437	478	–	–	–	–	-31	-13	**406**	**465**
Property, plant & equipment held for own use	47	47	–	–	–	–	15	15	**62**	**62**
Investments	30,468	30,446	1,582	1,582	569	569	-306	-298	**32,313**	**32,299**
Assets held for index-linked and unit-linked contracts	11,795	11,732	–	–	–	–	–	–	**11,795**	**11,732**
Loans and mortgages	10,110	8,631	–	–	–	–	788	783	**10,898**	**9,414**
Reinsurance recoverables	-237	-250	74	83	–	–	–	–	**-163**	**-167**
Receivables	279	279	58	58	1	1	-41	-41	**297**	**297**
Cash and cash equivalents	155	155	47	47	4	4	64	64	**270**	**270**
Any other assets, not elsewhere shown	17	17	1	1	–	–	4	4	**22**	**22**
Total assets	**53,071**	**51,535**	**1,762**	**1,771**	**574**	**574**	**493**	**514**	**55,900**	**54,394**

Liabilities	SRLEV		VIVAT Schade		Proteq		Other		VIVAT	
In € millions	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	**IFRS**
Technical provisions	45,822	44,507	1,029	1,134	447	454	-493	-342	**46,805**	**45,753**
Contingent liabilities	–	–	–	–	–	–	–	–	**-**	**-**
Provisions other than technical provisions	21	21	–	–	–	–	5	5	**26**	**26**
Pension benefit obligations	13	172	25	25	–	–	510	351	**548**	**548**
Deposits from reinsurers	67	67	18	18	–	–	1	–	**86**	**85**
Deferred tax liabilities	–	–	22	3	2	1	-24	-4	**-**	**-**
Derivatives	592	592	6	6	4	4	–	–	**602**	**602**
Debts owed to credit institutions	1,526	1,340	17	17	–	–	654	644	**2,197**	**2,001**
Liabilities	914	914	82	82	1	1	-52	-52	**945**	**945**
Subordinated liabilities[2]	1,067	1,062	155	150	–	–	-45	-28	**1,177**	**1,184**
Any other liabilities, not elsewhere shown	–	–	–	–	–	–	9	9	**9**	**9**
Total liabilities	**50,022**	**48,675**	**1,353**	**1,435**	**454**	**460**	**565**	**583**	**52,395**	**51,153**
Excess of assets over liabilities[3]	**3,049**	**2,860**	**409**	**336**	**120**	**114**	**-72**	**-69**	**3,505**	**3,241**

[1] This column contains eliminations due to consolidation as well as the balance sheets of VIVAT NV and of the subsidiairies of SRLEV (e.g. N.V. Pensioen ESC) and VIVAT Schadeverzekeringen. For more details we refer to Annex I.
[2] The subordinated liabilities in the Solvency II and IFRS balance sheet also include the Capital Subordinated Loan of € 260 mln. The subordinated liabilities are further specified in section E.1.3.
[3] The own funds are further specified in section E.1.

Balance sheet at 31 December 2017

Assets	SRLEV		VIVAT Schade		Proteq		Other[1]		VIVAT	
In € millions	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	**IFRS**
Goodwill and intangible assets	–	–	–	1	–	–	–	–	**–**	**1**
Deferred tax assets	625	475	–	–	4	2	-9	14	**620**	**491**
Property, plant & equipment held for own use	44	44	–	–	–	–	21	21	**65**	**65**
Investments	29,897	29,869	1,548	1,540	562	562	-238	-230	**31,769**	**31,741**
Assets held for index-linked and unit-linked contracts	12,950	12,871	–	–	–	–	270	270	**13,220**	**13,141**
Loans and mortgages	10,677	8,987	51	51	–	–	863	860	**11,591**	**9,898**
Reinsurance recoverables	91	91	83	90	–	–	–	–	**174**	**181**
Receivables	271	271	81	81	–	–	-54	-54	**298**	**298**
Cash and cash equivalents	145	145	43	43	4	4	67	67	**259**	**259**
Any other assets, not elsewhere shown	24	24	–	8	–	–	180	180	**204**	**212**
Total assets	**54,724**	**52,777**	**1,806**	**1,814**	**570**	**568**	**1,100**	**1,128**	**58,200**	**56,287**

Liabilities	SRLEV		VIVAT Schade		Proteq		Other		VIVAT	
In € millions	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	IFRS	**SII**	**IFRS**
Technical provisions	47,658	45,302	1,061	1,169	467	459	-243	-135	**48,943**	**46,795**
Contingent liabilities	–	–	–	–	–	–	–	–	**–**	**–**
Provisions other than technical provisions	35	35	–	–	–	–	9	9	**44**	**44**
Pension benefit obligations	19	184	26	26	–	–	540	375	**585**	**585**
Deposits from reinsurers	87	81	21	21	–	–	–	–	**108**	**102**
Deferred tax liabilities	–	–	27	4	–	–	-27	-4	**–**	**–**
Derivatives	606	606	8	8	6	6	16	16	**636**	**636**
Debts owed to credit institutions	1,826	1,626	16	16	–	–	642	642	**2,484**	**2,284**
Liabilities	930	924	76	76	5	5	-3	60	**1,008**	**1,065**
Subordinated liabilities[2]	1,068	1,062	157	150	–	–	-176	-167	**1,049**	**1,045**
Any other liabilities, not elsewhere shown	–	–	–	–	–	–	184	184	**184**	**184**
Total liabilities	**52,229**	**49,820**	**1,392**	**1,470**	**478**	**470**	**942**	**980**	**55,041**	**52,740**
Excess of assets over liabilities[3]	**2,495**	**2,957**	**414**	**344**	**92**	**98**	**158**	**148**	**3,159**	**3,547**

[1] This column contains eliminations due to consolidation as well as the balance sheets of VIVAT NV, Actiam NV, Zwitserleven PPI NV and of the subsidiairies of SRLEV (e.g. N.V. Pension ESC) and VIVAT Schadeverzekeringen. For more details we refer to Annex I.
[2] The subordinated liabilities are further specified in section E.1.3.
[3] The own funds are further specified in section E.1.

D.5.2. Off-balance sheet items

Off balance sheet positions different from the financial statements do not exist. We refer to section 6.3 Note 21 Guarantees and Commitments in the Annual Report VIVAT NV 2018.

D.5.3. Any other disclosures

No other disclosures are applicable.

E. Capital management

E.1. Own funds

Under Solvency II, capital is called 'eligible own funds' and is divided into three tiers. These tiers reflect the ability to absorb capital losses, with Tier 1 being the highest capital quality and Tier 3 the lowest. VIVAT does not have 'ancillary own funds' (such as letters of credit and guarantees) which require supervisory approval.

Two subordinated bonds issued by SRLEV NV in 2011 (CHF 105 million and € 250 million (original amount € 400 million)) classify as Tier 1 and Tier 2 capital of VIVAT NV and SRLEV NV based on the transitional measures contained in the level 1 regulations, and is aligned with DNB.

The following table shows the breakdown of the eligible own funds, starting from shareholders' equity:

Breakdown of eligible own funds at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	Total
Issued share capital	-	11	3	-14	**-**
Share premium reserve	2,264	464	45	1,536	**4,309**
Retained earnings 2018	-278	16	1	-23	**-284**
Other reserves	877	-154	65	-1,573	**-785**
Capital Subordinated Loan	265	-	-	36	**301**
Shareholders' equity	**3,128**	**337**	**114**	**-38**	**3,541**
Reconciliation IFRS-Solvency II	188	72	5	-	**265**
Capital Subordinated Loan	-265	-	-	-36	**-301**
Subordinated liabilities	1,067	155	-	-45	**1,177**
Deductions other financial undertakings	-	-	-	-28	**-28**
Total basic own funds after Deductions other financial undertakings	**4,118**	**564**	**119**	**-147**	**4,654**
Own funds of other financial sectors	-	-	-	28	**28**
Own funds aggregated when using the D&A	-	-	-	-	**-**
Tiering restriction	-118	-	-	71	**-47**
Total eligible own funds	**4,000**	**564**	**119**	**-48**	**4,635**

Breakdown of eligible own funds at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	Total
Issued share capital	-	11	3	-14	**-**
Share premium reserve	2,064	399	45	1,801	**4,309**
Retained earnings 2017	-55	2	3	-66	**-116**
Other reserves	948	-68	47	-1,573	**-646**
Capital Subordinated Loan	260	-	-	-260	**-**
Shareholders' equity	**3,217**	**344**	**98**	**-112**	**3,547**
Reconciliation IFRS-Solvency II	-460	69	-6	10	**-387**
Capital Subordinated Loan	-263	-	-	263	**-**
Subordinated liabilities	1,068	157	-	-176	**1,049**
Deductions other financial undertakings	-	-	-	-35	**-35**
Total basic own funds after Deductions other financial undertakings	**3,562**	**570**	**92**	**-50**	**4,174**
Own funds of other financial sectors	-	-	-	34	**34**
Tiering restriction	-316	-	-	-112	**-428**
Total eligible own funds	**3,246**	**570**	**92**	**-128**	**3,780**

The following table shows the Movements in the reporting period of basic own funds:

Movements in the reporting period of basic own funds

In € millions	SRLEV	VIVAT Schade	Proteq	Other	Total
Balance as at January 1, 2018	3,246	570	92	-128	**3,780**
Share premium account related to ordinary share capital	200	66	-	-266	**-**
Reconciliation reserve	544	-71	31	-246	**258**
An amount equal to the value of net deferred tax assets	-188	-	-4	-22	**-214**
Capital Subordinated Loan issued	-	-	-	301	**301**
Deductions other financial undertakings	-	-	-	7	**7**
Deduction for participations included by using D&A	-	-	-	-	**-**
Total movements basic own funds	**3,802**	**565**	**119**	**-354**	**4,132**
> Subordinated liabilities - movements in the reporting period					
- Issued	180	-	-	120	**300**
- Redeemed	-182	-	-	-	**-182**
- Movements in valuation	2	-1	-	9	**10**
Total movements subordinated liabilities	**-**	**-1**	**-**	**129**	**128**
Own funds of other financial sectors	-	-	-	-6	**-6**
Own funds aggregated when using the D&A	-	-	-	-	**-**
Tiering restriction	198	-	-	183	**381**
Balance as at December 31, 2018	**4,000**	**564**	**119**	**-48**	**4,635**

Basic Own Funds are own-fund items that are on the balance sheet of VIVAT and are permanently available to absorb losses (e.g. paid-in ordinary share capital). Such items may be used to cover a part of the SCR. Currently VIVAT does not have 'ancillary own funds' (such as letters of credit and guarantees) which require supervisory approval.

In Other the difference between the group and the sum of its subsidiaries is shown.

For VIVAT, the following two undertakings do not need to comply with Solvency II and therefore the capital requirements for both undertakings should be based on sectorial regulation and need to be taken into account within the consolidated (VIVAT) balance sheet under own funds of other financial sectors:

> ACTIAM N.V. is an investment undertaking and holds a license as asset manager with supervision of the Autoriteit Financiële Markten (AFM). The capital requirement of ACTIAM N.V. should be based on the capital requirements as determined in the Financial Supervision Act ('Wet op het financieel toezicht', 'Wft'), with possibly an additional required capital due to the requirements of the Alternative

Investment Fund Managers Directive (AIMFD) with respect to professional liability of asset fund managers.

- Zwitserleven PPI N.V. holds a license as a 'payment institution' with supervision of the Dutch Central Bank (DNB). Zwitserleven PPI N.V. recognises the investments held on behalf of participants and the related liabilities in its balance sheet. Zwitserleven PPI N.V. is not the risk owner and the financial statements are based on Dutch GAAP.

E.1.1. Ordinary share capital

The ordinary share capital of VIVAT is € 238,500. The share capital has been fully paid-up and consists of ordinary shares with a nominal value of € 500 each. 477 ordinary shares had been issued at 31 December 2018.

Breakdown of issued shares

In numbers	SRLEV	VIVAT Schade	Proteq	VIVAT
Authorised share capital	450	100,000	35,000	2,385
Share capital in portfolio	360	75,000	28,000	1,908
Issued share capital as at December 31, 2018	**90**	**25,000**	**7,000**	**477**

Breakdown of share capital

In € thousands	SRLEV	VIVAT Schade	Proteq	VIVAT
Authorised share capital	225	45,400	15,890	1,193
Share capital in portfolio	180	34,050	12,712	954
Issued share capital as at December 31, 2018	**45**	**11,350**	**3,178**	**239**

E.1.2. Reconciliation reserve

The following table shows the reconciliation reserve:

Breakdown of reconciliation reserve at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Other IFRS reserves	877	-154	65	-1,573	-785
Retained earnings 2018	-278	16	1	-23	-284
Reconciliation IFRS-Solvency II	188	72	5	-	265
Tranfer of net deferred tax assets from tier 1 to tier 3	-437	-	-	31	-406
Total reconciliation reserve	**350**	**-66**	**71**	**-1,565**	**-1,210**

Breakdown of reconciliation reserve at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Other IFRS reserves	946	-67	47	-1,573	-648
Retained earnings 2017	-55	2	3	-66	-116
Reconciliation IFRS-Solvency II	-460	69	-6	10	-387
Tranfer of net deferred tax assets from tier 1 to tier 3	-625	-	-4	9	-620
Total reconciliation reserve	**-194**	**4**	**40**	**-1,620**	**-1,771**

The main changes in 2018 in respect to reconciliation relate to changes in the VA.

In Solvency II the balance between the deferred tax assets and liabilities (DTA and DTL) is classified as tier 3 capital within the own funds. The eligible amount of Tier 3 items is maximised at 15% of the SCR. This restriction applies to VIVAT and SRLEV due to its relative large net DTA positions. The restriction is not applicable for VIVAT Schadeverzekeringen and Proteq Levensverzekeringen.

Reconciliation IFRS-Solvency II

The reconciliation encompasses the following significant differences in measurement under Solvency II and under IFRS:

- Technical provisions – Under Solvency II the technical provisions (including provisions for saving mortgages) are measured using Solvency II parameters, taking into account current market estimates. Under IFRS a liability adequacy test on the technical provision is performed, if the carrying amount of the technical provision is inadequate, the provision is increased. With respect to economic parameters used, there are differences regarding the interest rate curve and the cost of capital. The difference in the interest rate curve development, due to the VA development that is applicable for SII and not for IFRS, is a main driver for the development of the reconciliation of IFRS and Solvency II.
- Deferred Tax Assets – Due to differences in the valuation of assets and liabilities the resulting DTA position is different.
- Reinsurance Recoverable / Technical Provision – In Solvency II the re-insurance recoverable of the new longevity reinsurance contract is presented separately on the balance sheet. Under IFRS the reinsurance recoverable is presented under the Technical provision. Mainly due to differences in the effects to the risk margin the impact for IFRS is more negative than Solvency II Eligible Own Funds.

E.1.3. Subordinated liabilities

Under Solvency II the available own funds include subordinated debt including accrued interest with regard to this debt.

Breakdown of subordinated liabilities at 31 December 2018

In € millions	Currency	Interest	SII Value (EUR)	Nominal amount (EUR)	Issue date	First call date	Expiration date
> VIVAT							
Tier 1							
VIVAT	EUR	7.000%	305	300	2018-jun	2025-jun	perpetual
Total			**305**	**300**			
Tier 2							
VIVAT (US Dollar)	USD	6.250%	498	502	2017-nov	2022-nov	perpetual
Total			**498**	**502**			
> SRLEV							
Tier 1							
SRLEV (Swiss Franc)	CHF	mid-swap plus 5.625%	93	93	2011-jul	2019-dec	perpetual
VIVAT NV	EUR	7.750%	267	250	2017-jun	2022-jun	perpetual
			360	**343**			
Tier 2							
SRLEV NV	EUR	9.000%	281	250	2011-apr	2021-apr	2041-apr
VIVAT NV	EUR	7.750%	149	140	2015-dec	2025-dec	2025-dec
VIVAT NV	EUR	3.780%	96	95	2017-nov	2022-nov	2027-nov
VIVAT NV	EUR	3.600%	181	180	2018-jun	2023-jun	2028-jun
			707	**665**			
Total			**1,067**	**1,008**			
> VIVAT Schade							
Tier 2							
VIVAT NV	EUR	7.750%	85	80	2015-dec	2025-dec	2025-dec
VIVAT NV	EUR	6 months EURIBOR plus 5.545%	70	70	2016-dec	2021-dec	2026-dec
Total			**155**	**150**			
Other (elimination)			-848	-815			
Total			**1,177**	**1,145**			

Tier 1

In July 2011, SRLEV NV issued CHF 105 million in perpetual subordinated bonds. The CHF bond has a first redemption date on 19 December 2016. SRLEV decided not to exercise its redemption option to redeem the CHF bond in December 2017 and 2018. Under the Solvency II transitional measures the CHF bond qualifies in full as Restricted Tier 1 own funds in the calculation of Solvency II own funds for ten years after 1 January 2016. At this specific time, it has been determined that it is currently in the interests of SRLEV not to exercise the redemption option to redeem the CHF Bond. The interest rate on the CHF bond has been reset to 5-year CHF mid-swap plus 5.625%.

In June 2017 SRLEV agreed a Capital Subordinated Loan for an amount of € 250 million. The Capital Subordinated Loan is a tier 1 perpetual loan issued by VIVAT NV with a fixed interest rate of 7.75%.

In June 2018 VIVAT issued subordinated Restricted Tier 1 notes. The € 300 million subordinated notes are perpetual. The notes are first callable after 7 years and each interest payment date thereafter, subject to conditions to redemption. The coupon is fixed at 7% per annum until the first call date and payable semi-annually in arrear on 19 June and 19 December in each year.

Tier 2

In April 2011, SRLEV NV issued € 400 million in subordinated bonds maturing in 2041. In June 2018, SRLEV repurchased a part of the € 400 million subordinated notes. SRLEV repurchased notes of a notional amount of € 150 million. The market value of the notes was € 180 million, resulting in a loss on the transaction of € 30 million.

In November 2017, VIVAT NV issued $ 575 million (€ 476 million) in subordinated notes. The notes are first callable after 5 years and each fifth anniversary thereafter, subject to conditions to redemption. The coupon is fixed at 6.25% per annum until the first call date. The notes qualify as Tier 2 regulatory capital under Solvency II. The proceeds of the issuance were used to redeem the subordinated loans issued by Anbang Group Holdings Co. Limited. A new subordinated private loans of € 95 million is issued by VIVAT NV.

In June 2018, VIVAT NV granted a loan to SRLEV NV in the amount of € 180 million. The loan is a 10-years Solvency II Tier 2 subordinated loan with a maturity date at 19 June 2028. The loan is first callable after 5 years with a first call date at 19 June 2023. The loan bears a fixed interest coupon of 3.6% per annum.

Breakdown of subordinated liabilities at 31 December 2017

In € millions	Currency	Interest	SII Value (EUR)	Nominal amount (EUR)	Issue date	First call date	Expiration date
> VIVAT							
Tier 2							
VIVAT (US Dollar)	USD	6.250%	490	479	2017-nov	2022-nov	perpetual
Total			**490**	**479**			
> SRLEV							
Tier 1							
SRLEV (Swiss Franc)	CHF	mid-swap plus 5.625%	91	90	2011-jul	2018-dec	perpetual
VIVAT NV	EUR	7.750%	263	250	2017-jun	2022-jun	perpetual
			354	**340**			
Tier 2							
SRLEV NV	EUR	9.000%	468	400	2011-apr	2021-apr	2041-apr
VIVAT NV	EUR	7.750%	149	140	2015-dec	2025-dec	2025-dec
VIVAT NV	EUR	3.780%	97	95	2017-nov	2022-nov	2027-nov
			714	**635**			
Total			**1,068**	**975**			
> VIVAT Schade							
Tier 2							
VIVAT NV	EUR	7.750%	85	80	2015-dec	2025-dec	2025-dec
VIVAT NV	EUR	6 months EURIBOR plus 5.545%	72	70	2016-dec	2021-dec	2026-dec
Total			**157**	**150**			
Other (elimination)			-666	-635			
Total			**1,049**	**969**			

E.2. Solvency Capital Requirement and Minimum Capital Requirement

The final amount of the Solvency Capital Requirement is still subject to the opinion of the supervisory authority

The SCR is a risk-based measure and reflects VIVAT's risk profile. The measure is based on a 1-in-200 year stress scenario over a one-year period. Comparison of the SCR with the Eligible Own Funds shows to what extent VIVAT is able to absorb the aforementioned 1-in-200 year losses. VIVAT calculates the SCR with the Solvency II standard model, which is based on the following criteria:

- It is calculated on a going-concern basis.
- It aims to capture the material quantifiable risks that most undertakings are exposed to. The standard formula might however not cover all material risks a specific undertaking is exposed to. If an insurer still has material additional quantifiable risks, then these risks must be assessed in the Own risk and Solvency Assessment (ORSA).

- Both existing business and new business in the next 12 months are covered (in the case of existing activities, it covers only unexpected losses).
- It is calibrated with a 99.5% confidence level over a 12-month period.
- The effects of risk-mitigation techniques are considered, but allowance should then be made for any newly introduced risk (e.g. counterparty default risk of the derivative).
- The SCR must be consistent with the SCR on the baseline date used for calculating the risk margin.
- Where the SCR is determined using scenarios, the risk margin can be kept constant. This also applies to the value of discretionary bonuses and deferred taxes. If the scenario allows the own funds to increase, the SCR is set at zero.
- Diversification is assumed to exist between the modules and sub-modules.

The SCR is equal to the sum of the Basic SCR (BSCR), the capital requirement for operational risk (Op) and an adjustment for the loss-absorbing capacity of the technical provisions and any deferred taxes (Adj).

These sections briefly describe the method used by VIVAT in calculating the Solvency Capital Requirement (SCR). VIVAT calculates the SCR by making use of the standard formula.

The MCR represents the minimum level of security below which the Eligible Own Funds may not fall. The MCR is calibrated on the basis of a confidence level of 85% over a one-year period. The MCR is calculated using a relatively simple linear formula, which includes both a floor and a cap (as a percentage of the SCR).

The MCR is determined using the prescribed calculation methods. Besides the percentage criterion, which is a percentage of the most recently calculated SCR including any capital add-on, the MCR should not fall below a certain minimum. This requirement is regarded as the absolute minimum capital requirement (also known as Absolute Minimum Capital Requirement, hereinafter AMCR). The AMCR is € 3,7 million per solo entity.

E.2.1. VIVAT

The table below shows a breakdown of the ratio of VIVAT.

Ratio VIVAT

In € millions	2018	2017
Total eligible own funds to meet the SCR	4,635	3,780
Total eligible own funds to meet the MCR	3,687	2,806
SCR	2,412	2,327
MCR	1,090	1,055
Ratio of Eligible own funds to Group SCR	192%	162%
Ratio of Eligible own funds to Group MCR	338%	266%

A detailed movement analysis is included in the general section of the Risk Profile.

E.2.2. SRLEV

The table below shows a breakdown of the ratio of SRLEV.

Ratio SRLEV

In € millions	2018	2017
Total eligible own funds to meet the SCR	4,000	3,246
Total eligible own funds to meet the MCR	3,165	2,409
SCR	2,127	2,061
MCR	957	927
Ratio of Eligible own funds to SCR	188%	158%
Ratio of Eligible own funds to MCR	331%	260%

A detailed movement analysis is included in the general section of the Risk Profile.

E.2.3. VIVAT Schadeverzekeringen

Ratio VIVAT Schadeverzekeringen

In € millions	2018	2017
Total eligible own funds to meet the SCR	564	570
Total eligible own funds to meet the MCR	433	437
SCR	361	351
MCR	119	114
Ratio of Eligible own funds to SCR	156%	162%
Ratio of Eligible own funds to MCR	364%	384%

A detailed movement analysis is included in the general section of the Risk Profile.

E.2.4. Proteq Levensverzekeringen

The table below shows a breakdown of the ratio of Proteq Levensverzekeringen.

Ratio Proteq Levensverzekeringen

In € millions	2018	2017
Total eligible own funds to meet the SCR	119	92
Total eligible own funds to meet the MCR	119	88
SCR	36	35
MCR	13	14
Ratio of Eligible own funds to SCR	327%	263%
Ratio of Eligible own funds to MCR	895%	640%

A detailed movement analysis is included in the general section of the Risk Profile.

E.3. Use of the duration-based equity risk sub-module in the calculation of the Solvency Capital Requirement

VIVAT does not make use of the duration-based equity risk sub-module set out in Article 304 of Directive 2009/138/EC for the calculation of the Standard Formula SCR.

E.4. Differences between standard formula and internal model

VIVAT solvency is governed by a standard formula, rather than a self-developed model.

E.5. Non-compliance with the Minimum Capital Requirement and non-compliance with the Solvency Capital Requirement

VIVAT has not faced any form of non-compliance with the Minimum Capital Requirement or significant non-compliance with the Solvency Capital Requirement during the reporting period or at the reporting date. Therefore no further information is included here.

E.6. Any other information

E.6.1. General

E.6.1.1. Definition

Capitalisation refers to the extent to which VIVAT and its underlying legal entities have buffer capital available to cover unforeseen losses and to achieve the strategic objectives of the company. VIVAT manages its capitalisation within limits set in the Risk Appetite. Annually target setting happens in the Operational Plan culminating in a Capital & Funding Plan. Monthly and quarterly forward looking monitoring enables VIVAT taking timely action if capitalisation would deteriorate. VIVAT assesses its capitalisation regularly with respect to level and quality in the ORSA and with respect to risk / return in the ALM Study.

E.6.1.2. Capital policy

VIVAT aims for a robust and strong capital position in accordance to its risk profile, which contributes to both the confidence that clients have in the institution and access to financial markets. VIVAT deems a solvency ratio between 140% and 200% as a normal going concern level. The objective of the Capital Policy is to ensure that there is sufficient capital to fulfill obligations towards policyholders and meet requirements. The available capital of VIVAT has to meet internal risk appetite standards as well as external requirements of regulators, rating agencies and also includes commercial considerations. Capitalisation generally refers to the relationship between risk-bearing activities and available regulatory capital (own funds). The second objective of the Capital Policy is to ensure that capital is used as efficiently and flexibly as possible to facilitate the implementation of VIVAT's strategy.

A recovery plan exists which describes the procedure that applies in a contingency situation. A contingency situation is a situation in which a capital deficit arises, or threatens to arise, that poses a direct threat to the going concern of VIVAT. In its Risk Appetite, VIVAT has defined specific triggers that determine whether a contingency situation exists. The emphasis of these triggers is on capital metrics and these are linked to governance and management measures. VIVAT's Capital Policy forms the basis for lower level policies, process descriptions and procedures.

Management uses the Operational Plan, Capital and Funding Plan, ALM study, Risk Dashboards, ORSA, Recovery Plan and Financial Risk Reporting for managing the capital position. The Capital and Funding Plan describes the medium-term activities relating to capital and funding, including a five-year solvency forecast. The Capital and Funding Plan is based on the Operational Plan as supplied by the underlying Product Lines.

E.6.1.3. Regulatory framework

Solvency II is a risk-based regime consisting of three pillars. Pillar 1 regulates the capital requirements. Insurers should be capitalised adequate to their risks. Therefore, this pillar introduces two risk weighted measures: the Minimum Capital Ratio (MCR), and the Solvency Capital Ratio (SCR). Pillar 2 demands a higher level of risk management and governance. Pillar 3 establishes higher standards of transparency.

E.6.1.4. Recovery plan

VIVAT is required to establish a recovery plan, which describes the procedures in a contingency situation. A contingency situation is a situation in which a capital deficit arises, or threatens to arise, that poses a direct threat to the going concern of VIVAT. The Recovery Plan is updated annually. The Recovery Plan includes early warning indicators for emerging crises, a crisis management governance framework and the management actions VIVAT has at its disposal in a crisis situation to maintain its core businesses viable for the future. The management actions are evaluated in a scenario analysis. The annual update of the Recovery Plan is performed in conjunction with the ORSA process and its results are shared with the regulator.

E.6.2. Capital position

The supervisory authorities EIOPA and DNB have produced several public guidance notes on the interpretation of Solvency II and VIVAT produces all regulatory reports that are mandatory under the Solvency II legislation.

For internal purposes, VIVAT calculates the Solvency II position on a monthly basis. VIVAT calculates its position under Solvency II using the standard formula, applying the Volatility Adjustment (VA) and thus making use of the possibility of applying long-term guarantee measures. VIVAT does not apply the Matching Adjustment. The required and available capital (own funds) under Solvency II are determined on the basis of information at year-end 2018. The yield curve used as at 31 December 2018, including the Ultimate Forward Rate (UFR), Credit Risk Adjustment (CRA) and VA, is published by EIOPA.

EIOPA yearly re-calculates the UFR in accordance with the methodology to derive the UFR. For the euro the calculated target UFR for 2018 is 3.65%. As the UFR for the euro was 4.2% in 2017 and the annual change of the UFR is limited to 15 basis points according to the methodology, the applicable UFR is 4.05% in 2018. That UFR was for the first time applicable for the calculation of the risk-free interest rates of 1 January 2018.

When determining the Solvency II capital ratio, the loss absorbing capacity of deferred tax assets may be set off against the Solvency Capital Requirement (SCR). VIVAT has examined whether, following a loss of the same scale as the (pre-tax) SCR shock, future fiscal profits will be sufficient to be able to recover, partially or fully, the change in deferred tax asset created by that loss. The Loss Absorbing Capacity of Deferred Taxes in the SCR is prudently set at 0% for VIVAT and its legal entities, except for legal entities with a net Deferred Tax Liability (DTL). In these cases the Loss Absorbing Capacity of Deferred Taxes equals the net DTL position. The net Deferred Tax Asset on the balance sheet of VIVAT as at 31 December 2018 is valued at 100% under IFRS and Solvency II.

E.6.2.1. Tiering

Tiering

The Own Funds are classified in three tiering categories (Tier 1, Tier 2, and Tier 3 with Tier 1 being the highest quality of Own Funds). This tiering concept is based on the extent to which own-fund items are considered to hold the characteristics of permanent availability and subordination.

The tiering classification is prescribed, as not all own-fund items are considered to be able to fully absorb losses in the event of winding-up proceedings. Tier 1 own-fund items are the highest grade capital (e.g. paid-in ordinary share capital) and Tier 3 items are the lowest grade capital.

Breakdown of tiering VIVAT

	Tier 1		Tier 2	Tier 3	Total
In € millions	Unrestricted	Restricted			
Eligible own funds to meet the Group SCR 2018	3,099	398	779	359	4,635
Eligible own funds to meet the Group SCR 2017	2,538	91	958	193	3,780

Breakdown of tiering SRLEV

	Tier 1		Tier 2	Tier 3	Total
In € millions	Unrestricted	Restricted			
Eligible own funds to meet the SCR 2018	2,614	360	707	319	4,000
Eligible own funds to meet the SCR 2017	1,870	354	713	309	3,246

Breakdown of tiering VIVAT Schadeverzekeringen

	Tier 1		Tier 2	Tier 3	Total
In € millions	Unrestricted	Restricted			
Eligible own funds to meet the SCR 2018	409	-	155	-	564
Eligible own funds to meet the SCR 2017	414	-	156	-	570

Breakdown of tiering Proteq Levensverzekeringen

	Tier 1		Tier 2	Tier 3	Total
In € millions	Unrestricted	Restricted			
Eligible own funds to meet the SCR 2018	119	-	-	-	119
Eligible own funds to meet the SCR 2017	88	-	-	4	92

Tiering restriction

The use of own funds of different tiers is subject to certain limits under Solvency II. These limits are related to the required capital or Tier 1 capital, and is applied to define the Eligible Own Funds. These limits cause a difference between the Available Own Funds and the Eligible Own Funds.

Per Year-end 2017 the tier 2 and tier 3 restriction was applicable for VIVAT. The successfully executed Restricted Tier 1 issuance by VIVAT of EUR 300 million combined with a successful tender offer of EUR 150 million for part of the SRLEV EUR 400 million Tier 2 subordinated notes in June, increased the effectiveness of capital and decreasing the tiering restriction. Per Year-end 2018 only the tier 3 restriction was applicable for VIVAT. Furthermore, the increase in the VA and the by the Senate approved decrease of the Corporate Income Tax Rate decrease the DTA and therefore decrease the tiering restriction as well.

For SRLEV the tier 3 restriction remained applicable during 2018.

Eligible own funds at 31 December 2018

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Available own funds to meet the Group SCR	**4,118**	**564**	**119**	**-147**	**4,654**
Own funds of other financial sectors	–	–	–	28	28
Own funds aggregated when using the D&A	–	–	–	–	–
Tiering restriction SCR	-118	–	–	71	-47
Eligible own funds to meet the Group SCR	**4,000**	**564**	**119**	**-48**	**4,635**
Own funds of other financial sectors	–	–	–	-28	-28
Own funds aggregated when using the D&A	–	–	–	–	–
Tier 3 capital	-319	–	–	-40	-359
Tiering restriction MCR	-516	-131	–	86	-561
Total eligible own funds to meet the Group MCR	**3,165**	**433**	**119**	**-30**	**3,687**

Eligible own funds at 31 December 2017

In € millions	SRLEV	VIVAT Schade	Proteq	Other	VIVAT
Available own funds to meet the Group SCR	**3,562**	**570**	**92**	**-50**	**4,174**
Own funds of other financial sectors	–	–	–	34	34
Tiering restriction SCR	-316	–	–	-112	-428
Eligible own funds to meet the Group SCR	**3,246**	**570**	**92**	**-128**	**3,780**
Own funds of other financial sectors	–	–	–	-34	-34
Tier 3 capital	-309	–	-4	120	-193
Tiering restriction MCR	-528	-134	–	-85	-747
Total eligible own funds to meet the Group MCR	**2,409**	**436**	**88**	**-127**	**2,806**

The following limits are applicable so far as compliance with the SCR is concerned:

- The eligible amount of Tier 1 items should be at least 50% of the SCR;
- No more than 20% of those Tier 1 items may be restricted instruments (i.e. preference shares, subordinated liabilities or subordinated mutual member accounts) or items included under the transitional arrangements as discussed in section 6.2.1;

- Where an instrument meeting the restricted Tier 1 requirements is excluded from Tier 1 as a result of the mentioned limits, it may be included within Tier 2 Basic Own Funds;
- The sum of the eligible amounts of Tier 2 and 3 items should not exceed 50% of the SCR;
- The eligible amount of Tier 3 items should be less than 15% of the SCR. This restriction applies to VIVAT due to its net DTA position as Tier 3 capital.

The following limits are applicable so far as compliance with the MCR is concerned:
- Only Tier 1 and Tier 2 basic own-fund items can be used to cover the MCR. Ancillary Own Funds and Tier 3 Basic Own Funds are therefore not eligible to cover the MCR;
- At least 80% of the MCR should be met by eligible Tier 1 own funds. No more than 20% of those Tier 1 Own Funds may be restricted Tier 1 instruments (i.e. preference shares, subordinated liabilities and subordinated mutual member accounts) or items included under the transitional arrangements. The effect of this is that Tier 2 Basic Own Funds are eligible as long as they are less than 20% of the MCR;
- Where an instrument meeting the restricted Tier 1 requirements is excluded from Tier 1 as a result of the mentioned limits, it may be included within Tier 2 Basic Own Funds.

E.6.2.2. Other assumptions

Loss Absorbing Capacity of Defered Taxes (LACDT)
Under Solvency II, the Solvency Capital Requirement (SCR) may be determined taking into account the extent to which the tax losses which occur under the described shock can be settled with the tax authorities.

The LACDT has to be calculated taking into account the following:

- The adjustment for the loss-absorbing capacity of deferred taxes shall be equal to the change in the value of deferred taxes of insurance and reinsurance undertakings that would result from an instantaneous loss of an amount that is equal to the sum of the following:
  - The Basic Solvency Capital Requirement referred to in Article 103(a) of Directive 2009/138/EC;
  - The adjustment for the loss-absorbing capacity of technical provisions referred to in Article 206 of this Regulation;
  - The capital requirement for operational risk referred to in Article 103(b) of Directive 2009/138/EC .
- A decrease in the value of deferred tax liabilities or an increase in the value of deferred tax assets will result in a negative adjustment to the SCR.
- If the calculation results in a positive change in deferred tax assets, this should only be considered if it can be shown that future taxable profits will be available.

The Loss Absorbing Capacity of Deferred Taxes in the SCR is set at 0%, except for legal entities with a net Deferred Tax Liability (DTL). In these cases the Loss Absorbing Capacity of Deferred Taxes equals the net DTL-position.

E.6.3. Any other disclosures

Regarding the SCR calculation we have used simplification methods for calculating the risk mitigating effect for reinsurance arrangements or securitization, the calculation of the risk mitigating effect and for the calculation of the risk adjusted value of collateral.

ANNEX I

Related subsidiaries VIVAT NV

VIVAT NV owns the following material related undertakings:

Related subsidiaries

In € millions	Country	Legal form	% capital share	Treatment of the undertaking	Excess of assets over liabilities[1]
SRLEV N.V.	NL	NV	100%	Full consolidation	3,049
VIVAT Schadeverzekeringen N.V.	NL	NV	100%	Full consolidation	409
Proteq Levensverzekeringen N.V.	NL	NV	100%	Full consolidation	120
Zwitserleven PPI N.V.	NL	NV	100%	Sectoral rules	2
ACTIAM N.V.	NL	NV	100%	Sectoral rules	26
Holding and elimination					-101
					3,505

[1] The consolidated figures are shown in the table

Related subsidiaries SRLEV NV

SRLEV NV owns the following material related undertakings:

Related subsidiaries

In € millions	Country	Legal form	% capital share	Treatment of the undertaking	Excess of assets over liabilities
REAAL Wognumsebuurt B.V.	NL	BV	100%	Adjusted equity method	7
REAAL DeRuyterkade B.V.	NL	BV	100%	Adjusted equity method	25
REAAL Kantoren I B.V.	NL	BV	100%	Adjusted equity method	3
REAAL Winkels I B.V.	NL	BV	100%	Adjusted equity method	10
REAAL Winkels II B.V.	NL	BV	100%	Adjusted equity method	10
GVR 500 Building B.V.	NL	BV	100%	Adjusted equity method	45
Young Urban Housing B.V.[1]	NL	BV	100%	Adjusted equity method	–
REAAL Woningen I B.V.	NL	BV	100%	Adjusted equity method	8
RE Griftlaan Zeist B.V.[2]	NL	BV	100%	Adjusted equity method	3
REAAL Landbouw I B.V.	NL	BV	100%	Adjusted equity method	6
NV Pensioen ESC[3]	CW	NV	100%	Adjusted equity method	–
					117
Princenhof Staete Driebergen B.V	NL	BV	100%	Adjusted equity method	2
REAAL Landbouw II B.V.	NL	BV	100%	Adjusted equity method	6
REAAL Landbouw III B.V.	NL	BV	100%	Adjusted equity method	6
					14
					131

1 As of 29 October 2018 GVR 500 Parking B.V. has changed its name into RE Young Urban Housing B.V.
2 As of 26 October 2018 Empresa B.V. has changed its name into RE Griftlaan Zeist B.V.
3 NV Pensioen ESC is treated under D&A (Deduction and Aggregation) at VIVAT level

Related subsidiaries VIVAT Schadeverzekeringen NV

VIVAT Schadeverzekeringen NV owns the following material related undertakings:

Related subsidiaries

In € millions	Country	Legal form	% capital share	Treatment of the undertaking	Excess of assets over liabilities
Nieuw Rotterdam Knight Schippers	NL	BV	100%	Adjusted equity method	–
W. Haagman & Co B.V.	NL	BV	100%	Adjusted equity method	1
Volmachtkantoor Nederland B.V.	NL	BV	100%	Adjusted equity method	1
Bemiddelingskantoor Nederland B.V.[1]	NL	BV	100%	Adjusted equity method	–
					2

1 As of 1 January 2018 Bemiddelingskantoor Nederland B.V. is a wholly owned subsidiary of VIVAT Schadeverzekeringen N.V.

ANNEX II

Disclosure QRT's VIVAT NV

Table of content Disclosure QRT's VIVAT

1	S.02.01 - Balance Sheet
2	S.05.01 - Premiums, claims and expenses by line of business
3	S.22.01 - Impact of long term guarantees measures and transitionals
4	S.23.01 - Own Funds
5	S.25.01 - Solvency Capital Requirement - for groups on Standard Formula
6	S.32.01 - Undertakings in the scope of the group

The disclosure QRT's of VIVAT NV are publiced separately on https://wwww.vivat.nl/en/investors/annual-reports/

Disclosure QRT's SRLEV NV

Table of content Disclosure QRT's SRLEV NV

1	S.02.01 - Balance Sheet
2	S.05.01 - Premiums, claims and expenses by line of business
3	S.12.01 - Life and Health SLT Technical Provisions - Best Estimate by country
4	S.22.01 - Impact of long term guarantees measures and transitionals
5	S.23.01 - Own Funds
6	S.25.01 - Solvency Capital Requirement - for undertakings on Standard Formula
7	S.28.01 - Minimum Capital Requirement - Only life or only non-life insurance or reinsurance activity

The disclosure QRT's of SRLEV NV are publiced separately on https://www.vivat.nl/en/investors/annual-reports/

Disclosure QRT's VIVAT Schadeverzekeringen NV

Table of content Disclosure QRT's VIVAT Schadeverzekeringen NV

1	S.02.01 - Balance Sheet
2	S.05.01 - Premiums, claims and expenses by line of business
3	S.12.01 - Life and Health SLT Technical Provisions - Best Estimate by country
4	S.17.01 - Non - life Technical Provisions
5	S.19.01 - Non-life Insurance Claims Information
6	S.22.01 - Impact of long term guarantees measures and transitionals
7	S.23.01 - Own Funds
8	S.25.01 - Solvency Capital Requirement - for undertakings on Standard Formula
9	S.28.01 - Minimum Capital Requirement - Only life or only non-life insurance or reinsurance activity

The disclosure QRT's of VIVAT Schadeverzekeringen NV are publiced separately on https://www.vivat.nl/en/investors/annual-reports/

Disclosure QRT's Proteq Levensverzekeringen NV

Table of content Disclosure QRT's Proteq Levensverzekeringen NV

1	S.02.01 - Balance Sheet
2	S.05.01 - Premiums, claims and expenses by line of business
3	S.12.01 - Life and Health SLT Technical Provisions - Best Estimate by country
4	S.22.01 - Impact of long term guarantees measures and transitionals
5	S.23.01 - Own Funds
6	S.25.01 - Solvency Capital Requirement - for undertakings on Standard Formula
7	S.28.01 - Minimum Capital Requirement - Only life or only non-life insurance or reinsurance activity

The disclosure QRT's of Proteq Levensverzekeringen NV are publiced separately on https://www.vivat.nl/en/investors/annual-reports/