2017
SFCR ASR Levensverzekering N.V.
# Introduction

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## Business and performance

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Introduction

The structure of the Solvency and Financial Condition Report (SFCR) has been prepared as described in annex XX of the Solvency II Directive Delegated Regulation. The subjects addressed are based on article 51 to 56 of the Solvency II Directive and act 292 up to and including 298 of the Delegated Regulation. Furthermore, the figures presented in this report are in line with the supervisor’s reported Quantitative Reporting Templates.

All amounts in this report, including the amounts quoted in the tables, are presented in millions of euros (€ million), being the functional currency of ASR Levensverzekering N.V. (hereafter referred to as a.s.r. leven), unless otherwise stated.
Summary

The 2017 Solvency and Financial Condition Report provides ASR Levensverzekering N.V.'s stakeholders insight in:

A. Business and performance

The Solvency II ratio stood at 186% as at 31 December 2017, based on the standard formula as a result of € 5,101 million Eligible Own Funds and € 2,740 million Solvency Capital Requirement (SCR).


Full details on the a.s.r. leven’s business and performance are described in chapter A Business and performance (page 9).

B. System of governance

This paragraph contains a description of group policy, which is applicable for the solo entity.

General governance

a.s.r. is a public company with limited liability under Dutch Law. The company has a two-tier board system; with a Supervisory Board and an Executive Board. a.s.r. has been listed on Euronext Amsterdam since 10 June 2016. a.s.r. applies the full two-tier regime (volledige structuurregime).

The Supervisory Board performs its duties based on three roles; the supervisory role, the advisory role and the employer’s role. The Supervisory Board supervises the policy pursued by the Executive Board and the general course of affairs at a.s.r. and its group entities. Specific powers are vested in the Supervisory Board, including the approval of certain decisions taken by the Executive Board.

Risk management

It is of great importance to a.s.r. that risks within all business lines are timely and adequately controlled. In order to do so, a.s.r. has implemented a Risk Management framework based on internationally recognised and accepted standards. With the aid of this framework, material risks that a.s.r. is, or can be, exposed to are identified, measured, managed, monitored and evaluated. The framework is both applicable to a.s.r. group and the underlying business entities.

Control environment

In addition to risk management, a.s.r.’s Solvency II control environment consist of an internal control system, an actuarial function, a compliance function, and an internal audit function. The system of internal control includes the management of risks at different levels in the organisation, both operational and strategic. Internal control at an operational level centres around identifying and managing risks within the critical processes that pose a threat to the achievement of the business line's objectives. The actuarial function is responsible for expressing an opinion on the adequacy and reliability of reported technical provisions, reinsurcance and underwriting. The mission of the compliance function is to enhance and ensure a controlled and sound business operation where impeccable, professional conduct is self-evident. The Audit Department provides a professional and independent assessment of the governance, risk management and internal control processes with the aim of aiding management in achieving the company's objectives. The Audit Department evaluates the effectiveness of governance, risk management and internal control processes, and gives practical advice on process optimisation.

Full details on the a.s.r.’s system of governance are described in chapter B System of governance (page 20).
C. Risk profile

a.s.r. leven applies an integrated approach in managing risks, ensuring that our strategic goals (customer interests, financial solidity and efficiency of processes) are maintained. This integrated approach ensures that value will be created by identifying the right balance between risk and return, while ensuring that obligations towards our stakeholders are met. Risk management supports a.s.r. leven in the identification, measurement and management of risks and monitors to ensure adequate and immediate actions are taken in the event of changes in a.s.r. leven’s risk profile.

a.s.r. leven is exposed to the following types of risks: market risk, counterparty default risk, insurance risk, strategic risk and operational risk. The risk appetite is formulated at both group and legal entity level and establishes a framework that supports an effective selection of risks.

Full details on the a.s.r. leven’s risk profile are described in chapter C Risk profile (page 48).
D. Valuation for Solvency purposes

a.s.r. leven values its Solvency II balance sheet items on a basis that reflects their economic value. Where the IFRS fair value is consistent with Solvency II requirements, a.s.r. leven follows IFRS for valuing assets and liabilities other than technical provisions.

The reconciliation of IFRS equity and Excess Assets over Liabilities (Solvency II basis) can be summarised as follows:
- derecognition of items on the Solvency II economic balance sheet which are admissible on the IFRS balance sheet, for instance goodwill, pre-paid commissions and other intangible assets;
- revaluation differences on mainly insurance liabilities and other assets which are valued other than fair value in the IFRS balance sheet;

A graphical representation of the reconciliation from Solvency II equity to EOF is presented below:

Reconciliation from Solvency II equity to EOF

Full details on the reconciliation between a.s.r. leven’s economic balance sheet based on Solvency II and consolidated financial statements based on IFRS are described in chapter D Valuation for solvency purposes (page 68).

E. Capital management

Overall capital management is administered at group level. Capital generated by operating units and future capital releases will be allocated to profitable growth of new business or repatriated to shareholders, beyond the capital that is needed to sustain commercial capital levels at management’s targets.

a.s.r. leven has no partial internal model and follows the default method for the determination of the group solvency. a.s.r. leven maintains an internal minimum and management target for the Solvency II ratio. The internal minimum Solvency II ratio for a.s.r. leven as formulated in the risk appetite statement is 120%. The management threshold level for the Solvency II ratio is above 160%. a.s.r. only distributes cash dividends if the interest of the policyholders has been ensured (i.e. a Solvency II ratio above 140%). The Solvency II ratio was 186% at 31 December 2017.
Full details on the capital management of a.s.r. leven can be found in chapter E Capital Management (page 79).
A Business and performance

A.1 Business

A.1.1 Profile

Object of the company
ASR Levensverzekering N.V. (hereinafter: a.s.r. leven) is part of ASR Nederland N.V. (hereinafter: a.s.r.). a.s.r. leven wants to enable people to insure themselves against risks they are unable or unwilling to bear themselves. a.s.r. leven is convinced that its right to exist is justified by thinking in terms of customer interests and perception. The products and services of a.s.r. leven must be in line with this. Understandability and simplicity combined with efficient business processes and a solid financial position are essential. Customers can count on their risk coverage being held by an insurer that avoids waste, listens to them, thinks along with them and is accessible through various channels.

Customers need transparent products, clear communication and personal service.

a.s.r. leven has made it its top priority to meet these needs. For example, activities and objectives of a.s.r. leven are tested against the interests of the customer and products are presented to customer panels. Customer demands and the wishes expressed by customers are included in product development. Ultimately, this is reflected in the valuation of customers as measured by the Net Promoter Score (NPS). The NPS measures the extent to which customers would recommend a.s.r. leven to their surroundings.

Core activities
The objective is achieved by offering insurance policies aimed at wealth accumulation, asset protection, death risk and funeral for consumers and entrepreneurs. The insurances are offered via the brands a.s.r. and Ardanta.

Legal structure of the company
a.s.r. leven is a wholly-owned subsidiary of a.s.r. a.s.r. is a public limited company under Dutch law having its registered office located at Archimedeslaan 10, 3584 BA in Utrecht, the Netherlands. a.s.r. has chosen the Netherlands as ’country of origin’ (land van herkomst) for the issued share capital and corporate bonds which are listed on Euronext Amsterdam and the Irish Stock Exchange. As of 10 June 2016 a.s.r. is listed on Euronext Amsterdam (Ticker: ASR NL).

Internal organisational structure and staffing
a.s.r. leven includes the product lines Life, Pensions and Funeral. Each product line has its own management and reports directly to the Executive Board. Various services are purchased internally from a.s.r. (Payment Centre, HR, Finance & Risk, Information Technology & Communication (IT&C)). In order to strengthen the finance and risk function, a.s.r. leven brought together the CFROs of the product lines into one CFRO in 2017, who is responsible for the three product lines.

Organisational charts
Below, the organisational charts of the three productions lines within ASR Levensverzekering N.V. are presented:
All departments are hierarchically managed, except for ‘Compliance and Legal Affairs’ and ‘Shared Service center Actuary Department’: the latter two are functionally managed.
Collaboration of Ardanta with ASR Levensverzekering N.V.

Structure Pensions

Headcount
Total FTE staff of a.s.r. leven fell to 623 FTEs at year-end 2017 (2016: 666 FTEs).

Key elements of pursued policy
Part of the strategy of a.s.r. leven is to reduce costs by continuously improving efficiency. This continuous improvement takes place through, among other things, standardisation of processes and products and by increasing the level of Straight-Through Processing and outsourcing of certain processes. a.s.r. leven offers its customers transparent products with low costs and a high level of service, such as the Employee Pension, the Funeral Product and the Immediately Effective Annuity, in which the customer's interests are central.
Individual life
The strategy of Individual life aims to maximise and sustain the current value of the Individual life book. In order to achieve this a.s.r. focusses on optimising customer satisfaction and making cost lower and more variable.

Optimise customer satisfaction
To increase the value of the individual life book, a.s.r.’s strategy is to maximise customer satisfaction. a.s.r. believes that maintaining customer satisfaction is crucial to efficiently manage the way in which customers behave and to avoid unnatural lapses. While focusing on customer satisfaction, a.s.r. strives to further digitise its services and to make the services easier to use for its customers.

Lower its cost base and shift towards a higher percentage of variable costs
In order to preserve the value of the individual life in force portfolio, a.s.r. aims to simplify its organisation and shift its cost base from fixed costs towards more variable costs. In order to reduce costs and shift the overall cost mix in the individual life book, a.s.r. is simplifying the individual books of business within the Individual life portfolio and migrating them to a SaaS platform. a.s.r. intends to maintain this strategy, analysing books on an individual basis to find the most appropriate and value enhancing solution while minimising operational costs and complexity. The programme is on track. Four books have been successfully migrated (two in 2017). The acquired Generali life customers will be migrated to the same platform.

Pensions
a.s.r.’s strategy for its existing defined benefits (DB) book focuses on preserving its value, reducing capital requirements, enhancing cost coverage and lowering risks. Generali customers will be migrated to a.s.r. platforms, while offering the same services to these new customers and while enhancing the market position. a.s.r. aims to invest, within its financial targets, in larger blocks or buy-outs of DB business that meet one of two strategic objectives: cost coverage or potential defined contribution (DC transfer). Furthermore, a.s.r. is adapting to the changing pension market by developing the capacity to distribute new ‘capital-light’ pension products.

a.s.r. is also active in the pension market through Het Nederlandse pensioenfonds (Hnpf). a.s.r. delivers pension administration for Hnpf. Hnpf was founded in 2016 by a.s.r. in order to offer new and existing customers an alternative DB product. As of 2017, the first customers were welcomed, including De Effeling and DAS. In 2018, Stichting Pensioenfonds Arcadis Nederland (Arcadis Netherlands Pension Fund) will transfer its pension scheme to Hnpf. Hnpf is one of the six general pension funds in the Netherlands. Hnpf has now reached a top 3 position in terms of committed assets.

Funeral
The strategy is aimed at growth through acquisitions. In 2017, NIVO’s portfolio was integrated into Ardanta. This meant that the 280,000 NIVO policies of 135,000 customers were transferred to the Ardanta administration. Partly as a result of this acquisition, Funeral can realise further economies of scale, resulting in low costs per policy compared to the market, which means that Funeral can also remain competitive in the market in the future. The conversion of the funeral portfolio of Generali is planned for 2018. This is further described in paragraph 1.5.

The introduction of the new customer contact strategy, in which more attention is paid to the customer’s individual wishes, appears to be successful. Customer satisfaction continued to rise to 7.1 (2016: 7.0) and NPS to +44, despite the integration of portfolios in recent years.

Market and distribution developments

Individual life
Market developments
The premium volume has fallen in recent years. The reasons are low interest rates and tax changes. This contraction is expected to continue in the years to come. The market for these products cannot be expected to pick up in the short term. From 1 January 2018, therefore, a.s.r. has only offered life insurance products as from 1 January 2018, other products will no longer be sold within Individual life.

a.s.r. is well positioned to become the consolidator in the Dutch back book market. With the acquisition of Generali Leven, a.s.r. added ‘block of business’ for the first time. The book will be migrated in the same way as the migrations resulting from the service book strategy.

Distribution developments
a.s.r.’s individual life product line consists primarily of an in-force book of Individual Life portfolios. The active
product range of the Individual Life product line is limited and consists mainly of sales of its term-life product or sales of immediate annuities to customers whose traditional life savings products are maturing. Customers with expiring policies and customers who would like to switch prior to expiry are offered either an insurance product, including modern unit-linked products, or a bank-saving product that is suited to new customers. a.s.r. ended the active sale of unit-linked and universal life capital policies.

Pensions
Market developments
In the pension market, there is a shift towards capital-light products. Customers want to reduce their interest rate exposure. a.s.r. believes that it is well positioned to gain market share in this segment with DC and IORP propositions, through high-level service, cost effectiveness and execution power, while meeting its pricing policy.

The modern DC proposition of a.s.r. has been further developed in order to strengthen its competitive position in the DC market. Through this proposition a.s.r. believes it is well-positioned for anticipated further individualisation in the future, which may be the result of the current pension debate in the Netherlands.

Distribution developments
Distribution of a.s.r. pension products to SMEs and other corporate clients takes place via advisors only. a.s.r. utilises smaller local advisors, actuarial offices and larger national pension advisors.

Funeral
Market developments
The market is characterised by consolidation. As a result of the low interest environment, premium levels of funeral insurance have been raised. The distinctive selling point of Ardanta is the ‘free choice’ with respect to the delivery of funeral services, and as a consequence Ardanta has an unique market position which is cherished.

Distribution developments
For Funeral, distribution takes place via four channels: intermediary offices, the internet, internal advisors and a field service. Business shows a shift towards direct channels. In 2017, 55% of total business was taken out directly (2016: 48%).

Internal control of processes and procedures
Risk management is an integral part of a.s.r.’s daily business operations. a.s.r. applies an integrated approach to managing risks ensuring that strategic objectives are met. The Risk Management Function (RMF) supports and advises a.s.r. leven in identifying, measuring and managing risks, and monitors that adequate and immediate action is taken in the event of developments in the risk profile. a.s.r. leven is exposed to the following types of risk: market risk, counterparty default risk, liquidity risk, insurance risk (Life), strategic risk and operational risk.

The quality of internal control within a.s.r. leven is assured by means of a Risk and Control Matrix (RCM) as part of a.s.r.’s Operational Risk Management (ORM) policy. This framework has been developed from an integral risk management perspective and, based on the framework and the a.s.r. ORM policy, the effectiveness of key controls in the core processes is periodically tested and management is informed of the results.

The results are reported every quarter to the Business Risk Committee of Life as well as to the Non-financial Risk Committee of a.s.r. on a quarterly basis. The report also focuses on the management of strategic and compliance risks.

New products and services with the corresponding customer brochures are subjected to an internal ‘Product Approval and Review Process (PARP)’. Submitting products and services to customer and intermediary panels is often part of this before the PARP board gives its approval. It is assessed to what extent the wishes and ideas of customers can be included in the product development.

Existing products and services are regularly tested against the changing customer needs based on PARP. In addition, work processes at customers are tested on the basis of a ‘customer trip’. In this context, a process from the first to the last step is presented to customers and their comments are taken into account in order to improve the process so that it better meets the needs and expectations of the customer. Ultimately this can be seen in the customer’s valuation as measured by the Net Promoter Score (NPS).
The risks due to outsourcing, are mitigated by periodically monitoring Service Level Agreements and controls based on ISAE3402 reports.

**Quality control**

The quality management of a.s.r. leven contains policies, procedures and principles about how we want to serve our customers. The quality management is aimed at achieving the highest possible customer satisfaction and is taken into account in all contacts with our customers. Internal standards have been set and are used to actively comply with the a.s.r. leven quality standards and in the continuous improvement of our services.

For the operational departments, including the client contact offices (front office) and the back office, the objectives in terms of customer focus and the internal standards of a.s.r. leven have been translated into operational KPIs. These contribute to the control of our communication with customers in terms of being error-free, transparency and speed of processing. Handling complaints is also central in this context.

The KPIs are managed on a daily basis by the relevant management. The results of the KPIs are periodically shared and discussed at all levels within a.s.r. leven. Collaboration in risk governance contributes to ensuring customer satisfaction and putting the client’s interests first.

**Training of employees**

ASR Levensverzekering N.V. believes it is important to continuously educate its employees in knowledge and skills. Various training initiatives have been set up for this purpose. The initiatives receive continuous attention at both a general level and an individual level.

Continuous training takes place through:
- Twice a year the compulsory Permanent Training sessions for all employees.
- At individual level, the training tool of a.s.r. is used and appropriate education is provided at job level. The aim is to ensure that every employee is and remains permanently trained and up-to-date.
- A training plan is drawn up for new employees and updated after each evaluation session based on experience.
- The Gamification tool is available to all employees, which helps them interactively to refresh and deepen their knowledge of, among other things, integrity issues on a daily basis.

**Finance**

The capital policy of a.s.r. leven is defined and adopted every year by a.s.r. for the company as a whole and its supervised entities. Capital generated by operating units and future capital releases will be allocated to profitable growth of new business or repatriated to shareholders, beyond the capital that is needed to sustain commercial capital levels at management’s targets. a.s.r. leven actively manages its in-force business, which is expected to result in substantial free capital generation over time. Additionally, business improvement and balance sheet restructuring should improve the capital generation capacity while advancing the risk profile of the company. a.s.r. leven is capitalised separately, and excess capital over management’s targets are intended to be up-streamed to the holding company to the extent this is allowed by local regulations and within the internal risk appetite statement. In 2017, a capital upstream of € 395 million (2016: € 290 million) to the holding company took place.

**A.1.2 General information**

The Solvency and Financial Condition Report is presented in euros (€), being the functional currency of ASR Levensverzekering N.V. All amounts quoted in the tables contained in the SFCR are in millions of euros, unless otherwise indicated.

The SFCR has been prepared by and is the sole responsibility of the Company’s management. Selected Own Funds and SCR information are also reported in a.s.r. financial statements. EY has examined the 2017 financial statements and issued a report thereon.

**Name and contact details of the supervisory authority**

Name: De Nederlandsche Bank  
Visiting address: Westeinde 1, 1017 ZN Amsterdam  
Phone number (general): +31 800 020 1068  
Phone number (business purposes): +31 20 524 9111  
Email: info@dnb.nl
A.2 Underwriting performance

Key figures

<table>
<thead>
<tr>
<th>Key figures (€ million)</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross written premiums*</td>
<td>1,453</td>
<td>2,013</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>184</td>
<td>205</td>
</tr>
<tr>
<td>Profit/(loss) before tax</td>
<td>941</td>
<td>661</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>202</td>
<td>160</td>
</tr>
<tr>
<td><strong>Profit/(loss) for the year</strong></td>
<td><strong>739</strong></td>
<td><strong>501</strong></td>
</tr>
<tr>
<td>New business (APE)</td>
<td>89</td>
<td>152</td>
</tr>
</tbody>
</table>

* Including DC staff pension plan of € 79 million (2016: € 88 million)

Gross written premiums
Gross written premiums decreased by 28% to € 1,453 million (2016: € 2,013 million). The decrease is mainly a consequence of a substantial transfer price in 2016 at Funeral (€ 323 million) and a substantial collective value transfer at Pensions (€ 195 million).

Operating expenses
Operating expenses decreased from € 205 million to € 184 million, benefitting from the efficiencies of scale achieved by the operational integration of the AXENT organisation into the Funeral business and the integration of De Eendragt into the Pension business. In 2017, further steps were also taken concerning the migration of closed books portfolios to a single ICT platform and ICT platforms were consequently phased out.

Profit for the year
The net result for 2017 amounted to € 739 million (2016: € 501 million). The increase is a consequence of higher indirect investment income and non-recurring items.

New business (APE)
New business decreased by € 63 million to € 89 million (2016: € 152 million). The decrease is predominantly a consequence of the 2016 acquisition within the funeral portfolio (NIVO).

Solvency and liquidity at reporting date
Overall capital management is administered at Group level. Capital generated by operating units and future capital releases will be either allocated to profitable growth of new business or repatriated to shareholders, beyond the capital that is needed to sustain commercial capital levels at management’s targets.

The Solvency II ratio stood at 186% at 31 December 2017 (2016: 182%), which was comfortably higher than the lower limit solvency target of 140% and the management target of above 160%.
A.3 Investment performance

a.s.r.’s investment policy is aimed at striking a balance between generating returns and preventing risks. Protecting the solvency position is an important factor in this context.

A.3.1 Financial assets and derivatives

Investments

<table>
<thead>
<tr>
<th>Investments (financial assets)</th>
<th>31 December 2017</th>
<th>31 December 2016 (restated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available for sale</td>
<td>19,450</td>
<td>20,356</td>
</tr>
<tr>
<td>At fair value through profit or loss</td>
<td>1,210</td>
<td>52</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20,660</strong></td>
<td><strong>20,408</strong></td>
</tr>
</tbody>
</table>

The investments at fair value through profit or loss increased in 2017 by € 1,158 million primarily due to the transfer of real estate equity funds from investment property.

Breakdown of investments

<table>
<thead>
<tr>
<th></th>
<th>31 December 2017</th>
<th>31 December 2016 (restated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Available for sale</td>
<td>Fair value through profit or loss</td>
</tr>
<tr>
<td>Government bonds</td>
<td>8,360</td>
<td>-</td>
</tr>
<tr>
<td>Corporate bonds</td>
<td>8,497</td>
<td>-</td>
</tr>
<tr>
<td>Mortgage-backed securities</td>
<td>63</td>
<td>-</td>
</tr>
<tr>
<td>Other asset-backed securities</td>
<td>53</td>
<td>-</td>
</tr>
<tr>
<td>Equities</td>
<td>2,477</td>
<td>36</td>
</tr>
<tr>
<td>Real estate equity funds</td>
<td>-</td>
<td>1,174</td>
</tr>
<tr>
<td>Other investments</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total investments</strong></td>
<td><strong>19,450</strong></td>
<td><strong>1,210</strong></td>
</tr>
</tbody>
</table>

Investment income

Breakdown of investment income per category

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest income from receivables due from credit institutions</td>
<td>149</td>
<td>154</td>
</tr>
<tr>
<td>Interest income from investments</td>
<td>321</td>
<td>374</td>
</tr>
<tr>
<td>Interest income from amounts due from customers</td>
<td>231</td>
<td>233</td>
</tr>
<tr>
<td>Interest income from trade receivables and derivatives</td>
<td>215</td>
<td>199</td>
</tr>
<tr>
<td>Other interest income</td>
<td>19</td>
<td>12</td>
</tr>
<tr>
<td><strong>Interest income</strong></td>
<td><strong>935</strong></td>
<td><strong>972</strong></td>
</tr>
<tr>
<td>Dividend on equities</td>
<td>53</td>
<td>49</td>
</tr>
<tr>
<td>Dividend on real estate equity funds</td>
<td>45</td>
<td>-</td>
</tr>
<tr>
<td>Rentals from investment property</td>
<td>56</td>
<td>117</td>
</tr>
<tr>
<td>Other investment income</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Dividend and other investment income</strong></td>
<td><strong>154</strong></td>
<td><strong>167</strong></td>
</tr>
<tr>
<td><strong>Total investment income</strong></td>
<td><strong>1,089</strong></td>
<td><strong>1,139</strong></td>
</tr>
</tbody>
</table>

The effective interest method has been applied to an amount of € 698 million of the interest income from financial assets not classified at fair value through profit or loss (2016: € 754 million).
A.3.2 Company statement of comprehensive income

Company statement of comprehensive income for the year ended 31 December

<table>
<thead>
<tr>
<th>(in € millions)</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit for the year</td>
<td>739</td>
<td>501</td>
</tr>
<tr>
<td>Unrealised change in value of property for own use</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Income tax on items that will not be reclassified to profit or loss</td>
<td>-1</td>
<td>-2</td>
</tr>
<tr>
<td>Total items that will not be reclassified to profit or loss</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Unrealised change in value of available for sale assets</td>
<td>98</td>
<td>752</td>
</tr>
<tr>
<td>Realised gains/(losses) on available for sale assets reclassified to profit or loss</td>
<td>-338</td>
<td>-407</td>
</tr>
<tr>
<td>Shadow accounting</td>
<td>405</td>
<td>-310</td>
</tr>
<tr>
<td>Segregated investment pools</td>
<td>-43</td>
<td>-27</td>
</tr>
<tr>
<td>Income tax on items that may be reclassified subsequently to profit or loss</td>
<td>-19</td>
<td>-5</td>
</tr>
<tr>
<td>Total items that may be reclassified subsequently to profit or loss</td>
<td>103</td>
<td>3</td>
</tr>
<tr>
<td>Total other comprehensive income for the year, after tax</td>
<td>106</td>
<td>10</td>
</tr>
<tr>
<td>Total comprehensive income</td>
<td>845</td>
<td>511</td>
</tr>
</tbody>
</table>

Shadow accounting allows a recognised but unrealised gain or loss on an asset to be transferred to liabilities arising from insurance contracts.

A.3.3 Information about investments in securities

As a.s.r. leven has no investments in securitisation, no further information is included here.

A.4 Performance of other activities

No other activities are material.

A.5 Any other information

In September 2017, a.s.r. announced the acquisition of 100% of the shares in Generali Nederland N.V., an insurer focusing on non-life and life insurances. The closing for the transaction of Generali Nederland took place on 5 February 2018. A.s.r. Levensverzekeringen N.V. acquired Generali Leven N.V. from a.s.r. directly after the closing.
B System of governance

In the case where the text below refers to ‘the company’, a.s.r. Leven is meant.

B.1 General information on the system of governance

B.1.1 Corporate governance

Executive Board
The Executive Board is collectively responsible for the day-to-day conduct of business of a.s.r. as a whole and for its structure, strategy and performance. In performing its duties, the Executive Board is guided by a.s.r.’s interests, which include the interests of the businesses connected with a.s.r., which, in turn, include the interests of customers, shareholders, employees and society in general. For the performance of its duties, the Executive Board is accountable to the Supervisory Board and to the General Meeting of shareholders.

The Executive Board consists of four members. The General Meeting of Shareholders appoints the members of the Executive Board and may suspend or dismiss any member of the Executive Board at any time. The Supervisory Board may also suspend any member of the Executive Board. A suspension by the Supervisory Board may be initiated by the General Meeting of Shareholders at any time.

In addition to the Executive Board, the three divisions of a.s.r. Leven each have their own management team (MT).

Supervisory Board
The Supervisory Board performs its duties on the basis of three roles; the supervisory role, the advisory role and the employer’s role. The Supervisory Board supervises the policy pursued by the Executive Board and the general course of affairs at a.s.r. and its group entities. Specific powers are vested in the Supervisory Board, including the approval of certain decisions taken by the Executive Board.

The Supervisory Board consists of four members. The General Meeting of Shareholders appoints the members of the Supervisory Board and may suspend or dismiss any member of the Supervisory Board at any time.

B.1.1.1 Corporate Governance
This paragraph contains a description of group policy, which is applicable for a.s.r. leven.

There are three committees that support the Supervisory Board; the Audit & Risk Committee, the Remuneration Committee and the Selection & Appointment Committee. The committees are responsible for preparing items delegated to them on which the chair of each committee verbally reports the main points of discussion and the resulting recommendations in the next meeting of the Supervisory Board. The records of the committees are also shared with the members of the Supervisory Board.

Audit and Risk Committee
The composition of the Audit & Risk Committee is such that specific business expertise, financial accounting expertise and related management expertise (risk and control) in the activities of a.s.r. is present. The Audit & Risk Committee has three members; Cor van den Bos, a financial expert with a deep experience in finance matters in insurance, is the Chairman and the other two members are Annet Aris and Herman Hintzen.

In 2017, the Committee held seven meetings. In accordance with the Audit & Risk Committee Rules, these meetings were also attended by the CFO, the Director of Group Risk Management, the Director of Group Accounting, Reporting & Control, the Director of Finance & Risk, the Director of Compliance, the Director of Audit and the independent external auditor. The standing agenda items included the financial (quarterly) results and the quarterly risk, compliance and audit reports. In addition, the Committee addressed issues specific to the supervised entities, including the impact of changing market conditions and the report related to Solvency II matters. Also, the management letter of the external auditor highlighting key internal control observations was discussed in the fourth quarter.

During the year, outside the regular meetings, the Committee met on two occasions with the Audit, Compliance, Risk Management and Actuarial Functions in their roles as countervailing powers. The Chairman of the Committee
had two one-on-one meetings with each of the directors of Audit, Compliance and Group Risk Management and had two meetings with the External Auditor EY.

After each quarter end, the Committee met to discuss the financial results based on detailed risk, compliance and internal and external audit reports and analyses. Progress on the recommendations of the internal and external auditor was monitored. The full 2017 reporting year was discussed in the first quarter of 2018 on the basis of the press release, the Annual Report, the financial statements, the Board Report and the actuarial report. The Committee advised the Supervisory Board positively. The discussion of the actuarial report was also attended by the Actuarial Function. The Committee issued positive opinions on the Annual Report and the financial statements to the Supervisory Board.

The Audit & Risk Committee specifically focused on the effectiveness of the audit, compliance, risk and actuarial functions within a.s.r. The Committee discussed and approved the annual plan for 2018 of the Compliance department, Group Risk Management, including Actuarial Function. The updated Compliance Charter, the Charters of the Risk Management Function and the Actuarial Function were adopted in 2017. After positive advice of the Committee the Supervisory Board approved the annual plan and charter of the Audit department. The Committee also approved the independent external auditor’s audit plans for 2017.

In 2017 the outcomes of the SCR calculations and the ORSA were discussed by the Committee. The UFR effect within the Solvency II framework was highlighted and special attention was paid to the economic UFR scenario that has been defined by a.s.r. At year-end, the Audit & Risk Committee also discussed the updated risk appetite statement for 2018, which is based on a detailed risk assessment. The risk appetite for 2018 was approved by the Supervisory Board. The a.s.r. risk appetite is based on a prudent approach to risk management and translates the risk appetite into requirements for solvency, liquidity and returns; solvency takes priority over profit and profit takes priority over premium income. Furthermore, a.s.r.’s updated capital and dividend policy was discussed and positive advice for approval was given to the Supervisory Board.

The Committee discussed the potential issuance of Tier 1 capital in the second half of 2017. Also, the key changes due to the forthcoming implementation of IFRS9 and IFRS17 were highlighted in a special meeting. The Committee periodically monitored the status of the risk appetite during the year via a.s.r.’s Integrated Risk Dashboard and the status report on the management of risk priorities. The Committee was informed of the outlines of the reinsurance programme. Also, the internal control structure (Management in Control 2.0) was a regular item of discussion by the Committee. The structure allows the management of a.s.r. to verifiably manage the principal risks that pose a threat to achieving the company’s strategic targets.

To conclude, in December, the multi-year budget for 2018-2020 and the investment plan for 2018 were discussed at length, after which the multi-year budget was adopted by the Supervisory Board.

Remuneration Committee

The Remuneration Committee advises the Supervisory Board on, among other things, the remuneration policy regarding the Executive Board, the terms and conditions of employment of members of the Executive Board, and it reviews the remunerations of members of senior management.

The Remuneration Committee was in session on five occasions in 2017 and the members of the Remuneration Committee are Annet Aris (chair) and Kick van der Pol. Its meetings are also attended by the CEO (except when issues relating to the Executive Board are discussed) and the Human Resources Director, who doubles as secretary. The Committee solicits support and advice from departments such as Group Risk Management, Compliance, Audit and Human Resources. Where needed, it calls in the expertise of independent legal and pay & benefit experts.

In accordance with the policy, the Committee advised the Supervisory Board on target setting, performance appraisals and the ex-post assessments of variable payments awarded to identified staff. The remuneration policy was updated in line with new rules and regulations and the Remuneration Committee discussed the implementation of the remuneration policy for our subsidiaries and participations. The results of the audit plan on the application of a.s.r.’s remuneration policy were discussed.

In 2017, the Remuneration Committee used the services of Korn Ferry for a benchmark of the remuneration for the Executive Board (periodic three-year benchmark). In the run-up to the sell down, the Remuneration Committee held extensive discussions on the remuneration of the Executive Board and the fact that, after the sell down, the remuneration policy can be applied to the members of the Executive Board (as also applied to the employees of a.s.r.). Various scenarios were discussed. The interests of various stakeholders were weighed up, such as those of...
customers, employees, directors and shareholders. At year-end 2017, the Supervisory Board decided to gradually increase the remunerations of the members of the Executive Board with effect from 1 January 2018.

To conclude, the Committee was informed about the outline of the new collective labour agreement, which was a process in co-creation with the trade unions.

Selection & Appointment Committee
Among other things, the Selection & Appointment Committee advises the Supervisory Board on selection and appointment procedures, on the compositions of the Boards and it prepares (re)appointments of members. The Selection & Appointment Committee was in session on four occasions in 2017 and its members are Annet Aris (chair) and Kick van der Pol. Its meetings are also attended by the CEO (except when issues relating to the Executive Board are being discussed) and the Human Resources Director, who doubles as secretary.

The committee decided and advised on topics such as the procedure of (re)appointing members of the Executive Board and Supervisory Board, the Succession plan and the Diversity Policy. At the beginning of 2017, the Supervisory Board discussed the composition of the Board. The term of appointment of the current Chairman will end at the 2019 General Meeting and the Vice-Chairman, also Chairman of ARC, at the 2020 General Meeting. The committee prepared the search for future members of the Supervisory Board and members of the Executive Board. The interviews resulted in two strong (female) candidates, which were nominated for appointment for a four-year period.

A possible reappointment of the CFO was also discussed and prepared. The proposed reappointment of Chris Figeé as CFO for a four-year period will be on the 2018 AGM agenda for discussion.

To conclude, the Selection and Appointment Committee discussed the annual assessments of senior management. A nine-box grid was used to evaluate senior managers and to discuss their individual development and possible successors. The Selection and Appointment Committee was also informed about the results of the Denison scan, a new tool to measure the success of the organisation.

B.1.1.2 Corporate Governance

General
a.s.r. is a public company with limited liability under Dutch law. The company has a two-tier board structure; it has a Supervisory Board and an Executive Board. a.s.r. has been listed on Euronext Amsterdam since 10 June 2016. Since the listing, a.s.r. has applied a full two-tier board structure.

History
In the autumn of 2008, the Dutch State acquired the Dutch entities of Fortis Group and spun off Fortis Levensverzekeringen Nederland N.V., which now operates as a.s.r. Although a.s.r. was acquired by the Dutch State as a result of the nationalisation of Fortis Group, a.s.r. never received state aid.

In September 2011, the Dutch State transferred all of its shares to NLFI in exchange for depositary receipts for the shares. NLFI was responsible for managing the shares and exercising all rights associated with these shares under Dutch law, including voting rights. In November 2015, NLFI and the Dutch Minister of Finance agreed that all conditions for a privatisation of the Group had been met. In January 2016, the Dutch Parliament agreed to the exit strategy proposed by the Dutch Minister of Finance based on the NLFI advice, after which the Dutch Minister of Finance formally asked NLFI and a.s.r. to start the sale process through an IPO.

On 13 May 2016, NLFI confirmed its intention to proceed with the next step towards an IPO and the listing of the ordinary shares of the Group on Euronext Amsterdam. a.s.r. became a listed company on Friday 10 June 2016 and the price was set at € 19.50 per offered share.

Structure
ASR Nederland N.V. is the Group’s holding company. The supervised entities (OTSOs) within the Group are ASR Levensverzekering N.V., ASR Schadeverzekering N.V., ASR Basis Ziektekostenverzekeringen N.V., ASR Aanvullende Ziektekostenverzekeringen N.V., ASR Bank N.V. and, since the acquisition of Generali Nederland on 5 February 2018, also Generali levensverzekering maatschappij N.V. and Generali schadeverzekering maatschappij N.V. The last two companies are intended to merge legally with ASR Levensverzekering N.V. and ASR Schadeverzekering N.V., respectively, in 2018. ASR Utrecht N.V. (before Generali Nederland N.V.) is the holding company of the
The Executive Board members and Supervisory Board members of ASR Levensverzekering N.V. and ASR Schadeverzekering N.V. are the same as those of ASR Nederland N.V. The Executive Board of Generali levensverzekering maatschappij N.V. and Generali schadeverzekering maatschappij N.V. is also the same as that of ASR Nederland N.V. These companies have dispensation for having a Supervisory Board. ASR Basis Ziektekostenverzekeringen N.V., ASR Aanvullende Ziektekostenverzekeringen N.V. and ASR Bank N.V. have their own Executive Board. The Supervisory Board of these entities consists of a combination of members of the Executive Board and members of the Supervisory Board of ASR Nederland N.V.

**B.1.1.3 Executive Board**

The Executive Board is collectively responsible for the day-to-day conduct of business of a.s.r. as a whole and for its strategy, structure and performance. In performing its duties, the Executive Board is guided by a.s.r.’s interests, which include the interests of the businesses connected with a.s.r., which, in turn, include the interests of customers, shareholders, employees and society in general. For the performance of its duties, the Executive Board is accountable to the Supervisory Board and to the General Meeting of shareholders.

Certain resolutions of the Executive Board require approval of the Supervisory Board and/or the General Meeting. These resolutions are outlined in the articles of association of a.s.r. and in the Rules of Procedure of the Executive Board. Both are available on asrnl.com.

**Composition**

According to the articles of association, the Executive Board consists of a minimum of two members, including at least a CEO and CFO. The Supervisory Board appoints the Executive Board members and may suspend or dismiss any member of the Executive Board at any time. The Supervisory Board notifies the General Meeting of proposed appointments. Only candidates found to meet the ‘fit and proper test’ under the Dutch Financial Supervision Act are eligible for appointment. In 2017, there were no changes in the composition of the Executive Board.

In addition to the Executive Board, the three divisions of a.s.r. Leven each have their own management team (MT).

**Remuneration**

Information on the remuneration policy for members of the Executive Board and their individual remunerations can be found in the Remuneration report.

**Education and evaluation**

With a view to innovation, the members of the Executive Board spent a week in Silicon Valley, California, in early 2017, visiting Singularity University and several innovative companies. During this trip, the members of the Executive Board were informed about the latest developments and gained inspiration to work on certain themes within a.s.r., such as robotisation and developments in the field of health.

Sessions were also organised jointly with the Supervisory Board. The first session was a training of the defence manual led by a commercial bank and law firm. All disciplines that have a role in the defence manual were involved. The second session concerned a note to IFRS 17, the new accounting standard for insurance contracts. The new rules will affect the future external reporting on insurance contracts. The implementation of IFRS 17 within a.s.r. is an extensive project that will have a major impact.

The Executive Board evaluated its own performance regularly in 2017 by holding what are known as Executive Board team conduct evaluation sessions. Furthermore, a specific self-evaluation session was held after the results of a 360-feedback questionnaire was received. With this 360-feedback, the Executive Board (as a whole) received feedback from members of the Supervisory Board, senior management, two members of the Works Council and from themselves. In the context of the 360-feedback questionnaire, the leadership themes from ‘the story of a.s.r.’ were specifically asked for; dilemmas, dialogue, clear frameworks and actions. The outcome of the questionnaire was discussed within the Executive Board under the guidance of an employee of the supplier of the 360 tooling to further interpret the results. The overall impression that emerged from this self-assessment was positive. It turned out that the Executive Board is more critical of itself than other providers of feedback are. Positive points include the open and interested attitude of the Executive Board and its decisiveness/execution power. Recommendations include providing clearer frameworks to senior management and openly discussing dilemmas that divide the Executive Board and for which more time is needed in decision-making.

In addition to the self-evaluation, the performance of the members of the Executive Board was also assessed by
the Supervisory Board within the scope of the annual assessment round. In that context, interviews are held twice a year with the individual members of the Executive Board (by two members of the Supervisory Board each time).

**B.1.1.4 Supervisory Board**

The Supervisory Board performs its duties on the basis of three roles; the supervisory role, the advisory role and the employer’s role. The Supervisory Board supervises the policy pursued by the Executive Board and the general course of affairs at a.s.r. and its group entities. Specific powers are vested in the Supervisory Board, including the approval of certain decisions taken by the Executive Board.

**Composition**

The Supervisory Board consists of four members. The General Meeting of Shareholders appoints the members of the Supervisory Board and may suspend or dismiss any member of the Supervisory Board at any time.

In 2017 there were no changes to the composition of the Supervisory Board. The composition of the Supervisory Board of ASR Levensverzekering N.V. is the same as that of ASR Nederland N.V.

**Education and evaluation**

The Supervisory Board performs an annual self-assessment. A self-assessment with external guidance is carried out every three years. The self-assessment for 2017 was performed with external guidance. The assessment was based on written and oral input from the members of the Supervisory Board, the members of the Executive Board, the Corporate Secretary and several senior managers. The following aspects were assessed:

- Composition of the Supervisory Board;
- Communication, information-gathering and decision-making;
- Interaction and dynamics; and
- Important supervisory issues.

The outcome of the assessment was discussed by the members of the Supervisory Board and the external assessor. The overall impression that emerged from this self-assessment was positive. The Supervisory Board is seen as an effective / impactful team in terms of content, with a balanced and high-quality composition. This was also considered closely in the context of the end of current terms of appointment. The atmosphere is open and the relationship with the Executive Board is good. One recommendation made was to improve an open dialogue on relevant strategic issues at an early stage. In this context, the actions taken were to tighten the content-related meeting schedule for Supervisory Board meetings and create room for this dialogue. It was also discussed to devote more attention to succession management. To conclude, the reports received by the Supervisory Board were improved last year.

In 2017, two continuing education (CE) sessions were organised for the members of the Supervisory Board together with the members of the Executive Board. The first session was a defence manual training, led by an investment bank and a law firm. The second session concerned an explanation of IFRS 17, the new accounting standard for insurance contracts. The new regulations will impact the external reporting on insurance contracts in the future. The implementation of IFRS 17 within a.s.r. is a major project.

**B.1.1.5 Governance Codes**

**Professional oath**

On 1 January 2013, the Dutch financial sector introduced a mandatory oath for Executive and Supervisory Board members of financial institutions licensed in the Netherlands. With respect to insurance companies, apart from the Executive and Supervisory Board members, persons with a management position directly below the Executive Board who are responsible for persons that may have a significant influence on the risk profile of the insurance company, are also required to take the oath, as are certain other employees. This includes persons that may (independently) significantly influence the risk profile of the undertaking as well as those persons that are or may be involved in the provision of financial services.

Regardless of the above, a.s.r. has decided that employees and other persons performing activities under its responsibility must take the oath. New employees take the oath within three months of joining the company.

**Decision on disclosure of non-financial information and Decision on disclosure of diversity policy**

a.s.r. also wants to be transparent about non-financial information in its Management Report. Since the reporting year 2017, the relating legal requirements have been tightened up for large companies of public interest. These organisations, including a.s.r., are expected to make clear how they deal with environmental, social and personnel
issues, respect for human rights and the fight against corruption and bribery in their business operations and value chain. Large listed companies must also provide insight into the diversity policy regarding the Executive Board and Supervisory Board.

B.1.2 Remuneration report

This paragraph contains a description of group policy, which is applicable for the solo entity. Improving and maintaining the integrity and robustness of a.s.r. is key to the remuneration policy, and the focus is squarely on the long-term interests of all our stakeholders. The aim of the remuneration policy is to motivate employees to work for the interests of customers and other stakeholders within the parameters of the duty of care. The remuneration policy is based on the following principles.

The principles followed for drafting, adopting, applying and enforcing the Group Remuneration Policy are described below.

1. HR policy:
   • The remuneration policy strikes a balance between trust in intrinsic motivation on the one hand and agreement on clear targets and assessment of performance on those targets on the other.
   • The total pay-and-benefits package enables the company to compete in the labour market and to attract and retain competent people.

2. Sound remuneration policy:
   • The remuneration policy, including the pension policy, ties in with the corporate strategy and with the company's objectives, values and long-term interests. Any changes in strategy, objectives, values and long-term interests are taken into account when updating the remuneration policy.
   • The remuneration policy is ethical, sound and sustainable, in line with the company’s risk appetite, risk management strategy and risk profile, contributes to robust and effective risk management, and does not encourage a greater risk appetite than is acceptable to the business.
   • The remuneration policy has been designed in such a way that allowance is made for the internal workings of the company, its subsidiaries and group companies, and for the nature, scale and complexity of the risks attached to the business.
   • The remuneration policy does not restrict the company's scope to maintain and strengthen its robust regulatory capital, solvency margin or own funds.

3. Protection of customers and safeguarding integrity and long-term enterprise value:
   • The remuneration policy encourages employees to act in accordance with the company’s long-term interests.
   • The remuneration policy has been designed in such a way that consumers, clients or members are treated with due care.
   • Performances delivered by employees and by the company itself are measured based on both financial and non-financial indicators.
   • The remuneration policy does not encourage employees to take excessive risks.
   • The remuneration policy seeks to prevent conflicts of interest.
   • The company does not apply constructions or methods that facilitate the evasion of the remuneration policy or the relevant legislation and regulations.
   • Employees are expected not to make use of personal hedging strategies or of any insurance policies linked to remuneration and liability to undermine the risk management effects embedded in their remuneration schemes.

4. Transparency:
   • The design, governance and methodology of the remuneration policy are clear, transparent and applicable to all employees.

5. Compliance:
   • The remuneration policy complies with prevailing national and international legislation and regulations (see also Section 1.4). It is evaluated periodically and modified, if necessary, to ensure compliance with new legislation and regulations or market standards.
   • The compliance of the remuneration policy and the related procedures with the relevant rules and regulations is checked at least once a year by a centralised and independent internal body.
Governance

- The Annual General Meeting (AGM) has decision-making powers relating to the remuneration policy of the Executive Board and the individual remuneration of the supervisory directors. In addition, the Supervisory Board informs the AGM of the individual remuneration of the executive directors.
- The Supervisory Board has decision-making powers relating to setting the individual remuneration of the members of the Executive Board. In addition, the Supervisory Board has powers regarding, the remuneration policy for all groups of employees and monitors same. The Supervisory Board also approves the remuneration policy and its underlying principles before they are adopted and the selection of identified staff.
- The Supervisory Board has an Audit and Risk Committee (ARC Committee) and as of the moment of the IPO the Selection, Appointment and Remuneration Committee was split in the Selection and Appointment Committee and the Remuneration Committee. These committees are composed of members of the Supervisory Board. The full Supervisory Board remains responsible for any decisions taken, even if they have been prepared by a committee.
- The duties, composition, expertise, independence and organisation of the committees of the Supervisory Board are described in further detail in their rules of procedure, which are included in two appendices to the Rules of Procedure of the Supervisory Board.
- The Remuneration Committee provides the Supervisory Board with support and advice in relation to its duties and responsibilities regarding remuneration policy and remuneration practices. Decisions taken by the Supervisory Board in this area are prepared by the Remuneration Committee.
- Without prejudice to the duties of the Remuneration Committee, the ARC Committee examines whether the incentives created by the remuneration system take account of risk, capital, liquidity and the probability and staggering of profit forecasts, for the purpose of supporting the introduction of sound remuneration policy and practices. The ARC Committee also provides input for the selection of identified staff.
- The Executive Board has decision-making powers and responsibilities relating to the remuneration policy in respect of all employees, with the exception of the Executive Board itself and the Supervisory Board. The Executive Board also decides on the individual remuneration of senior managers (SMs, job levels 22-23).
- Control functions (also known as key functions) are departments that are responsible for the control and supervision of operations as well as the risks arising from those operations, and in doing so operate independently from the rest of the organisation. They advise and support the Executive Board and Supervisory Board, and report directly to the Executive Board and Supervisory Board on compliance with applicable legislation and regulations and internal codes. Employees in control functions are defined as senior and/or managerial employees working in the compliance, audit, risk management and actuarial functions. The compliance, audit and risk management functions also play an active role in the context of the remuneration policies and practices relating to other groups of employees.
- The human resources function is very closely involved with the implementation of the remuneration policy. It also coordinates the preparation and evaluation of the remuneration policy and suggests what the policy should look like. In keeping with the control functions, the human resources function provides input for the ex-ante and ex-post risk adjustments of variable remuneration.
- The control functions and the human resources function collaborate actively on a regular basis. They share information and provide input for each other’s activities in the area of the remuneration policy.

Remuneration groups

Except where stated otherwise, the regulations contained in the remuneration policy apply to all employees who work under the responsibility of the Group. The specific groups mentioned are:
- Identified staff
- Employees in control functions (key functions)
- Policymakers
- Senior managers subject to the Dutch Financial Undertakings (Remuneration) Act (Wbfo)
- Executive directors and supervisory directors
- Senior and higher management

Key features of the remuneration system

Until 1 July 2014, the income of senior management, higher management and the CBA (Collective Bargaining Agreement) population (back-office and front-office) consisted of a fixed and a variable component. The Executive Board has received no variable remuneration since financial year 2011 based on Sections 1:128 and 1:129 of the Dutch Financial Supervision Act (Wft) and the corresponding transitional provisions. Following the collective bargaining negotiations with the trade unions, the variable remuneration for the CBA population was converted as of 1 July 2014 into a salary increase and a fixed supplement. The conversion was also implemented pro rata for a.s.r. as a whole, including higher and senior management. From 1 July 2014 onwards, the income of all salary groups including identified staff has consisted only of a fixed salary, with the exception of 115 front-office staff. This group has a fixed pay component and a target-related pay award of up to 20%.
Executive Board
The pay awarded to the members of the Executive Board comprises a fixed amount per month, including holiday allowance. The pay is indexed in accordance with the CBA for the insurance industry.

Other employees
The fixed pay awarded to employees consists of a fixed gross monthly salary, a fixed allowance (as a result of the conversion of variable pay for those employed at a.s.r. on 1 July 2014), 8% holiday allowance and a year-end bonus. The level of fixed pay depends on the weight attributed to an employee’s role, the related salary group and the employee’s general performance rating (assessment of deliverables and agreements on appropriate conduct). Fixed pay is adjusted for structural wage developments in accordance with the CBA for back-office positions in the insurance industry. The objectives pursued as part of how employees perform their duties are extrapolated from a.s.r.’s strategic targets. a.s.r.’s strategy is based on helping by taking action. This is reflected in KPIs relating to such issues as a customer dashboard, the Customer-Oriented Insurance Quality Mark and the Net Promoter Score. These KPIs form the basis of inspiring individual targets.

Identified staff
Variable remuneration awarded to identified staff before 1 July 2014 will be paid in instalments over the next few years. Identified staff are conditionally awarded a material share (i.e. 50%) of their variable pay in the form of cash and non-cash instruments. The conditional variable pay is deferred for three years; a reappraisal is performed at the end of the three-year period, after which the cash component is paid out. The non-cash component is subject to an additional retention period of two years. Some of the unconditional variable pay is paid out in cash immediately. The non-cash component of the unconditional variable pay is also retained for two years.

This group is also subject to a claw-back mechanism, a fairness clause and a penalty scheme, meaning that the Supervisory Board can claw back any variable pay already awarded if it was determined and awarded based on incorrect information.

In addition, the Supervisory Board has the right to adjust the level of the conditional variable pay if leaving the payment unchanged would go against the principles of reasonableness and fairness.

At a.s.r., the following specific variable remuneration schemes may apply to groups of employees:
• Target-related remuneration for front-office positions: employees may be entitled to variable remuneration under the CBA job classification and pay structure for front-office positions at a.s.r.
• Variable remuneration at ASR Vastgoed Vermogensbeheer B.V. and ASR Vastgoed Ontwikkeling N.V.: As a transitional measure, a variable remuneration scheme applies to a small group of employees working at ASR Vastgoed Vermogensbeheer B.V. and ASR Vastgoed Ontwikkeling N.V. who are not identified staff.
• Incidental bonuses: A variable remuneration scheme in which a small amount of remuneration is linked to specific performance that goes beyond their job description applies to employees who come within the scope of the ASR Remuneration Policy but are not identified staff.

Retention bonuses
Prior written permission from DNB for retention bonuses exceeding the bonus cap of 20% may only be requested by a.s.r.’s HR department after it has obtained the prior consent of the Remuneration Committee.

Guaranteed variable remuneration, welcome bonuses and buy-outs
a.s.r. does not award guaranteed variable remuneration except within the legal bounds and only if prior permission has been obtained from the HR Director.

In accordance with the Group Remuneration Policy, a.s.r. applies the ex-ante and ex-post risk adjustment to variable remuneration.
• Ex-ante risk adjustment
  The human resources function (HR Director) applies the ex-ante risk adjustment, based on input received from the control functions.
• Penalty
  Following a proposal from the Remuneration Committee and based on input from the human resources function and the control functions, the Supervisory Board decides whether the penalty is to be applied.
• Claw-back
  Following a proposal from the Remuneration Committee and based on input from the human resources function and the control functions, the Supervisory Board decides whether the claw-back clause is to be applied.
Severance pay
No severance pay, either fixed or variable, may be awarded to an employee in the following cases:
• In the event that the employment relationship is terminated early at the employee’s own initiative, except where this is due to serious culpable conduct or neglect on the part of the company.
• In the event of serious culpable conduct or neglect in the performance of his or her role by the employee.

Additionally, the following conditions apply with respect to severance pay for policymakers.
• The maximum severance pay is 100% of the fixed annual remuneration.
• No severance pay is awarded in the event of the company’s failure.
• No severance pay that can be classified as variable is awarded to policymakers of a.s.r. or banks and insurers that are part of the Group.
• No fixed severance pay may be awarded to this group of employees unless this severance pay was agreed before 7 February 2015 (or before 20 June 2012 in the case of members of the a.s.r. Executive Board) or is agreed when the employee in question commenced his or her activities as a policy-maker after 7 February 2015.

No employee may receive total variable remuneration that exceeds 20% of his or her total fixed annual remuneration. This ratio is also referred to as the ‘20% bonus cap’.

Pension
The principal features of the pension scheme were as follows in 2016:
1. Average-pay pension plan;
2. Retirement age: 67 years;
3. Accrual rate for old-age pension: 1.875% for all salary groups;
4. Pensionable salary: fixed annual salary on 1 January of any year (capped at € 101,519 gross, this is offset by a contribution for the accrual of a net pay pension);
5. Partner’s pension: 70% of projected old-age pension;
6. Orphan’s pension: 14% of projected old-age pension;
7. Employee contribution: 6% of pensionable earnings;
8. Flexible elements: early retirement, deferred retirement, exchange, high/low, part-time;
9. a.s.r. does not allow for the award of discretionary pensions.

Pre-pension allowance
As a result of statutory pre-pension regulations, a.s.r. removed all pre-pension elements from its pension plans in 2006. Employees who joined a.s.r. before 1 January 2006 were initially compensated for this removal through optimisation of their accrual rate and the state pension offset. Where such compensation was inadequate, the employees were awarded a pre-pension allowance, the amount of which varied based on their age and the original pension commitment. The pre-pension allowance for employees who joined a.s.r. after 1 January 2006 was 1% of their pensionable salary.

As a result of the change to the pension plan agreed with the Works Council, an additional pre-pension allowance was introduced with effect from 1 January 2015 for employees who had a pension accrual rate of 2.25% at year-end 2013. The supplementary pre-pension allowance has been set at 2.25%.

The allowance is paid until the end date of the (regular) pre-pension allowance, subject to a maximum of five years.

Once every three years, an independent consultancy is hired to perform a market comparison (remuneration benchmark). For the complete a.s.r. remuneration policy please see: asrnl.com.

B.1.3 Related-party transactions
A related party is a person or entity that has significant influence over another entity, or has the ability to affect the financial and operating policies of the other party. Parties related to a.s.r. leven include a.s.r. and its subsidiaries, associates, NLFI and the Dutch State for the period until 13 September 2017, members of the Executive Board, members of the Supervisory Board, close family members of any person referred to above, entities controlled or significantly influenced by any person referred to above and any other affiliated entity.

a.s.r. leven regularly enters into transactions with related parties during the conduct of its business. These transactions mainly involve loans and receivables, allocated costs and premiums received, and are conducted on terms equivalent to those that prevail in arm’s length transactions.
The operating expenses, are predominantly intercompany, consisting of allocated expenses from head office, support functions and expenses related to personnel;

Transactions with a.s.r. concern the payment of taxes as a.s.r. heads the fiscal unity;

The post-employment benefit plan of a.s.r. has been insured by a.s.r. leven. The premium income in the following table concerns the premiums related to this post-employment benefit plan.

Positions and transactions between a.s.r. leven, associates and other related parties

The table below shows the financial scope of the related party transactions of a.s.r. leven:

• Associates;

• Other related parties (including ASR Nederland N.V. and its subsidiaries).

Financial scope of a.s.r. leven related party transactions

<table>
<thead>
<tr>
<th></th>
<th>2017 Group companies</th>
<th>2017 Total</th>
<th>2016 Group companies</th>
<th>2016 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans and receivables to group companies</td>
<td>134</td>
<td>134</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Other assets</td>
<td>128</td>
<td>128</td>
<td>184</td>
<td>184</td>
</tr>
<tr>
<td>Premium income</td>
<td>31</td>
<td>31</td>
<td>118</td>
<td>118</td>
</tr>
<tr>
<td>Interest income</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>FV Gains and Losses</td>
<td>17</td>
<td>17</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

No provisions for impairments have been recognised on the loans and receivables for the years 2017 and 2016.

Main transactions are:

• In 2017, a.s.r. leven sold mortgages to ASR Bank N.V. for € 470 million (2016: € 436 million) and ASR Hypotheekfonds € 500 million.

• In March 2017 a.s.r. leven bought the remaining share in ANVM from a.s.r. schade for an amount of € 336 million.

All transactions were conducted at arm’s length.

During 2016 a.s.r. leven paid a dividend to ASR Nederland N.V. in the amount of € 395 million (2016: € 290 million).

B.1.4 Remuneration of Supervisory Board and Executive Board

The members of the Executive Board and Supervisory Board of a.s.r. leven are the same members in the Executive Board and Supervisory Board of a.s.r. The amount of compensation paid for the services provided by the Executive Board and the Supervisory Board of a.s.r. was not charged to a.s.r. leven, and is subsequently not accounted for in the result of a.s.r. leven.

The remuneration policy of the Executive and Supervisory Board members is determined in accordance with the current Articles of Association of a.s.r. An overview of these remunerations is described in the consolidated financial statements of a.s.r. group.
B.2 Fit and proper requirements

This paragraph contains a description of group policy, which is applicable for the solo entity. The policy pursued by a.s.r. concerning fit and proper requirements for persons who effectively run the undertaking and other key functions contributes to a controlled and sound business operations and promotes the stability and integrity of a.s.r. as well as customer confidence.

The fit and proper requirements that are imposed on persons who effectively run the undertaking and other key functions are included in the job profile, which is used as a basis for recruitment. Each year, an assessment is made of the extent to which an employee requires training to perform its duties. In addition, a.s.r. has developed a training plan for the continuing education of persons who effectively run the undertaking and other key functions. a.s.r. assesses all prospective employees for their reliability and integrity prior to their appointment.

B.3 Risk management system including the Own Risk and Solvency Assessment Risk Management System

This paragraph contains a description of group policy, which is applicable for the solo entity. It is of great importance that risks within all business lines are timely and adequately controlled. In order to do so, a.s.r. has implemented a Risk Management framework based on internationally recognised and accepted standards (such as COSO ERM and ISO 31000:2009 risk management principles and guidelines). Using this framework, material risks that a.s.r. is, or can be, exposed to, are identified, measured, managed, monitored and evaluated. The framework is both applicable to a.s.r. group and the underlying (legal) business entities.

B.3.1 Risk Management Framework

The figure below is the risk management framework as applied by a.s.r. The framework is based on the Risk Management (ERM) model by COSO 1.

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1 ISO 31000:2009 risk management principles and guidelines
Risk Management framework
The Risk Management (RM) framework consists of risk strategy (including risk appetite), risk governance, systems and data, risk policies and procedures, risk culture, and risk management process. The RM framework contributes to achieving the strategic objectives as set out by a.s.r.

Risk strategy (incl. risk appetite)
Risk strategy is defined to contain at least the following elements:
• Strategic objectives that are pursued;
• The risk appetite in pursuit of those strategic objectives.

a.s.r.’s risk strategy aims to ensure that decisions are made within the boundaries of the risk appetite, as stipulated annually by the Executive Board and the Supervisory Board (see chapter B.3.1.1 Risk strategy and risk appetite).

Risk appetite
The risk appetite is defined as the level and type of risk a.s.r. is willing to bear in order to meet its strategic, tactical and operational objectives. Risk preferences in the form of qualitative risk appetite statements and risk tolerances presented by quantitative risk appetite statements, guide the organisation in the selection of risks. Risk appetite statements are implemented within the business through the use of risk limits.

Risk governance
Risk governance can be seen as the way in which risks are managed, through a sound risk governance structure and clear tasks and responsibilities, including risk ownership. a.s.r. employs a risk governance framework that entails the tasks and responsibilities of the risk management organisation and the structure of the Risk committees (see chapter B.3.1.2 Risk governance).

Systems and data
Systems and data support the risk management process and provide management information to the risk committees and other relevant bodies. Strategic decisions are based on the management information provided. a.s.r. finds it very important to have qualitatively adequate data and systems in place, in order to be able to report and steer correct figures and to apply risk-mitigating measures timely. To ensure this, a.s.r. has designed a policy for data quality in line with Solvency II. Tools, models and systems are implemented to support the risk management process by giving guidance to and insights into the key risk indicators, risk tolerance levels, boundaries and actions, and remediation plans to mitigate risks (see chapter B.3.1.3 Systems and data).

Risk policies and procedures:
Risk policies and procedures at least:
• Define the risk categories and the methods to measure the risks;
• Outline how each relevant category, risk area and any potential aggregation of risk is managed;
• Describe the connection with the overall solvency needs assessment as identified in the Own Risk & Solvency Assessment (ORSA), the regulatory capital requirements and the risk tolerances;
• Provide specific risk tolerances and limits within all relevant risk categories in line with the risk appetite statements;
• Describe the frequency and content of regular stress tests and the circumstances that would warrant ad-hoc stress tests.

The classification of risks within a.s.r. is performed in line with, but is not limited to, the Solvency II risks. Each risk category consists of a policy that explicates how risks are identified, measured and controlled within a.s.r. (see chapter B.3.1.4 Risk policies and procedures).

Risk culture
An effective risk culture is one that enables and rewards individuals and groups for taking risks in an informed manner. It is a term describing the values, beliefs, knowledge, attitudes and understanding about risk. All the elements of the RM framework combined make an effective risk culture.

Within a.s.r. risk culture is an important element that emphasises the human side of risk management. The Executive Board has a distinguished role in expressing the appropriate norms and values (tone at the top). a.s.r employs several measures to increase the risk awareness and, in doing so, the risk culture (see chapter B.3.1.5 Risk culture).
Risk management process
The risk management process contains all activities within the RM processes to structurally 1) identify risks; 2) measure risks; 3) manage risks; 4) monitor and report on risks; and 5) evaluate the risk profile and risk management framework. At a.s.r., the risk management process is used to implement the risk strategy in the steps mentioned. These five steps allow for the risks within the company to be managed effectively (see chapter B.3.1.6 Risk Management process).

B.3.1.1 Risk strategy and risk appetite
The risk strategy of a.s.r. aims to ensure that management decisions lead to a risk profile that remains in line with the mission of the organisation. The risk strategy entails all processes to manage identified risks and to take advantage of opportunities should they arise. In order to achieve this, a risk appetite is established so that the risk profile can be managed within the limits as determined by the Executive Board and approved by the Supervisory Board. These risk boundaries are set with the goal of remaining a solid insurance company with the right balance between risk and return. The risk appetite describes the level of risk a.s.r. is willing to bear in order to meet its strategic objectives. Risk exposures are actively managed to ensure that the risks will stay within the defined limits. Risk appetite is defined at both group level and at legal entity level for financial and non-financial risks. Risk tolerances, limits and targets are set for all risk appetite statements. Objectives of the risk appetite are:

- To serve as an important steering instrument on a daily basis: a pragmatic approach at both group-, legal entity- and business unit level. This helps to develop a vision with respect to risk, which is used in the day-to-day decision-making process;
- To link the risk appetite to the strategic goals, in order to indicate a.s.r.’s willingness to take risks.

The risk appetite is based on a.s.r.’s mission, vision and strategy, determined by the Executive Board. The overall mission is to offer transparent insurance solutions as a trusted partner to customers, while creating a sustainable and stable value for a.s.r.’s stakeholders. This mission is translated into the prioritisation of simple and transparent products, clear communication and fair treatment of customers. The strategy is derived from the mission and is based on four pillars: meeting customer needs, pricing discipline and underwriting excellence, cost effectiveness and maintaining a cash generative business model. a.s.r. strives to execute these four strategic pillars within all of the Group’s segments.

Meeting customers’ needs
a.s.r. aims to offer customers simple, transparent products that fulfil their needs.

Excellence in pricing, underwriting and claims handling
a.s.r. intends to maintain a disciplined pricing strategy focusing on further expanding its knowledge of customer behaviour and continuing to enhance and further develop its experience and skills in respect of pricing and underwriting.

Cost Effectiveness
a.s.r. aims to continuously focus on effectively managing its costs.

Cash Generating Business Model
a.s.r.’s objective is to maintain its operation on a cash generative business model backed by a sound investment policy and investment mix to deliver robust, high-quality earnings underpinned by strong capital generation.

Through a top-down strategic risk analysis at group level and bottom-up control risk self-assessments from the legal entities, the most important strategic risks are identified. For each of these risks an estimation of the likelihood and impact is made to prioritise the risks. The outcomes of these analyses are used as input for defining the level of risk the organisation is willing to take in order to achieve strategic goals. The risk appetite is formulated to provide guidance and direction to the management of the strategic risks. The risk appetite contains a number of qualitative and quantitative risk statements. The statements point out the risk preferences and tolerances of the organisation and are viewed as key elements for the realisation of our strategy. With the use of hard and soft limits the boundaries for accepting risks are objective and evident. Soft limits are used as early warning signals to prevent risk taking beyond the hard limits. The performance against these statements is monitored in the risk committees. The statements and limits are evaluated regularly to maintain alignment with the strategy. For more information on the risk appetite statements, see the Policy on Risk Appetite.
B.3.1.2 Risk governance

a.s.r.’s risk governance can be described by:

- risk ownership;
- the implemented three lines of defence model and associated (clear delimitation of) tasks and responsibilities of key function holders; and
- the risk committee structure to ensure adequate strategic decision making.

Risk ownership

The Executive Board has the final responsibility for risk exposures and management within the organisation. Part of the responsibilities have been delegated to persons that manage the divisions where the actual risk-taking takes place. Risk owners are accountable for one or more risk exposures that are inextricably linked to the department they are responsible for. Through the risk committee structure, risk owners provide accountability for the risk exposures.

Three lines of defence

The risk governance structure is based on the ‘three lines of defence’ model. The ‘three lines of defence’ model consists of three defence lines with different responsibilities with respect to the ownership of controlling risks. The model below provides insight in the organisation of the three lines of defence within a.s.r.

**Three lines of defence model**

<table>
<thead>
<tr>
<th>First line of defence</th>
<th>Second line of defence</th>
<th>Third line of defence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Board</td>
<td>Group Risk Management department</td>
<td>Internal Audit department</td>
</tr>
<tr>
<td>Management teams of the business lines and their employees</td>
<td>- Risk management function</td>
<td>- Audit function</td>
</tr>
<tr>
<td>Finance &amp; risk decentral</td>
<td>- Actuarial function</td>
<td></td>
</tr>
<tr>
<td>Ownership and implementation</td>
<td>Group Risk Management</td>
<td>Policies and monitoring implementation by 1st line</td>
</tr>
<tr>
<td>- Responsible for the identification and the risks in the daily business</td>
<td>- Compliance function</td>
<td>- Challenges the 1st line and supports the 1st line to achieve their business objectives in accordance with the risk appetite</td>
</tr>
<tr>
<td>- Has the day-to-day responsibility for operations (sales, pricing, underwriting, claims handling, etc.) and is responsible for implementing risk frameworks and policies.</td>
<td>- Has sufficient countervailing power to prevent risk concentrations and other forms of excessive risk taking</td>
<td>- Responsible for developing risk policies and monitoring the compliance with these policies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Independent assessment of 1st and 2nd lines</td>
</tr>
</tbody>
</table>

**Positioning of key functions**

Within the risk governance, the key functions (compliance, risk, actuarial and audit) are organised in accordance with Solvency II regulation and play an important role as countervailing power of management in the decision-making process. The four key functions are independently positioned within a.s.r. The risk and actuarial function are positioned under responsibility of the CFO; the compliance and audit function under the responsibility of the CEO. All functions are executed in the central risk committees. None of the functions has voting rights in the committees, in order to remain fully independent as countervailing power. All functions have direct communication lines with the Executive Board and can escalate to the chairman of the Audit & Risk Committee of the Supervisory Board. Furthermore, the key functions have regular meetings with the supervisors of the Dutch Central Bank and/or The Dutch Authority for the Financial Markets (AFM).
Group Risk Management
Group Risk Management is responsible for the execution of the risk management function and the actuarial function. The department is led by the CRO. Group Risk Management consists of the following sub-departments:
- Enterprise Risk Management;
- Financial Risk Management (including Actuarial Function).

Enterprise Risk Management
Enterprise Risk Management is responsible for second-line operational (including IT) risk management and the enhancement of the risk awareness within the organisation. The responsibilities with regards to strategic risk management include the development of risk policies, the annual update of the risk strategy (risk appetite), the coordination of the CRSA process leading to the risk priorities and ORSA scenarios and the monitoring of the non-financial strategic risk profile. For the management of operational risks, a.s.r. has a solid Risk-Control framework in place that contributes to its long-term solidity. The RMF monitors and reviews the non-financial operational risk profile on a frequent basis. The quality of the framework is continuously enhanced by the analysis of operational incidents, periodic assessments and monitoring by the RMF. Enterprise Risk Management actively promotes risk awareness at all levels to contribute to the vision of staying a socially relevant insurer.

Financial Risk Management
Financial Risk Management (FRM) is responsible for the second line financial risk and supports both the Actuarial Function and Risk Management Function. An important task of FRM is to be the countervailing power to the Executive Board and management in managing financial risks for a.s.r. and its legal entities. FRM assesses the accuracy and reliability of the market risk, counterparty risk, insurance risk and liquidity risk, risk margin and best estimate liability. Other responsibilities are model validation and policies on valuation and risk. FRM is also responsible for the actuarial function. As part of the actuarial function, FRM reviews the technical provisions, monitors methodologies, assumptions and models used in these calculations, and assesses the adequacy and quality of data used in the calculations. Furthermore, the Actuarial Function expresses an opinion on the underwriting policy and determines if risks related to the profitability of new products are sufficiently addressed in the product development process. The actuarial function also expresses an opinion on the adequacy of reinsurance arrangements.

Compliance
Compliance is responsible for the execution of the compliance function. An important task of Compliance is to be the countervailing power to the Executive Board and management in managing compliance risks for a.s.r. and its subsidiaries. The mission of the compliance function is to enhance and ensure a controlled and sound business operations where impeccable, professional conduct is self-evident.

As second line of defence, Compliance encourages the organisation to comply with relevant rules and regulations, ethical standards and the internal standards derived from them (‘rules’) by providing advice and devising policy. Compliance supports the first line in the identification of compliance risks and assess the effectiveness of risk management on which Compliance reports to the relevant risk committees. In doing so, Compliance uses a compliance risk and monitoring framework. In line with risk management, Compliance also creates further awareness in order to promote a culture of integrity. Compliance coordinates contacts with regulators in order to maintain an effective relationship and keeps oversight of the current topics.

Audit
The Audit department, the third line of defence, provides an independent opinion on governance, risk and management processes, with the goal of supporting the Executive Board and other management of a.s.r. in achieving the corporate objectives. To that end, Audit evaluates the effectiveness of governance, risk and management processes, and provides pragmatic advice that can be implemented to further optimise these processes. In addition, senior management can engage Audit for specific advisory projects.

**Risk committee structure**
a.s.r. has established a structure of risk committees with the objective to monitor the risk profile for a.s.r. group, its legal entities and its business lines in order to ensure that it remains within the risk appetite and the underlying risk tolerances and risk limits. When triggers are hit or likely to be hit, risk committees make decisions regarding measures to be taken, being risk-mitigating measures or measures regarding governance, such as the frequency of their meetings. For each of the risk committees a statute is drawn up in which the tasks, composition and responsibilities of the committee are defined.
Audit & Risk Committee
The Audit & Risk Committee was established by the Supervisory Board to gain support in the following matters:
- Assessment of the risk appetite proposal based on the financial and non-financial risk reports;
- Assessment of the annual report, including the financial statements;
- The relationship with the independent external auditor, including the assessment of the qualities and independence of the independent external auditor and the proposal by the Supervisory Board to the AGM to appoint the independent external auditor;
- The performance of the audit function, compliance function and the risk management function;
- Compliance with rules and regulations; and
- The financial position.

The Audit & Risk Committee has three members of the RvC, one of whom acts as the chairman.

a.s.r. Risk Committee
The a.s.r. Risk Committee (a.s.r. RC) is a sub-committee of the Executive Board and monitors a.s.r.’s overall risk profile on a quarterly basis. At least annually, the a.s.r. RC determines the risk appetite statements, limits and targets for a.s.r. and business lines. This relates to the overall a.s.r. risk appetite and the subdivision of risk appetite by financial and non-financial risks. The risk appetite is then submitted to the a.s.r. Audit & Risk Committee, which advises the Supervisory Board on the approval of the risk appetite. The a.s.r. RC also monitors the progress made in managing risks included in the Risk Priorities of the Executive Board.

All members of the Executive Board participate in the a.s.r. RC, which is chaired by the CEO. The involvement of the Executive Board ensures that risk decisions are being addressed at the appropriate level within the organisation. In addition to the Executive Board, the CRO, Director of Audit and Director of Integrity are members of the Committee.

Non-Financial Risk Committee
The Non-Financial Risk Committee (NFRC) discusses, advises and decides upon non-financial risk policies. The most relevant risk policies are approved by the a.s.r. RC. The NFRC monitors that non-financial risks are managed adequately and monitors that the risk profile stays within the agreed risk limits. If the risk profile exceeds the limits, the NFRC takes mitigating actions. The NFRC reports to the a.s.r. RC. The Chairman of the NFRC is one of the COO’s (who is also a member of the Executive Board).
Financial Risk Committee
The Financial Risk Committee (FRC) discusses and decides upon financial risk policies. The most relevant financial risk policies are approved by the a.s.r. RC. The FRC monitors and controls financial risks (market, insurance (Life and Non-life), liquidity and counterparty default risk). The FRC also monitors whether the risk profile stays within the risk limits. If the risk profile exceeds these limits, the FRC takes mitigating actions. The FRC reports to the a.s.r. Risk Committee. The Chairman of the FRC is the CFO.

Capital, Liquidity and Funding Committee
The Capital, Liquidity and Funding Committee (CLFC) is a subcommittee of the FRC. As such, the CLFC prepares and assesses the technical analysis of capital, liquidity and funding positions, rating policy, rating model reporting, and treasury activities. The Chairman of the CLFC is the Director of Group Asset Management.

Model Validation Committee
The model validation committee (MVC) is a subcommittee of the FRC and is responsible for the execution and update of the model validation policy and the approval of validation of existing or newly developed models. The MVC receives all required information for the validation of models (e.g. model documentation and validation reports) prepared by the validation board (MVB) that assures the quality of the validation process. The chairman of the MVC is the CRO.

Business Risk Committees
The business lines manage and control their risk profile through the Business Risk Committees (BRC). The BRC’s monitor that the risk profile of the business lines stays within the risk appetite, limits and targets, as formulated by the Executive Board. The BRC reports to the FRC and the NFRC. The Chairman of the BRC is the Managing Director of the business line.

Central Investment Committee
In addition to the risk committee structure, the Central Investment Committee (CIC) monitors tactical decisions and the execution of the investment policy. It takes investment decisions within the boundaries of the strategic asset allocation as agreed upon in the FRC. The CIC bears particular responsibility for investment decisions exceeding the mandate of the investment department. The CIC is chaired by the COO Life (member of the Executive Board).

Product Approval and Review Process Board
The Product Approval & Review Process Board (PARP Board) is responsible for the final decision-making process around the introduction of new products and adjustments in existing products. The committee evaluates if potential risks in newly developed products are sufficiently addressed. New products need to be developed in such a way that they are cost efficient, reliable, useful and secure. New products also need to have a strategic fit with a.s.r.’s mission to be a solid and trustful insurer. In addition, the risks of existing products are evaluated, as requested by the product approval and review process as a result of product reviews.

B.3.1.3 Systems and data
Tools, models and systems are implemented to support the risk management process by giving guidance and insight into the key risk indicators, risk tolerance levels, boundaries and actions and remediation plans to mitigate risks. The availability, adequacy and quality of data and IT systems is important in order to ensure that correct figures are reported and risk mitigating measures can be taken in time. It is important to establish under which conditions the management information that is submitted to the risk committees has been prepared and which quality safeguards were applied in the process of creating this information. This allows the risk committees to ascertain whether the information is sufficient to base further decisions upon.

a.s.r. has a Data Governance and Quality policy in place to support the availability of correct management information. This policy is evaluated on an annual basis and revised at least every three years to keep the standards in line with the latest developments on information management. The quality of the information is reviewed based on the following aspects, based on Solvency II:
• completeness (including documentation of accuracy of results);
• adequacy;
• reliability;
• timeliness.
The preparatory body or department checks the assumptions made and the plausibility of the results, and ensures coordination with relevant parties. When a preparatory body has established that the information is reliable and complete, it approves and formally submits the document(s) to a risk committee.

The information involved tends to be sensitive. To prevent unauthorised persons from accessing it, it is disseminated using a secure channel or protected files. a.s.r.’s information security policy contains guidelines in this respect.

a.s.r.’s information security policy is based on ISO 27002 ‘Code of practice for information security management’. This Code describes best practices for the implementation of information security.

The aim of the information security policy is to take measures to ensure that the requirements regarding availability, reliability and integer and confidential use of systems and data are met.

- Information availability refers to the degree to which the information is at hand as soon as the organisation needs it, meaning, for instance, that the information should be retrievable on demand and that it can be consulted and used at the right time;
- The integrity, i.e. reliability, of information is the degree to which it is up-to-date, complete and error-free;
- ‘Confidential use’ refers to the degree to which the information is available to authorised persons only and the extent to which it is not available to unauthorised persons.

There are technical solutions for accomplishing this, by enforcing a layered approach (defence-in-depth) of technical measures to avoid unauthorised persons (i.e. hackers) to compromise a.s.r. corporate data and systems. In this perspective, one may think of methods of logical access management, intrusion detection techniques, in combination with firewalls are aimed at preventing hackers and other unauthorised persons from accessing information stored on a.s.r. systems. Nevertheless, confidential information can also have been committed to paper. In addition to technical measures there are physical measures part of the information security environment.

When user defined models (e.g. spreadsheets) are used for supporting the RM Framework, the ‘a.s.r. Standard for End user computing’ - in addition of the general security policy - defines and describes best practices in order to guard the reliability and confidentiality of these tools and models. a.s.r. recognises the importance of sound data quality and information management systems. In 2017, a.s.r. took a number of actions to enhance the measurement and reporting on data quality for the purposes of financial reporting. In 2018 a.s.r. will take further steps on this.

The management of IT and data risks of the implemented tools, models and systems (including data) is part of the Operational IT risk management.

**B.3.1.4 Risk policies and procedures**

a.s.r. has established guidelines, including policies that cover all main risk categories (market, counterparty default, liquidity, insurance, strategic and operational). These policies address the accountabilities and responsibilities regarding management of the different risk types. Furthermore, the methodology for risk measurement is included in the policies. The content of the policies is aligned to create a consistent and complete set. The risk policy landscape is maintained by Group Risk Management and Compliance. These departments also monitor the proper implementation of the policies in the business. New risk policies or updates of existing risk policies are approved by the risk committees as mentioned previously.

**B.3.1.5 Risk culture**

Risk awareness is a vital component of building a sound risk culture within a.s.r. that emphasises the human aspect in the management of risks. In addition to gaining sufficient knowledge, skills, capabilities and experience in risk management, it is essential that an organisation enables objective and transparent risk reporting in order to manage them more effectively.

The Executive Board clearly recognises the importance of risk management and is therefore represented in all of the major group level risk committees. Risk Management is involved in the strategic decision-making process, where the company’s risk appetite is always considered. The awareness of risks during decision-making is continually addressed when making business decisions, for example by discussing and reviewing risk scenarios and the positive and/or negative impact of risks before finalising decisions.

It is very important that this risk awareness trickles down to all parts of the organisation, and therefore management actively encourages personnel to be aware of risks during their tasks and projects, in order to avoid
risks or mitigate them when required. The execution of risk analyses is embedded in daily business in, for example, projects, product design and outsourcing.

In doing so, a.s.r. aims to create a solid risk culture in which ethical values, desired behaviours and understanding of risk in the entity are fully embedded. Integrity is of the utmost importance at a.s.r.: this is translated into a code of conduct and strict application policies for new and existing personnel, such as taking an oath or promise when entering the company, and the ‘fit and proper’ aspect of the Solvency II regulation, ensuring that a.s.r. is overseen and managed in a professional manner.

Furthermore, a.s.r. believes it is important that a culture is created in which risks can be discussed openly and where risks are not merely perceived to be negative and highlight that risks can also present a.s.r. with opportunities. Risk Management (both centralised and decentralised) is positioned as such, that it can communicate and report on risks independently and transparently, which also contributes to creating a proper risk culture.

B.3.1.6 Risk management process
The risk management process typically comprises of five important steps: 1) identifying; 2) measuring; 3) managing; 4) monitoring and reporting; and 5) evaluating. a.s.r. has defined a procedure for performing risk analyses and standards for specific assessments. The five different steps are explained in this chapter.

Identifying
Management should endeavour to identify all possible risks that may impact the strategic objectives of a.s.r., ranging from the larger and/or more significant risks posed on the overall business, down to the smaller risks associated with individual projects or smaller business lines. Risk identification comprises of the process of identifying and describing risk sources, events, and the causes and effects of those events.

Measuring
After risks have been identified, quantitative or qualitative assessments of these risks take place to estimate the likelihood and impact associated with them. Methods applicable to the assessment of risks are:

- Sensitivity analysis;
- Stress testing;
- Scenario analysis;
- Expert judgments (regarding likelihood and impact); and
- Portfolio analysis.

Managing
Typically, there are five strategies to managing risk:

- Accept: risk acceptance means accepting that a risk might have consequences, without taking any further mitigating measures;
- Avoid: risk avoidance is the elimination of activities that cause the risk;
- Transfer: risk transference is transferring the impact of the risk to a third party;
- Mitigate: risk mitigation involves the mitigation of the risk likelihood and/or impact;
- Exploit: risk exploitation revolves around the maximisation of the risk likelihood and/or increasing the impact if the risk does happen.

Risk management strategies are chosen in a way that ensures that a.s.r. remains within the risk appetite tolerance levels and limits.

Monitoring and reporting
The risk identification process is not a continuous exercise. Therefore, risk monitoring and reporting are required to capture changes in environments and conditions. This also means that risk management strategies could, or perhaps should, be adapted in accordance with risk appetite tolerance levels and limits.

Evaluating
The evaluation step is twofold. On the one hand, evaluation means risk exposures are evaluated against risk appetite tolerance levels and limits, taking (the effectiveness of) existing mitigation measures into account. The outcome of the evaluation could lead to a decision regarding further mitigating measures or changes in risk management strategies. On the other hand, the risk management framework (including the risk management processes) is evaluated by the risk management function, in order to continuously improve the effectiveness of the risk management framework as a whole.
B.3.2 a.s.r.'s risk categories

a.s.r. is exposed to a variety of risks. There are six main risk categories that a.s.r. recognises, as described below.

Insurance risk
Insurance risk is the risk that premium and/or investment income or outstanding reserves will not be sufficient to cover current or future payment obligations, due to the application of inaccurate technical or other assumptions and principles when developing and pricing products. a.s.r. leven recognises the following insurance risk:
- Life insurance risk

Market risk
The risk of changes in values caused by market prices or volatility of market prices differing from their expected values. The following types of market risk are distinguished:
- Interest rate risk
- Equity risk
- Property risk
- Spread risk
- Currency risk
- Concentration risk/market concentration risk

Counterparty default risk
Counterparty default risk is the risk of losses due to the unexpected failure to pay or credit rating downgrade of counterparties and debtors. Counterparty default risk exists in respect of the following counterparties:
- Reinsurers
- Consumers
- Intermediaries
- Counterparties that offer cash facilities
- Counterparties with which derivatives contracts have been concluded

Liquidity risk
Liquidity risk is the risk that a.s.r. is not able to meet its financial obligations to policyholders and other creditors when they become due and payable, at a reasonable cost and in a timely manner.

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. The following subcategories of operational risk are used:
- Compliance
- Business process
- Information technology
- Outsourcing
- Financial reporting

Strategic risk
Strategic risk is the risk of a.s.r. or its business lines failing to achieve the objectives due to incorrect decision-making, incorrect implementation and/or an inadequate response to changes in the environment. Such changes may arise in the following areas:
- Climate
- Demographics
- Competitive conditions
- Technology
- Macroeconomic conditions
- Laws and regulations and ethical standards
- Stakeholders
- Group structure (for product lines only)

Strategic risk may arise due to a mismatch between two or more of the following components: the objectives (resulting from the strategy), the resources used to achieve the objectives, the quality of implementation, the economic climate and/or the market in which a.s.r. and/or its business lines operate.
B.4 Internal control system

This paragraph contains a description of group policy, which is applicable for the solo entity. Within a.s.r., internal control is defined as the processes, affected by the board of directors, senior management, and other personnel within the organisation, implemented to obtain a reasonable level of certainty with regard to achieving the following objectives:

- High-level goals, aligned with and supporting the organisation’s mission
- Effective and efficient use of resources
- Reliability of operational and financial reporting
- Compliance with applicable laws regulations and ethical standards
- Safeguarding of company assets

B.4.1 Strategic and operational risk management

The system of internal control includes the management of risks at different levels in the organisation, both operational (discussed in section C.5) and strategic. Internal control at an operational level centres around identifying and managing risks within the critical processes that pose a threat to the achievement of the business line’s objectives. The use of controls helps to mitigate or even completely eliminate identified risks. This increases the business line’s chances of achieving its objectives and demonstrates that it is in control. Business lines report on the effectiveness of their controls on a quarterly basis. The effectivity of controls is important input for the sign off that each business line provides on the financial figures.

At a strategic level, the major risks are identified and assessed periodically with a control risk self-assessment. After the analysis a list of main risks is established and risk management actions are assigned. The progress of these actions is monitored in risk committee.

B.4.1.1 Strategic risk management

Strategic risk is defined as the risk that a.s.r. will not reach its strategic objectives, because risk considerations are not or incorrectly addressed in decision-making processes, incorrect implementation of decisions and/or failure to respond adequately to market developments. Strategic risk management aims to identify and manage the most significant risks that may impact a.s.r.’s strategic objectives. Subsequently, the aim is to identify and analyse the risk profile as a whole, including risk interdependencies. The ORSA process is designed to identify, measure, manage and evaluate those risks that are of strategic importance to a.s.r.:

Identifying

Through the ORSA process a Control Risk Self-Assessment (CRSA) is conducted annually to identify risks that have an impact on the achievement of the organisation’s strategic objectives. The outcomes of the CRSA is translated into risk scenarios and a list of main risks.

Measuring

a.s.r. conducts an own risk and solvency assessment (ORSA) at both group and legal entity level each year, or more frequently if pre-defined triggers are met. The ORSA is a tool for risk and capital management. Through the ORSA process, the likelihood and impact of the identified risks are assessed, by transposing the risks into scenarios, taking into account (the effectiveness of) risk mitigating measures and planned improvement actions. Information from other processes is used to gain additional insights into the likelihood and impact. One single risk scenario takes multiple risks into account. In this manner, the risk scenarios provide (further) insights into risk interdependencies. In these scenario’s the impact on the balance sheet, the solvency position and the income statement is simulated.

Managing

As part of the CRSA processes, the effectiveness of risk mitigating measures and planned improvement actions is assessed. This means risk management strategies are discussed, resulting in refined risk management strategies.

Monitoring and reporting

The output of the ORSA process is translated into day-to-day risk management and monitoring and reporting, both at group level and product line levels. At the level of the product lines, risks are discussed in the Business Risk Committee.

Evaluating

Insights regarding likelihood and impact are evaluated against solvency targets. Based on this evaluation, conclusions are formulated regarding the adequacy of solvency objectives at group and individual legal entity level.
B.4.1.2 Operational risk management

Operational Risk Management (ORM) involves the management of all possible risks that may influence the achievement of the business goals and that can cause financial or reputational damage. ORM includes the identification, analysis, prioritisation and management of these risks in line with the risk appetite. The policy on ORM is drafted and periodically evaluated under the coordination of Enterprise Risk Management. The policy is implemented in the decentralised business entities under the responsibility of the management boards. A variety of risks is encountered with the ORM policy: IT risk, outsourcing, data quality, claim handling etc.

Identifying

With the operational targets as a starting point, each business entity performs risk assessments to identify events that could influence these targets. In each business entity the business risk manager facilitates the periodic identification of the key operational risks. All business processes are taken into account to identify the risks. All identified risks are prioritised and recorded in a risk-control framework.

The risk policies prescribe specific risk analyses to be performed to identify and analyse the risks. For important IT systems, SPRINT (Simplified Process for Risk Identification) analyses have to be performed and for large outsourcing projects a specific risk analysis is required.

Measuring

All risks in the risk-control frameworks are assessed on likelihood of defaults and impact. Where applicable, the variables are quantified, but often judgments of subject matter experts are required. Based on the estimation of the variables, each risk is labelled with a specific level of concern (1 to 4). Risks with a level of concern 3 or 4 are considered ‘key’.

Managing

For each risk, identified controls are implemented into the processes to keep the level of risk within the agreed risk appetite (level of concern 1 or 2). In general, risks can be accepted, mitigated, avoided or transferred. A large range of options is available to mitigate operational risks, depending on the type. For each control an estimation is made of the net risk, after implementing the control(s).

Monitoring and reporting

The effectiveness of operational risk management is periodically monitored by the business risk manager at each business line or legal entity. For each key control in the risk-control framework a testing calendar is established, based on accounting standards. Each control is tested regularly and the outcomes of the effectiveness of the management of key risks are reported to the management board. Outcomes are also reported to the NFRC and a.s.r. RC.

Evaluating

Periodically, yet at least annually, the risk-control frameworks and ORM policies are evaluated to see if revisions are necessary. The risk management function also challenges the business lines and legal entities regarding their risk-control frameworks.

Operational incidents

Large operational incidents are reported to Group Risk Management, in accordance with the operational risk policy. The causes of losses are evaluated in order to learn from these experiences. An overview of the largest operational incidents and the level of operational losses is reported to the NFRC. Actions are defined and implemented to avoid repetition of operational losses.

ICT

Through IT risk management, a.s.r. devotes attention to the efficiency, effectiveness and integrity of ICT, including End User Computing applications. The logical access control for key applications used in the financial reporting process remains a high priority in order to enhance the integrity of applications of data. The logical access control procedures also prevent fraud by improving segregation of duties and by conducting regular checks of actual access levels within the applications. Proper understanding of information, security and cyber risks is essential, reason for which actions are carried out to create awareness among employees and business lines.

Business Continuity Management

Operational management can be disrupted significantly by unforeseen circumstances or calamities which could ultimately disrupt the execution of critical and operational processes. Business Continuity Management enables a.s.r. to continue its daily business uninterruptedly and to react quickly and effectively during such situations.
Critical processes and activities and the tools necessary to use for these processes are identified during the Business Impact Analysis. This includes the resources required to establish similar activities at a remote location. The factors that can threaten the availability of those tools necessary for the critical processes are identified in the Threat Analysis.

a.s.r. considers something a crisis when one or more business lines are (in danger of being) disrupted in the operational management, due to a calamity, or when there is a reputational threat. In order to reduce the impact of the crisis, to stabilise the crisis, and to be able to react timely, efficiently and effectively, a.s.r. has assigned a crisis organisation.

Each business line has their own crisis team led by the director of the management team. The continuity of activities and the recovery systems supporting critical activities are regularly tested and crisis teams are trained annually. The objective of the training is to give the teams insights into how they function during emergencies and to help them perform their duties more effectively during such situations. The training also sets out to clarify the roles, duties and responsibilities of the crisis teams.

Recovery Planning
a.s.r.’s Recovery Plan helps to be prepared and have the capacity to act in various forms of extreme financial stress. To this end, the Recovery Plan describes and quantifies the measures that can be applied to live through a crisis situation. These measures are tested in the scenario analysis, in which the effects of each recovery measure on a.s.r.’s financial position (solvency and liquidity) are quantified. The required preparations for implementing the measures, their implementation time and effectiveness, potential obstacles and operational effects are also assessed. The main purpose of the Recovery Plan is to increase the chances of successful early intervention in the event of a financial crisis situation and to further guarantee that the interest of policyholders and other stakeholders are protected.

Reasonable assurance and model validation
a.s.r. aims to obtain reasonable assurance regarding the adequacy and accuracy of the outcomes of models that are used to provide best estimate values and solvency capital requirements. To this end, multiple instruments are applied, including model validation. Materiality is determined by means of an assessment of impact and complexity. Impact and complexity is expressed in terms of High (H), Medium (M), or Low (L).

In the pursuit of reasonable assurance, model risk is mitigated and unpleasant surprises are avoided, against acceptable costs.

B.4.2 Compliance function
The mission of the compliance function is to enhance and ensure a controlled and sound business operation where impeccable, professional conduct is self-evident.

Positioning and structure of the compliance function
The compliance function is a centralised function and, together with Investigation, part of the Integrity department. The Integrity department is headed by a director who is appointed as the a.s.r. compliance officer for both a.s.r. and the supervised entities. The compliance function, the second line of defence, is considered a key function in accordance with the Solvency II regulation. The CEO of ASR Nederland N.V. has ultimate responsibility for the compliance function. The a.s.r. Compliance Officer reports directly to the CEO of ASR Nederland N.V. The Integrity Director, in addition to the direct reporting obligation to the CEO and the boards under the articles of association, has also a formal reporting obligation to the Chairman of the a.s.r. Audit and Risk Committee or the Chairman of the Supervisory Board of ASR Nederland N.V. to safeguard the independent position of the compliance function and enables it to operate autonomously. The a.s.r. Compliance Officer is entitled to upscale critical compliance matters to the highest organisational level or the Supervisory Board of ASR Nederland N.V.

Responsibilities and duties
The compliance function, as part of the second line of defence, is responsible for:

- Encouraging compliance with relevant rules and regulations, ethical standards and the internal standards derived from them (‘rules’) by providing advice and formulating policies;
- Monitoring compliance with rules;
- Managing compliance risks by developing adequate compliance risk management, including monitoring and, if necessary, making arrangements related to management actions to be taken;
- Creating awareness about compliance with rules and social and ethical issues, in which context ethical behaviour within a.s.r. is self-evident;
- Coordinating contacts with regulators in order to maintain effective and transparent relationships with them.
Annual Compliance plan

Developments in rules, the management of high compliance risks and action plans provide the basis for the annual compliance plan and the compliance monitoring activities. a.s.r. continuously monitors changing legislation and regulations and assesses the impact and corresponding actions to be taken. In 2017, a.s.r. paid specific attention to:

- General Data Protection Regulation (GDPR): The privacy officer falls under Compliance and is a member of the central project group AVG. Compliance advises on privacy issues and monitors as second line of defence the progress made in implementing the AVG within the businesses and tests compliance with legislation and regulations;
- MiFID2: Legal Affairs in collaboration with Compliance has conducted a substantive test for compliance of the existing policy documents. It was established that these meet the MiFID 2 rules;
- Insurance distribution directive (IDD): Compliance and Legal Affairs together with representatives of the relevant businesses are taking stock of the impact of this directive, whose implementation has been postponed until October 2018;
- Compliance: In 2017, Compliance conducted a.s.r.-wide monitoring surveys into compliance with the sanction regulations and CDD policy, privacy and quality of customer contacts and underlying procedures.

Reporting

The compliance function reports quarterly on compliance matters and progress made on the relevant actions at Group level, supervised entity level and division level. The quarterly report at division level is discussed with the responsible management and scheduled for discussion by the Business Risk Committee.

The quarterly report at Group level and supervised entity level is presented to and discussed with the a.s.r. Risk Committee, and submitted to the Audit & Risk Committee. The report is shared and discussed with the DNB, the AFM and the external auditor.

B.5 Internal audit function

This paragraph contains a description of group policy, which is applicable for a.s.r. leven. The Audit Department provides a professional and independent assessment of the governance, risk management and internal control processes with the aim of aiding management in achieving the company's objectives. The Audit Department evaluates the effectiveness of governance, risk management and internal control processes, and gives practical advice on process optimisation. This statement of duties has been set down in the Audit Charter for ASR Nederland N.V. and the legal entities. The Audit Department reports its findings to the Executive Board of ASR Nederland N.V., to the managing board of a.s.r. leven and, by means of the quarterly management report, to the a.s.r. Audit and Risk Committee.

The Audit Department has an independent position within a.s.r., as set down in the Audit Charter. The supervisory board guarantees Audit and its employees an independent, impartial and autonomous position in order to execute the mission of Audit. The head of the Audit Department reports to the chairman of the Executive Board of ASR Nederland N.V. and has a direct reporting line to the chairman of the Audit & Risk Committee. The Chief Audit Executive is appointed by the Supervisory Board of ASR Nederland N.V. In order to maintain the independence and impartiality of the internal audit function, the audit function is not influenced by the Executive Board of ASR Nederland N.V. and managing board of a.s.r. leven in the execution of an audit and the evaluation of and reporting on audit outcomes. The audit function is not subjected to any inappropriate influence from any other function, including the key functions.

The persons carrying out the internal audit function do not assume any responsibility for any other (key) function. The Audit Department has periodic consultations with DNB to discuss the risk assessment, findings and audit plan. The Audit Department's risk assessment is performed in close consultation with the independent external auditor. The department also takes the initiative to organise a 'tripartite consultation' with DNB and the independent external auditor at least once a year. In 2017, two tripartite consultations were held.

The Audit Department sets up a multi-year audit plan based upon an extensive risk assessment. The audit plan is approved by the Audit & Risk Committee. At least once a year, the audit plan is evaluated and any changes to the plan must be approved by the Audit & Risk Committee.

All auditors took the oath for the financial sector and are subject to disciplinary proceedings. All auditors have committed themselves to the applicable code of conduct of a.s.r., follow the Code of Ethics of the Institute of Internal Auditors (IIA) and comply with the specific professional rules of the Netherlands Institute of Chartered Accountants (NBA) and the professional association for IT-auditors in the Netherlands (NOREA).
Audit applies the standards of the IIA, NBA and NOREA for the profession of internal auditing. Each year, Audit performs a self-assessment and an internal quality review and reports the results to the chairman of the board and to the members of the Audit and Risk Committee. In accordance with the standards of the IIA, an external quality review is performed every four years. During the last review in 2016, Audit was approved by the IIA and received the Institute’s quality certificate.

B.6 Actuarial function

This paragraph contains a description of group policy, which is applicable for a.s.r. leven. The Actuarial Function (AF) is one of four key functions in a.s.r.’s system of governance.

The main tasks and responsibilities of the AF are to:

• coordinate the calculation of technical provisions;
• ensure the appropriateness of the methodologies, underlying models and the assumptions made in the calculation of technical provisions;
• assess the sufficiency and quality of the data used in the calculation of technical provisions;
• compare best estimates against experience;
• inform the administrative, management or supervisory body of the reliability and adequacy of the calculation of technical provisions;
• express an opinion on the overall underwriting policy;
• express an opinion on the adequacy of reinsurance arrangements; and
• contribute to the effective implementation of the risk management system.

The AF is part of the second line of defence and operates independently of both the first line (responsible for determining the technical provisions, reinsurance and underwriting), as well as the other three key functions (internal audit, risk management and compliance).

The AF for both ASR Nederland N.V. and the insurance legal entities is operationally part of a.s.r. Group Risk Management. The AF is performed by persons who have profound knowledge of actuarial and financial mathematics, proportionate to the nature, scale and complexity of the risks present in a.s.r.’s businesses.

There are two function holders. One is responsible for the legal entities in the Life segment (Individual Life, Funeral and Pensions business lines) as well as for the overall Life segment of ASR Nederland N.V. The other for the entities in the Non-life segment (Property & Casualty, Disability and Health business lines) as well as for the overall Non-life segment of ASR Nederland N.V. The first-mentioned one acts as function holder for a.s.r. leven.

The AF function is represented in several risk committees. Each year, the AF drafts a formal report, which it discusses with the a.s.r. Risk Committee (or Executive Board) and the a.s.r. Audit and Risk Committee.

Independence of the AF is secured through several measures:

• The Actuarial function holders are nominated by the Chairman of the Board and appointed by the a.s.r. Audit and Risk Committee;
• The Actuarial function holders have unrestricted access to all relevant information necessary for the exercise of their function;
• The Actuarial function holders have a direct reporting line to the a.s.r. Risk Committee or Executive Board and the Audit and Risk Committee of a.s.r. The AF is free to report to one of the management or risk committees when considered necessary;
• The AF is free to report all relevant issues;
• In case of a conflict of interest with the CFO and/or CRO, the function holders may escalate directly to the CEO and to the Chairperson of the Audit and Risk Committee of a.s.r.;
• If the AF is asked to perform tasks that are outside the formal scope described in a charter, the function holder(s) assess if there is a conflict of interest. If so, the AF will not execute the task unless there are sufficient additional measures to mitigate conflicts of interest;
• The Internal Audit Department conducts an annual assessment of the functioning of the governance of a.s.r. and the (independent) operation of the Actuarial function;
• Target Setting and assessment of the function holders is done by the CFO and must be approved by the Chairman of the Audit and Risk Committee.
B.7 Outsourcing

This paragraph contains a description of group policy, which is applicable for the solo entity. a.s.r. has outsourced some of its operational activities. Despite this, a.s.r. remains fully responsible and accountable for these activities and the power of influence remains with a.s.r. To manage the risks related to outsourcing, a.s.r. has drafted a policy to safeguard a controlled and sound business operations. Solid risk management, governance and monitoring are essential to manage outsourced activities. The outsourcing policy outlines the relevant procedures and is applicable to a.s.r. and its subsidiaries.

To define the respective rights and obligations, a.s.r. drafts a written outsourcing contract with the service provider. Confidentiality, quality of service and continuity are key for a.s.r. in carrying out its activities. In addition, customer centricity and compliance with law and regulations are essential, regardless of who performs the activities. To safeguard the quality of outsourced activities, service providers are closely scrutinised prior to selection and during the services. Compliance with agreed obligations is monitored. The findings of the monitoring activities serve as input for the periodic consultation on operational, tactical and strategic level with the service provider.

a.s.r. leven has outsourced certain critical and/or important activities that are part of material operational processes. Outsourced activities are related to front- or back office activities. In addition, the management and service of some supporting systems are also outsourced.

B.8 Any other information

Other material information about the system of governance does not apply.
Risk profile

This paragraph contains a description of group policy, which is applicable for the solo entity. Risk management is an integral part of a.s.r. leven’s daily business operations. a.s.r. leven applies an integrated approach to managing risks ensuring that strategic objectives are met. Value is created by striking the right balance between risk and return and capital, whilst ensuring that obligations to stakeholders are met. The Risk Management Function (RMF) supports and advises a.s.r. leven in identifying, measuring and managing risks, and monitors that adequate and immediate action is taken in the event of developments in the risk profile.

a.s.r. leven is exposed to a number of risks, such as strategic risk, market risk, counterparty default risk, liquidity risk, insurance risk (Life), and operational risk. Its risk appetite is formulated at both group and legal entity level and establishes a framework of risk appetite statements that supports effective risk selection and monitoring.

As of 1 January 2016, the Solvency II regime is in place. a.s.r. leven measures its risks based on the standard model as prescribed by the Solvency II regime and therefore the risk management framework and this chapter are fully aligned with Solvency II. The Solvency Capital Requirement (SCR) is determined as the change in own funds caused by a predetermined shock which is calibrated to a 1-in-200-year event. The basis for these calculations are the Solvency II technical provisions which are calculated as the sum of a best estimate and a risk margin.

Management of financial risks in 2017

a.s.r. leven strives to find an optimal trade-off between risk and return. Steering on capital, risk and return is applied in decision-making throughout the entire product cycle: from PARP (Product Approval Review Process) to the payment of benefits and claims. At a more strategic level, decision-making takes place through balance sheet management. A robust solvency position takes precedence over profit, premium income and direct investment income. Risk tolerance levels and limits are disclosed in the financial risk appetite statements (financial RAS) and monitored by the FRC. The FRC evaluates financial risk positions against the RAS on a monthly basis. Where appropriate, a.s.r. leven takes additional mitigating measures.

Developments in financial markets throughout 2017 were favourable and contributed to the growth of the group’s own funds. Despite the slight increase, interest rates remained low and continued to be a dominant theme. The interest rate hedge was reduced to enable a.s.r. leven to benefit from a potential future rise in interest rates. Group Risk Management (GRM) carried out a review on the underlying proposals. Its conclusion was that the down-side risk was acceptable vis-à-vis the current solvency level. The interest rate sensitivity of the SCR ratio remained within the limits of the interest rate policy during 2017. Exposure to shares, property and corporate bonds rose during 2017 in order to support the anticipated capital generation. The corresponding increase in the required capital for market risk remained within the limits set. Finally, net exposure to core sovereign bonds was reduced in order to mitigate the negative effects of a potential normalisation of swap spreads. GRM subscribed to this modification in the bond portfolio.

In 2017 the Actuarial Function performed its regulatory tasks in assessing the adequacy of the Solvency II technical provisions, giving an opinion on reinsurance and underwriting and contributing to the risk management. The actuarial function report relating to these areas was discussed by the Executive Board and by the Audit & Risk Committee. See the Financial Statements (Chapter 5.8) for further information about a.s.r. leven’s management of financial risks.

Management of non-financial risks in 2017

Non-financial risk appetite statements are in place to manage the risk profile within the limits as determined by the Executive Board and approved by the Supervisory Board. The a.s.r. Non-Financial Risk Committee (NFRC) monitors and discusses on a quarterly basis whether non-financial risks are adequately managed. Should the risk profile exceed the appetite, the NFRC agrees on actions to be taken. The a.s.r. Risk Committee takes decisions that may have a significant impact. The risk profile and internal control performance of each business line are discussed on a quarterly basis with senior management in the business risk committees and the NFRC.

In 2017, a.s.r. leven has made efforts to further improve the effectiveness of its operational risk control framework by taking a more risk-based approach. To further this cause, risk analyses were performed as part of the ‘Aantoonbaar in Control’ project in cooperation with an external consultant. The management of the business...
Lines (re)evaluated their key risks and controls and redesigned and implemented their risk-control frameworks accordingly.

Additionally, in order to enhance the uniformity, efficiency and effectiveness of the risk- and control cycle, a.s.r. leven purchased and started the implementation of the Governance and Risk Compliance (GRC) tool CERRIX. In 2018, a.s.r. leven will continue the implementation of the tool throughout the organisation to include all business lines. Naturally, a.s.r. leven will continue to focus on finding opportunities to improve the management of operational risks in 2018.

a.s.r. leven recognises the importance of sound data quality and information management systems. In 2017, a.s.r. leven took a number of actions to enhance the measurement and reporting on data quality for the purposes of financial reporting. In 2018 a.s.r. leven will take further steps on this topic.

**Risk priorities**

The risk priorities of a.s.r. are annually defined by the Executive Board based on the Strategic Risk Analysis and bottom-up Control Risk Self-Assessments of the legal entities. The most recent status of the risk priorities and progress on the defined actions are reported to the a.s.r. Risk Committee quarterly.

The risk priorities are:

1. Pressure on result and renewal of cash-generating business model;
2. Juridification of society;
3. Continuing low interest rates and volatile markets;
4. Impact of supervision, laws and regulations;
5. Information (cyber) security risk.

To determine the degree of risk, a.s.r. uses a risk scale based on probability and impact (Level of Concern). For the risk priorities, the degree of risk is determined by the a.s.r. Risk Committee quarterly. The following table shows the degree of risk per 2017Q4.

<table>
<thead>
<tr>
<th>Degree of risk</th>
<th>Gross risk</th>
<th>Net risk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LoC 1</strong>: low degree of risk (inside risk appetite boundaries)</td>
<td><img src="image1" alt="" /></td>
<td><img src="image2" alt="" /></td>
</tr>
<tr>
<td><strong>LoC 2</strong>: acceptable degree of risk (inside risk appetite boundaries)</td>
<td><img src="image3" alt="" /></td>
<td><img src="image4" alt="" /></td>
</tr>
<tr>
<td><strong>LoC 3</strong>: high degree of risk (outside risk appetite boundaries)</td>
<td><img src="image5" alt="" /></td>
<td><img src="image6" alt="" /></td>
</tr>
<tr>
<td><strong>LoC 4</strong>: very high degree of risk (outside risk appetite boundaries)</td>
<td><img src="image7" alt="" /></td>
<td><img src="image8" alt="" /></td>
</tr>
</tbody>
</table>

A.s.r. takes measures to mitigate the risks outside the risk appetite boundaries. For each risk priority the measures are described in the text below.

**Pressure on result and renewal of cash-generating business model**

The insurance market is changing and the (cash-generating) business model of many insurers is under pressure due to shrinking customer demand, changes in customer behaviour, changes in distribution channels, the current economic climate (low interest rates), regulatory changes and technological developments. Competition in the current market is fierce and cost-consciousness is growing, which could lead to an increase in non-life policy cancellations, loss of retention in the life business, a decline in new insurance contract sales and limited scalability of departments.
a.s.r. continually monitors and assesses its product portfolio and distribution channels for relevant alterations in order to meet the changing needs of customers and to achieve planned cost reductions as premiums fall. It is, for example, actively monitoring the market to study potential acquisitions and mergers, and has increased its market share through the acquisition of Generali Nederland. In the case of this acquisition a non-regular ORSA has been performed and Group Risk Management reviewed this ORSA. Other mitigating measures include the roll-out of capital-light initiatives (such as third party asset management and focus on pension DC) and the creation of an Innovation & Digital department through which it focuses on innovation.

Juridification of society

Risk description

Political, regulatory and public attention has been focused on unit-linked life insurance policies for some time now. Elements of a.s.r. leven’s unit-linked life insurance policies are being challenged on multiple legal grounds in current legal proceedings, and may continue to be in the future. There is a risk that one or more of the current and/or future claims and/or allegations will be upheld. To date, a number of rulings relating to unit-linked life insurance products have been issued by the Financial Services Complaints Board (FSCB) and (appeal) courts in the Netherlands against a.s.r. leven and other insurers in specific cases. In these proceedings, different (legal) approaches have been taken to arrive at a ruling. The outcomes of these rulings are diverse. Because the record of a.s.r. leven’s policies dates back many years, it contains a wide variety of products with different features and conditions, and since rulings are so diverse, no reliable estimate can be made concerning the timing and outcome of these current and future legal proceedings.

Although the financial consequences of these developments could be substantial, a.s.r. leven’s exposure cannot be reliably estimated or quantified at this point. If one or more of these legal proceedings succeed, there is a risk that a ruling, although only legally binding on the parties involved in the proceedings, could be applied to or be relevant for other unit-linked life insurance policies sold by a.s.r. leven. Consequently, the financial consequences of any current and/or future legal proceedings brought upon a.s.r. leven could be substantial for a.s.r. leven’s insurance business, and may have a material adverse effect on a.s.r. leven’s financial position, business, reputation, revenues, results of operations, solvency, financial condition and/or prospects.

Unit-Linked Products (beleggingsverzekeringen)

One of the aspects of the juridification of society are the current legal actions (partly class actions) with respect to unit-linked products sold.

Background

Since the end of 2006, individual unit-linked life insurance products (beleggingsverzekeringen) have been receiving negative attention in the Dutch media, from the Dutch Parliament, the AFM, consumers and consumer protection organisations. Elements of unit-linked policies are being challenged or may be challenged on multiple legal grounds. The criticism and scrutiny of unit-linked life insurance products has led to the introduction of compensation schemes by Dutch insurance companies that have offered unit-linked products. In 2008, a.s.r. leven concluded an outline agreement with two leading consumer protection organisations to offer compensation to unit-linked policyholders if the cost and/or risk premium exceeded a specified maximum. A full agreement on implementation of the compensation scheme was reached in 2012. The total recognised cumulative financial costs relating to the compensation scheme for Individual life in a.s.r. leven’s income statement until 2017 was € 1,031 million. This includes, amongst other things, compensation paid, amortisation of surrender penalties and costs relating to improved product offerings. The remaining provision in the balance sheet as at 31 December 2017 amounted to € 45.3 million and is available only to cover potential additional compensation (for distressing cases and costs relating to the compensation scheme. Under this agreement, a.s.r. leven offered consumers additional measures such as alternative products and less costly investment funds. In addition to the compensation scheme, a.s.r. leven implemented additional measures (supporting policy), including the ten best in class principles as formulated by the Dutch Minister of Finance. On 17 July 2015, the Dutch Ministry of Finance published an Order in Council (algemene maatregel van bestuur) under which insurance companies can be sanctioned if they fail to meet the compulsory targets set for approaching policyholders of unit-linked life insurance policies and prompting them to review their existing policies.

The agreement with the two consumer protection organisations and additional measures are not binding on policyholders. Consequently, neither the implementation of the compensation schemes nor the additional measures offered by a.s.r. leven prevent individual policyholders from initiating legal proceedings against a.s.r. leven and submitting claims for damages.
Legal proceedings

a.s.r. leven is the subject of a number of legal proceedings initiated by individual unit-linked policyholders, represented in most cases by claims organisations. While fewer than 15 cases are pending before Dutch courts, including courts of appeal and fewer than 120 cases are pending before the FSCB (the Dispute Committee and the Committee of Appeal of the FSCB), there is no assurance that further proceedings will not be brought against a.s.r. leven in the future. Future legal proceedings regarding unit-linked life insurance policies could be brought against a.s.r. leven by consumers individually, by consumer organisations acting on their behalf or in the form of a class action. There is also ongoing lobbying by consumer protection organisations such as the Consumentenbond and Stichting Geldbelangen to gain sustained media attention for unit-linked life insurance policies. These organisations argue, amongst other things, that consumers did not receive sufficient compensation under the compensation scheme.

a.s.r. leven is currently the subject of two class actions. In June 2016, Woekerpolis.nl initiated a class action asking the Midden-Nederland District Court to declare that a.s.r. leven sold products that were defective in various respects (e.g. lack of transparency regarding cost charges and other product characteristics, and including risks which the insurer failed to warn against, such as substantial stock deprecations, inability to realise the projected final policy value, unrealistic capital projections due to differences in geometric versus arithmetic returns and general terms and conditions governing costs which Woekerpolis.nl considered to be unfair). In March 2017, the Consumentenbond also brought a class action against a.s.r. leven. This class action was on grounds similar to that brought by Woekerpolis.nl. The class action brought by the Consumentenbond is currently pending before the Midden-Nederland District Court. a.s.r. leven has rejected all the claims in both cases. The timing and outcome of both class actions is as yet uncertain.

In 2011, three individual test cases were initiated by ConsumentenClaim B.V. on behalf of three policyholders against a.s.r. leven regarding certain unit-linked life insurance products. ConsumentenClaim argued, among other things, that a.s.r. leven (a) failed to provide the policyholders with sufficient information about certain aspects of the products, such as costs, risk premiums and the leverage capital consumption risk, (b) had a duty of care towards the policyholders which a.s.r. leven had breached, and (c) had applied general terms and conditions governing costs that were unfair. In two of the cases, the ’s-Hertogenbosch Court of Appeal (having the same composition) issued rulings on 2 May 2017 and 31 October 2017 respectively. In the first of the two judgments (2 May 2017), some specific general terms governing costs were considered to be unfair in the light of Directive 93/13/EEC concerning unfair terms in consumer contracts. In the second judgment (31 October 2017), some specific general terms governing costs were considered to be unlawful in light of general contract law which was applicable at the time when the product was sold. In both cases, the ’s-Hertogenbosch Court of Appeal ruled that a.s.r. leven was required to repay certain costs it had charged in the product to the customer concerned. The third case is still pending before the The Hague Court of Appeal. The timing and outcome of these proceedings are as yet uncertain.

Risk profile and contingent liability unit-linked life insurance products

The political, regulatory and public attention which is focused on unit-linked life insurance policies continues. Elements of a.s.r. leven’s unit-linked life insurance policies are being challenged on multiple legal grounds in current legal proceedings, and may continue to be so in future. There is a risk that one or more of the current and/or future claims and/or allegations will succeed. To date, a number of rulings regarding unit-linked life insurance products have been issued by the FSCB and courts (of appeal) in the Netherlands against a.s.r. leven and other insurers in specific cases. In these proceedings, a variety of (legal) approaches have been taken to arrive at a ruling. The outcomes of these rulings are diverse. Because a.s.r. leven’s book of policies dates back many years, it contains a variety of products with different features and conditions, and since the rulings are diverse, no reliable estimate can be made regarding the timing and outcome of current and future legal proceedings brought against a.s.r. leven and other insurance companies.

The total costs relating to compensation for unit-linked insurance contracts as described above have been fully recognised in the financial statements based on the management’s best knowledge of current facts, actions, claims, complaints and events. Provisions are recognised in the liabilities arising from insurance contracts and legal provisions (see Chapter 5.5.14). Although the financial consequences of the legal developments could be substantial, a.s.r. leven’s exposures cannot be reliably estimated or quantified at this point. If one or more of these legal proceedings succeed, there is a risk that a ruling, although legally binding only on the parties involved in the proceedings, could be applied to or be relevant for other unit-linked life insurance policies sold by a.s.r. leven. Consequently, the financial consequences of any of the current and/or future legal proceedings brought against a.s.r. leven could be substantial for a.s.r. leven’s insurance business and could have a material adverse effect on a.s.r. leven’s financial position, business, reputation, revenues, results of operations, solvency, financial condition and/or prospects.
Continuing low interest and volatile markets

The (cash-generating) business models of insurers are being severely impacted by structurally low interest rates. It is becoming an ever-increasing challenge to generate sufficient returns on investment and to be able to reinvest against attractive terms. The pressure to generate investment returns (search for yield) creates much tension between risk and return.

Unforeseen political developments and/or macroeconomic trends combined with decreased liquidity in the market due to the limited scope banks have to supply money creates the threat of financial markets becoming volatile and could in turn weaken a.s.r.’s solvency position.

a.s.r. will remain permanently alert to the risk of a scenario developing in Europe with a major impact on capital and solvability. It therefore continuously monitors its interest rate position and reports the findings to the Financial Risk Committee. The Interest Rate Risk Committee then holds preparatory discussions to decide whether or not to adjust the interest rate hedge. The consequences of possible interest rate fluctuations are also examined more fully in the Strategic Asset Allocation (SAA), an annual ALM study which a.s.r. conducts at its own expense, and also to some extent in the ORSA.

Impact of supervision, laws and regulations

As a result of increasing political and regulatory pressure, there is the risk that:
Due to growing political and regulatory pressure, there is the risk that:
- a.s.r.’s reputation will come under pressure if new requirements are not met in time;
- Available resources will largely be utilised to align the organisation with new legislation, meaning there are fewer resources to spend on core customer processes;
- Processes will become less efficient and pressure on the workforce will increase;
- a.s.r. will have administrative fines or sanctions imposed on it for failure to comply with requirements (on time).

a.s.r. constantly monitors changing laws and regulations and assess their impact and the corresponding actions required (in cooperation with Compliance and Legal). Also the availability of capacity is monitored continuously to have sufficient resources to process all regulations in a timely manner. As mentioned under ‘key trends’, in 2017 a.s.r. set up a multidisciplinary legislation and regulation committee to help the various businesses signal and adopt legislative amendments in good time. The committee reports to the NFRC. a.s.r. has also set up an internal centralised project group to monitor legislation on data protection, Algemene Verordening Gegevensbescherming (AVG). This project group manages and supports processes, policy guidelines and the interpretation of privacy aspects throughout a.s.r. In addition, in 2017 knowledge sessions were again organised for the decentralised project organisations, a fit-gap analysis was conducted and policy guidelines were formulated. The set-up and approach used by a.s.r. to meet the stricter requirements imposed by the AVG (GDPR) in a timely manner were also assessed externally. a.s.r. must be fully compliant by 25 May 2018.

In May 2017, the International Accounting Standards Board (IASB) published IFRS 17, the new IFRS standard for insurance contracts. IFRS 17 will take effect on 1 January 2021, at which time it will replace the existing IFRS 4 standard. IFRS 17 is designed to facilitate comparability between insurers and increase transparency in relation to risks, contingencies, losses and embedded options in insurance contracts. IFRS 9 Financial instruments was published in July 2014 and has had a major impact on the processing of the financial instruments (investments). IFRS 9 will, like IFRS 17, be applied by a.s.r. group from 1 January 2021 in order to maintain cohesion between these two standards and guard against IFRS 9 being implemented twice. This postponement is not available to ASR Bank N.V., which therefore began applying IFRS 9 from 1 January 2018. In 2017, a.s.r. launched an internal programme to prepare for the implementation of IFRS 17 and IFRS 9 throughout the group. This programme will have a major impact on the group’s primary financial processing and reporting and could have a significant effect on its capital, financial statements and related KPIs. Finance, risk, audit and the business have all been given responsibility in the programme due to the need to develop an integrated vision. For more information, see section 5.3.3 New standards, interpretations of existing standards or amendments to standards not yet effective in 2017.’

Information (cyber) security risk

Information (cyber) security risks have increased due to new technological developments – such as cloud computing, bring-your-own devices, social networks and online transactions with customers. In order to prevent cyber-attacks and information security breaches, a.s.r. must be sufficiently aware of the potential threats posed to the organisation. a.s.r. runs the risk of new technological developments requiring different and increased expertise and other mitigating measures. The potential of confidential information becoming available to third parties,
intentionally or unintentionally, is a risk facing both a.s.r. and its customers, and one which could ultimately lead to significant reputational harm. All our employees are therefore expected to be fully aware of the risks associated with the handling of confidential information regarding our customers, employees, financial information and strategy, and are asked to do their utmost to protect our assets.

The use of, and dependence on, IT is significant for both a.s.r. and its customers. Cybercrime could therefore have a major impact on a.s.r.’s security and continuity. The attempted cybercrime attacks we experienced in 2017, which included phishing, malware and ransomware attacks, have become a well-known phenomenon.

We made ongoing investments throughout 2017 to further strengthen our defences against cybercrime and to enhance the expertise of our teams. Our cybercrime experts closely monitor and evaluate developments in cybercrime, and take suitable measures where necessary. a.s.r. regularly tests the organisation’s ability to detect and respond to cyber incidents (red team test). In 2017 this test was carried out by a leading security company in the Netherlands. An awareness programme to improve the ability of employees and management to recognise phishing and other cyber threats was conducted throughout 2017, and due to the importance of the different outsourcing initiatives, a.s.r. also screened the cyber controls of its own suppliers. As a result, we have succeeded in keeping obstacles to a minimum. Partnerships with other financial institutions and public agents, such as the Dutch National Cyber Security Center (NCSC), are crucial to mounting an effective defence against cybercrime, and a.s.r is actively involved in this.

Key risk developments in 2017
In addition of the above mentioned risk priorities, a.s.r. Levensverzekering N.V. identified the following key risks that are specific related to the operating company. The Own Risk and Solvency Assessment (ORSA), which is part of the Solvency II rules, is performed on an annual basis. The ORSA makes it possible to form a judgement on the position of a.s.r. leven in terms of risk, solvency and capital, both now and in the future, under different stress scenarios and relative to the risk appetite. The ORSA provides insight into the robustness of the solvency position and the measures to be taken in diverse scenarios. The ORSA process is facilitated from the Group Risk Management Department. Representatives from a.s.r. leven take part in the risk assessment sessions, the CRSA, and identify the principal risks. The next step involves drawing up scenarios in which the company's ability to continue as a going concern could be jeopardised. The solvency impact of several stress scenarios was calculated as part of the ORSA. Based on these scenarios, the Managing Board of a.s.r. leven has defined mitigating measures that can be taken to continue meeting the solvency requirements in the event of the occurrence of a specific scenario. The ORSA process has led to the identification of the following principal risks for a.s.r. leven:

Increasing legislative and regulatory burden
Insurers are faced with a structural proliferation of rules and regulations. The regulator is exerting increasing pressure and displaying a growing appetite for enforcement. As a result of this mounting regulatory pressure, there is a risk that:

• a.s.r. leven’s reputation will come under pressure if new requirements are not met in time;
• available resources will largely be utilised to align the organisation with new legislation, meaning there are fewer resources to spend on core customer processes;
• processes will become less efficient and pressure on the workforce will increase;
• a.s.r. leven will have administrative fines or sanctions imposed on it for failure to comply with requirements (on time).

We constantly monitor changing laws and regulations and assess their impact and the corresponding actions required (in cooperation with Compliance and Legal). As mentioned under ‘key trends’, in 2017 a.s.r. leven set up a multidisciplinary legislation and regulation committee to help the various businesses signal and adopt legislative amendments in good time. The committee reports to the NFRC. a.s.r. leven has also set up an internal centralised project group to monitor legislation on data protection, Algemene Verordening Gegevensbescherming (AVG). This project group manages and supports processes, policy guidelines and the interpretation of privacy aspects throughout a.s.r. leven. In addition, in 2017 knowledge sessions were again organised for the decentralised project organisations, a fit-gap analysis was conducted and policy guidelines were formulated. The set-up and approach used by a.s.r. leven to meet the stricter requirements imposed by the AVG (GDPR) in a timely manner were also assessed externally. a.s.r. leven must be fully compliant by 25 May 2018.

Transparency-related reputational risk and legal claims risk
Failure to respond in a proper and timely manner to the continuing media attention for court rulings, disputes committee or regulator (governmental decree) may lead to growing social pressure in relation to unit-linked policies which, in turn, may aggravate the risk of legal claims, resulting in heightened reputational risk with a potentially large financial and/or operational impact.
Insufficient implementation of cost measures in relation to portfolio developments
If the reduction and flexibilisation of costs through programmes, integrations and demand-driven cost management is implemented too slowly or not at all, there is the risk that costs are not reduced quickly enough in relation to portfolio and market developments, resulting in insufficient cost coverage, overpricing relative to the market and/or insufficient profitability.

Uncertainties in financial markets and interest rate developments
Unforeseen political and/or macroeconomic developments combined with decreased liquidity in the market due to the banks’ limited scope for lending pose the threat of increased volatility in financial markets, causing a deterioration in the solvency a.s.r leven.

Data quality and model validation
Due to the diversity and complexity of information streams within a.s.r leven, there is a possibility that data quality is insufficiently controlled. Additionally, due to the number and complexity of the models used, there is a chance that correctness and entirety of models and/or assumptions within these models cannot be guaranteed. Both aspects can lead to insufficient management information, which in turn could lead to incorrect or untimely decisions, ultimately causing financial and reputational damage.

Potential material change in life expectancy
At the moment, a.s.r leven considers the longevity risk well recognised in the valuation of the SII technical provisions and the SII standard formula (SCR). The portfolio of a.s.r does recognise also a significant portfolio of funeral business that partly mitigates the impact of a potential material change in life expectancy. a.s.r leven will monitor future developments on this subject.

In the matter of unit-linked policies, firm policyholder compensation agreements have been made with the relevant customer associations. Meanwhile, the risk of new claims still looms. This risk is intensified by the increased juridification of our society and by the insecurity about the handling of legal proceedings at other insurance companies. Court rulings and decisions by arbitration boards may have an industry-wide impact and could trigger widespread media attention, evoking negative sentiments among policyholders, which in turn could increase the reputation risk for a.s.r leven.

Solvency II sensitivities
The sensitivities of the solvency ratio as at 31 December 2017, expressed as the impact on the a.s.r leven Solvency II ratio (in percentage points) are as presented in the table below. The total impact is split between the impact on the Solvency II ratio related to movement in the available capital and the required capital.

<table>
<thead>
<tr>
<th>Solvency II sensitivities - market risks</th>
<th>Available capital</th>
<th>Required capital</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect on: Scenario (%-point)</td>
<td>31 December 2017</td>
<td>31 December 2016</td>
<td></td>
</tr>
<tr>
<td>UFR -1%</td>
<td>-26</td>
<td>-35</td>
<td>-5</td>
</tr>
<tr>
<td>Interest rate +1% (incl. UFR 4.2%)</td>
<td>-4</td>
<td>-19</td>
<td>14</td>
</tr>
<tr>
<td>Interest rate -1% (incl. UFR 4.2%)</td>
<td>+8</td>
<td>+21</td>
<td>-14</td>
</tr>
<tr>
<td>Volatility Adjustment -10bp</td>
<td>-11</td>
<td>-17</td>
<td>-2</td>
</tr>
<tr>
<td>Equity prices -20%</td>
<td>-10</td>
<td>-13</td>
<td>9</td>
</tr>
<tr>
<td>Property values -10%</td>
<td>-8</td>
<td>-11</td>
<td>3</td>
</tr>
<tr>
<td>Spread +75bps/VA +21bps</td>
<td>+12</td>
<td>+15</td>
<td>+3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>31 December 2017</th>
<th>31 December 2016</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>UFR -1%</td>
<td>-26</td>
<td>-35</td>
<td>-5</td>
<td>-5</td>
<td>-31</td>
<td>-39</td>
</tr>
<tr>
<td>Interest rate +1% (incl. UFR 4.2%)</td>
<td>-4</td>
<td>-19</td>
<td>14</td>
<td>12</td>
<td>+9</td>
<td>-8</td>
</tr>
<tr>
<td>Interest rate -1% (incl. UFR 4.2%)</td>
<td>+8</td>
<td>+21</td>
<td>-14</td>
<td>-15</td>
<td>-6</td>
<td>+4</td>
</tr>
<tr>
<td>Volatility Adjustment -10bp</td>
<td>-11</td>
<td>-17</td>
<td>-2</td>
<td>-2</td>
<td>-13</td>
<td>-19</td>
</tr>
<tr>
<td>Equity prices -20%</td>
<td>-10</td>
<td>-13</td>
<td>9</td>
<td>7</td>
<td>-1</td>
<td>-6</td>
</tr>
<tr>
<td>Property values -10%</td>
<td>-8</td>
<td>-11</td>
<td>3</td>
<td>3</td>
<td>-5</td>
<td>-8</td>
</tr>
<tr>
<td>Spread +75bps/VA +21bps</td>
<td>+12</td>
<td>+15</td>
<td>+3</td>
<td>+6</td>
<td>+15</td>
<td>+21</td>
</tr>
</tbody>
</table>
The largest change in the Solvency II sensitivities was in the interest rate sensitivity. The change from -8 to +9 in the upward scenario (and from +4 to -6 in the downward scenario) is mainly caused by a change in the interest rate hedge policy.

**Expected development UFR**

European Insurance and Occupational Pensions Authority (EIOPA) may reduce the ultimate forward rate used to extrapolate insurers’ discount curves to better reflect expected inflation and real interest rates. There are various scenarios regarding lowering the Ultimate Forward Rate (UFR).

Recently, EIOPA announced its decision on the Ultimate Forward Rate (UFR). The UFR will decrease from 2018 from 4.2% to 3.65% with steps of 15 basis points per year. In 2018 the UFR will be 4.05%. After the decline of the UFR by 15 basis points the solvency ratio will remain above internal solvency objectives.

Changes in the UFR have an almost linear effect on the solvency ratio. The impact on the solvency ratio of various UFR levels is stated below.

**Sensitivity Solvency II ratio to UFR**

**Interest rate sensitivity of Solvency II ratio**

The impact of the interest rate on the Solvency II ratio, including the UFR effect, is stated below. The UFR methodology has been applied to the shocked interest rate curve.
Sensitivity Solvency II ratio to interest rate

<table>
<thead>
<tr>
<th>Interest rate change</th>
<th>1.0%</th>
<th>0.0%</th>
<th>-1.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 December 2017</td>
<td>195</td>
<td>182</td>
<td>186</td>
</tr>
<tr>
<td>31 December 2016</td>
<td>174</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Equity risk**
The 2017 the equity risk increased due to a larger equity portfolio and a smaller risk mitigating effect of put options and because of the diminishing effect of the transitional measure due to (i) higher risk charges and (ii) less equities qualifying for the transitional measure.

**Spread risk**
In 2017 a.s.r. leven sold government bonds, both core and non-core and bought corporates and financials. As a result, the required capital for spread risk increased, because government bonds had no charge.

In case of a scenario in which the average spread rises by 75 bps and the Volatility Adjustment (VA) rises by 21 bps, the solvency ratio increases +15%. As the VA is used in the calculation of the liabilities and spread movement only has an impact on the credit portfolio, the impact of the VA increase is bigger than the impact of the spread increase. Therefore, the solvency ratio rises in the event of an increase in the average spread.

**Loss absorbing capacity of deferred tax**
a.s.r. uses the following methodology for the calculation of the Loss Absorbing Capacity Deferred Tax (LAC DT) benefit in euros of a.s.r. leven.

Relevant regulation and current guidance (Delegated Regulation, Level 3 guidelines, Dutch Central Bank Q&As and IAS12) are taken into account in the development of the LAC DT methodology.

<table>
<thead>
<tr>
<th>LAC DT Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model sort</td>
</tr>
<tr>
<td>Component 1 – Taxable profit (t)</td>
</tr>
<tr>
<td>Component 2 – Taxable profit (t-1)</td>
</tr>
<tr>
<td>Component 3 – Net DTA position</td>
</tr>
<tr>
<td>Component 4a – Risk Margin</td>
</tr>
<tr>
<td>Component 4b – Future taxable profit</td>
</tr>
</tbody>
</table>

The outcome is an unrounded LAC DT factor.

1. For the basic model (the entities other than a.s.r. leven) the unrounded LAC DT factor is determined based on component 1 – 4a only. For the advanced model (a.s.r. leven), also future profits (component 4b) are projected. Please note that currently only part of the substantiation with component 4a and none of the substantiation with component 4b is included in the applied LAC DT factor.
2. Moreover, an outlook is made of the underpinning of the LAC DT factor in the upcoming quarters, divided over the separate components. This outlook will take into account potential risks not yet included in the model, also called a code of conduct. This code of conduct ensures financial stability in the LAC DT benefit for a.s.r. leven in euros, resulting in financial stability of the solvency position of a.s.r. leven.
3. The LAC DT factors and outlook are reviewed by the 2nd line.
4. In case a change in LAC DT factor of asr leven is proposed, the Financial Risk Committee has to approve the proposed change.
Another source of stability can be found in the way the LAC DT factor is adjusted if a change is desired. In case the substantiation of the LAC DT is too low the factor is lowered immediately, taking into account the code of conduct. However, in case an increase is possible, it is only realised in case it is sustainable and significant.

C.1 Insurance risk

Insurance risk is the risk that future insurance claims and benefits cannot be covered by premium and/or investment income, or that insurance liabilities are not sufficient, because future expenses, claims and benefits differ from the assumptions used in determining the best estimate liability.

Risk-mitigating measures are used to reduce and contain the volatility of results or to decrease the possible negative impact on value as an alternative for the capital requirement. Proper pricing, underwriting, reinsurance, claims management, and diversification are the main risk mitigating actions for insurance risks.

The solvency buffer is held by a.s.r. leven to cover the risk that claims may exceed the available insurance provisions and to ensure its solidity. The solvency position of a.s.r. leven is determined and continuously monitored in order to assess if a.s.r. leven meets the regulatory requirements.

As of 1 January 2016, the Solvency II regime is in place. a.s.r. leven measures its risks based on the standard model as prescribed by the Solvency II regime. The Solvency Capital Requirement (SCR) for each insurance risk is determined as the change in own funds caused by a predetermined shock which is calibrated to a 1-in-200-year event. The basis for these calculations are the Solvency II technical provisions which are calculated as the sum of a best estimate and a risk margin.

The insurance risk arising from the insurance portfolios of a.s.r. leven is as follows.

<table>
<thead>
<tr>
<th>Life insurance risk - required capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Life insurance risk</td>
</tr>
</tbody>
</table>

Solvency II sensitivities

a.s.r. leven has assessed the impact of various sensitivities on the Solvency II ratio. The sensitivities as at 31 December 2017 expressed as impact on the a.s.r. leven solvency ratio (in percentage points) are as follows:

<table>
<thead>
<tr>
<th>Solvency II sensitivities - insurance risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect on: Type of risk (%-points)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Expenses -10%</td>
</tr>
<tr>
<td>Mortality rates, all products -5%</td>
</tr>
<tr>
<td>Lapse rates -10%</td>
</tr>
</tbody>
</table>

Solvency II sensitivities - explanation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expense risk</td>
<td>Measured as the impact of a 10% decrease in expense levels.</td>
</tr>
<tr>
<td>Mortality risk</td>
<td>Measured as the impact of a 5% decrease in all mortality rates. A mitigating effect will occur between mortality and longevity rates.</td>
</tr>
<tr>
<td>Lapse risk</td>
<td>Measured as the risk of a 10% decrease in lapse rates.</td>
</tr>
</tbody>
</table>
C.1.1 Life insurance risk
The life portfolio can be divided into funeral, individual life and group pension. The insurance contracts are sold primarily to retail and wholesale clients through intermediaries.

The products are sold as insurance products in cash or unit-linked contracts. With respect to products in cash, the investment risk is fully borne by the insurer whereas, in the case of unit-linked products, the majority of the investment risk is for the policyholder’s account.

The following life insurance risks are involved:

Mortality risk
Mortality risk is associated with (re)insurance obligations, such as endowment or term assurance policies, where a payment or payments are made in case of the policyholder’s death during the contract term. The increase in mortality rates is applied to (re)insurance obligations which are contingent on mortality risk. The required capital for this risk is calculated as the change in own funds of a permanent increase of mortality rates by 15% for all ages and each policy.

Longevity risk
Longevity risk is associated with (re)insurance obligations where payments are made until the death of the policyholder and where a decrease in mortality rates results in higher technical provisions. The required capital is calculated as the change in own funds of a permanent decrease of mortality rates by 20%. The decrease in mortality rates is applied to portfolio’s where payments are contingent on longevity risk.

Disability-morbidity risk
Morbidity or disability risk is associated with all types of insurance compensating or reimbursing losses (e.g. loss of income, adverse changes in the best estimate of the liabilities) caused by changes in the morbidity or disability rates. The scenario analysis consists of a 35% increase in disability rates for the first year, 25% for subsequent years, combined with a decrease in revalidation rates of 20%.

Expense risk
A calculation is made of the effect on own funds of a permanent increase in costs used for determining the best estimate. The scenario analysis contains an increase in the costs of 10% and an increase in the cost inflation of 1 percentage point per year. This scenario also includes a similar shock in the investment costs. Both the internally and externally managed investment costs are involved in this scenario.

Lapse risk
Lapse risk is the risk of losses (or adverse changes in the best estimate of the liabilities) due to an unanticipated (higher or lower) rate of policy lapses, terminations, changes to paid-up status (cessation of premium payment) and surrenders. The effect of the lapse risk is equal to the highest result of a permanent increase in lapse rates of 50%, a permanent decrease in lapse rates of 50% or a mass lapse event (70% of insurance policies in collective pension funds or 40% of the remaining insurance policies). The lapse shocks are only applied to portfolios where this leads to a higher best estimate.

The required capital for a mass lapse event is reduced by the proceeds that are to be expected from a reinsurance arrangement (Mass Lapse Cover). This arrangement covers the risks of a mass lapse event of parts of the portfolio to the extent that the mass lapse is more than 22% and less than 40%.

Life catastrophe risk
Catastrophe risk arises from extreme events which are not captured in the other life insurance risks, such as pandemics. The capital requirement for this risk is calculated as a 1.5 per mille increase in mortality rates in the first projected year for (re)insurance obligations where the increase in mortality rates leads to an increase in technical provisions.

Mortgage Loans
Within the individual life portfolio there is a group of policies directly linked to a mortgage loan (‘Spaarhypotheken’). In case the mortgage loan is not provided by a.s.r leven, but by another party, which is the case for most of these policies, the interest that a.s.r. leven reimburses to the policyholder is claimed from the party that has provided the mortgage loan. The cashflow of interests from the provider of the mortgage loan to a.s.r leven represents an asset. The cashflow and value of this asset depends on the cashflow of the linked savings policy. Therefore, the change in this asset value due to mortality or lapse is taken into account when determining the SCR for life insurance risks.
Employee benefits
ASR Nederland N.V. has insured the post-employment benefit plans for a.s.r.’s employees with a.s.r. leven, an insurance company within a.s.r. group. Though the liability of this plan is classified as employee benefits on the balance sheet of ASR Nederland N.V. and determined according to IFRS principles, for a.s.r. leven the post-employment benefit plan for a.s.r.’s employees is a group pension contract and is treated that way both in IFRS-accounts and in Solvency II.

Other information
Within a.s.r. leven, the longevity risk is dominant and arises from group pension business and individual annuities. The longevity risk is partly offset by mortality risk that arises from the funeral portfolio and individual policies with mortality risk. In addition to longevity, a.s.r. leven is exposed to expense risk and lapse risk, though lapse risk is reduced due to the aforementioned Mass Lapse reinsurance arrangement.

<table>
<thead>
<tr>
<th>Life insurance risk - required capital</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality risk</td>
<td>268</td>
<td>250</td>
</tr>
<tr>
<td>Longevity risk</td>
<td>848</td>
<td>873</td>
</tr>
<tr>
<td>Disability-morbidity risk</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Lapse risk</td>
<td>398</td>
<td>343</td>
</tr>
<tr>
<td>Expense risk</td>
<td>623</td>
<td>567</td>
</tr>
<tr>
<td>Revision risk</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Catastrophe risk (subtotal)</td>
<td>62</td>
<td>66</td>
</tr>
<tr>
<td>Diversification (negative)</td>
<td>-778</td>
<td>-741</td>
</tr>
<tr>
<td>Life insurance risk</td>
<td>1,427</td>
<td>1,366</td>
</tr>
</tbody>
</table>

For the life portfolio, the provision at year-end can be broken down as follows under Solvency II:

<table>
<thead>
<tr>
<th>Life portfolio - technical provision per segment</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance with profit participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best estimate</td>
<td>21,489</td>
<td>20,860</td>
</tr>
<tr>
<td>Risk margin</td>
<td>1,088</td>
<td>1,128</td>
</tr>
<tr>
<td>Technical provision</td>
<td>22,577</td>
<td>21,989</td>
</tr>
<tr>
<td>Other life insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best estimate</td>
<td>8,531</td>
<td>7,336</td>
</tr>
<tr>
<td>Risk margin</td>
<td>475</td>
<td>368</td>
</tr>
<tr>
<td>Technical provision</td>
<td>9,006</td>
<td>7,704</td>
</tr>
<tr>
<td>Index-linked and unit-linked insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best estimate</td>
<td>7,743</td>
<td>11,085</td>
</tr>
<tr>
<td>Risk margin</td>
<td>92</td>
<td>164</td>
</tr>
<tr>
<td>Technical provision</td>
<td>7,835</td>
<td>11,249</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best estimate</td>
<td>37,763</td>
<td>39,281</td>
</tr>
<tr>
<td>Risk margin</td>
<td>1,655</td>
<td>1,660</td>
</tr>
<tr>
<td>Technical provision</td>
<td>39,418</td>
<td>40,941</td>
</tr>
</tbody>
</table>
C.1.2 Managing life insurance risk
Life insurance risk is mitigated by pricing, underwriting policies and reinsurance.

Pricing is based on profit capacity calculations. A calculation is made of the price required to cover the risks. A calculation is made of the price required to cover the insurance liabilities, expenses and risks.

Underwriting policies describe the types of risks and the extent of risk a.s.r. leven is willing to accept. Policyholders may be subjected to medical screening for individual life insurance.

Reinsurance
Reinsurance and other risk-mitigating measures are used to reduce the volatility of results or to decrease the possible negative impact on value as an alternative to the capital requirement. Reinsurance arrangements have been set up to mitigate the effects of catastrophes on earnings. The level of retention in different reinsurance contracts is aligned with the size and the risk profile of the underlying portfolios. This includes taking account of the cost of reinsurance on the one hand, and the risk that is retained on the other.

Buy out reinsurance
In order to optimise its balance sheet risks, a.s.r. leven entered into a reinsurance agreement with Legal and General Re in 2015. The agreement entailed the transfer of € 209 million in pension obligations to Legal and General Re.

Mass lapse cover
The required capital (SCR) for a mass lapse event is reduced by the proceeds that are to be expected from a reinsurance arrangement (Mass Lapse Cover) with RGA, Munich Re and some other reinsurers. This arrangement covers the risks of a mass lapse event of parts of the portfolio to the extent that the mass lapse is more than 22% and less than 40%.

C.2 Market risk
Market risk is the risk of potential losses due to adverse movements in financial market variables. Exposure to market risk is measured by the impact of movements in financial variables such as equity prices, interest rates and property prices. The various types of market risk which are discussed in this section, are:

- interest rate risk
- equity risk
- property risk
- currency risk
- spread risk
- concentration risk

Market risk reports are submitted to the FRC at least once a month. Key reports on market risk include the Solvency II and economic capital report, the interest rate risk report and the report on risk budgets related to the strategic asset mix.

A summary of sensitivities to market risks for the regulatory solvency, total equity and profit for the year is presented in the tables below.

<table>
<thead>
<tr>
<th>Market risk - required capital</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest rate</td>
<td>389</td>
<td>395</td>
</tr>
<tr>
<td>Equity</td>
<td>542</td>
<td>417</td>
</tr>
<tr>
<td>Property</td>
<td>707</td>
<td>698</td>
</tr>
<tr>
<td>Currency</td>
<td>218</td>
<td>228</td>
</tr>
<tr>
<td>Spread</td>
<td>960</td>
<td>906</td>
</tr>
<tr>
<td>Concentration</td>
<td>15</td>
<td>52</td>
</tr>
<tr>
<td>Diversification (negative)</td>
<td>-574</td>
<td>-598</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,256</strong></td>
<td><strong>2,098</strong></td>
</tr>
</tbody>
</table>
The main market risks of a.s.r. leven are spread, property and equity risk. This is in line with the risk budgets based on the strategic asset allocation study.

The value of investment funds at year-end 2017 was € 2,765 million (2016: € 1,603 million). a.s.r. leven applies the look-through approach for investment funds to assess the market risk.

The interest rate risk is the maximum loss of (i) an upward shock or (ii) a downward shock of the yield curve. For a.s.r. leven the downward shock is dominant.

a.s.r. leven applies the transitional measure for equity risk for shares in portfolio at 31 December 2015. The SCR equity shock was 22% at 31 December 2015 and linear, increasing to (i) 39% + equity dampener for type I shares and (ii) 49% + equity dampener for type II shares. The equity dampener has a value between -10% and 10%. In the event of increasing equity prices, the equity dampener will have a smaller dampening effect.

The diversification effect shows the effect of having a well-diversified investment portfolio.

C.2.1 Interest rate risk

Interest rate risk is the risk that the value of assets, liabilities or financial instruments will change due to fluctuations in interest rates. Many insurance products are exposed to interest rate risk; the value of the products is closely related to the applicable interest rate curve. The interest rate risk of insurance products depends on the term to maturity, interest rate guarantees and profit-sharing features. Life insurance contracts re particularly sensitive to interest rate risk. The required capital for interest rate risk is determined by calculating the impact on the available capital due to changes in the yield curve. Both assets and liabilities are taken into account. The interest rate risk is the maximum loss of (i) an upward shock or (ii) a downward shock of the yield curve according to the prescribed methodology. a.s.r. leven applies a look-through approach for investment funds to assess the interest rate risk.

The interest rate risk is calculated by a relative shock up- and downward shock of the risk-free (basis) yield curve. All adjustments (credit spread, volatility adjustment) on this yield curve are considered constant. The yield curve is extrapolated to the UFR. The yield curve after shock is not extrapolated again to the UFR.

The used shocks vary by maturity and the absolute shocks are higher for shorter maturities (descending: 75% to 20% and ascending: -70% to -20%):
- the yield curve up shock contains a minimum shock of 100bps;
- the yield curve in after the downward shock is limited to zero (no negative interest rates);
- the yield curves of all currencies are shocked simultaneously.

<table>
<thead>
<tr>
<th>Solvency II sensitivities - market risks</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCR interest rate risk up</td>
<td>-13</td>
<td>-121</td>
</tr>
<tr>
<td>SCR interest rate risk down</td>
<td>-389</td>
<td>-395</td>
</tr>
<tr>
<td>SCR interest rate risk</td>
<td>389</td>
<td>395</td>
</tr>
</tbody>
</table>

a.s.r. leven has assessed various scenarios to determine the sensitivity to interest rate risk. The impact on the solvency ratio is calculated by determining the difference in the change in available and required capital.
## Solvency II sensitivities - interest rate

<table>
<thead>
<tr>
<th>Scenario (%-point)</th>
<th>Available capital</th>
<th>Required capital</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31 December 2017</td>
<td>31 December 2016</td>
<td></td>
</tr>
<tr>
<td>UFR -1%</td>
<td>-26</td>
<td>-35</td>
<td>-5</td>
</tr>
<tr>
<td>Interest rate +1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(incl. UFR 4.2%)</td>
<td>-4</td>
<td>-19</td>
<td>14</td>
</tr>
<tr>
<td>Interest rate -1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(incl. UFR 4.2%)</td>
<td>8</td>
<td>21</td>
<td>14</td>
</tr>
<tr>
<td>Volatility Adjustment -10bp</td>
<td>-11</td>
<td>-17</td>
<td>-2</td>
</tr>
</tbody>
</table>

Interest rate risk is managed by aligning fixed-income investments to the profile of the liabilities. Among other instruments, swaptions and interest rate swaps are used for hedging the specific interest rate risk arising from interest rate guarantees and profit-sharing features in life insurance products.

An interest rate risk policy is in place for the group as well as for the registered insurance companies. All interest rate-sensitivity balance sheet items are in scope, including the employee benefit obligations of the group. In principle, the sensitivity of the solvency ratio to interest rates is minimised. In addition, the exposure to interest rate risk or various term buckets is subject to maximum amounts.

### C.2.2 Equity risk

The equity risk depends on the total exposure to equities. In order to maintain a good understanding of the actual equity risk, a.s.r leven applies the look-through approach for investment funds to assess the equity risk.

The required capital for equity risk is determined by calculating the impact on the available capital due to an immediate drop in share prices. Both assets and liabilities are taken into account. Stocks listed in regulated markets in countries in the EEA or OECD are shocked by 39% together with the symmetric adjustment of the equity capital charge (type I). Stocks in countries that are not members of the EEA or OECD, unlisted equities, alternative investments, or investment funds in which the look-through principle is not possible, are shocked by 49% together with the symmetric adjustment of the equity capital charge (type II).

a.s.r leven applies the transitional measure for equity risk for shares in portfolio at 31 December 2015. The SCR equity shock was 22% at 31 December 2015 and linear increasing in 7 years to (i) 39% + equity dampener for type I shares and (ii) 49% + equity dampener for type II shares.

### Equity risk - required capital

<table>
<thead>
<tr>
<th>SCR equity risk - required capital</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>542</td>
<td>417</td>
</tr>
</tbody>
</table>

In 2017, the equity risk increased on the one hand due to a larger equity portfolio and a smaller risk mitigating effect of put options. On the other hand as a result of the diminishing effect of the transitional measure due to (i) higher risk charges and (ii) less equities qualifying for the transitional measure.

The sensitivity of the solvency ratio to changes in equity prices is monitored on a monthly basis. Sensitivity of regulatory solvency (Solvency II) to changes in equity prices is shown in the following table.

## Solvency II sensitivities - equity prices

<table>
<thead>
<tr>
<th>Effect on:</th>
<th>Available capital</th>
<th>Required capital</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31 December 2017</td>
<td>31 December 2016</td>
<td></td>
</tr>
<tr>
<td>Equity prices -20%</td>
<td>-10</td>
<td>-13</td>
<td>9</td>
</tr>
</tbody>
</table>
Composition of equity portfolio

The fair value of equities and similar investments at year-end 2017 was € 1,980 million (2016: € 1,797 million). The increase in 2017 was mainly a result of higher equity prices.

The equities are diversified across the Netherlands (including participating interests), other European countries and the United States. A limited part of the portfolio consists of investments in emerging markets and alternatives. A portfolio of put options with an underlying value of € 12 million is in place to mitigate the equity risk.

The table below shows the exposure of the equity portfolio to sectors. The total value is including the equities in externally managed funds. In 2017 a.s.r. leven reduced the exposure tot non-euro shares to limit the FX risk in the equity portfolio.

C.2.3 Property risk

The property risk depends on the total exposure to real estate. In order to maintain a good understanding of the actual property risk, a.s.r. leven applies the look-through approach for investment funds to assess the property risk.

The required capital for property risk is determined by calculating the impact on the available capital due to an immediate drop in property prices by 25%. Both assets and liabilities are taken into account.

Property risk - required capital

<table>
<thead>
<tr>
<th>SCR property risk - required capital</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>707</td>
<td>698</td>
</tr>
</tbody>
</table>

The 2017, the real estate investments increased due to property transactions and increases in property prices. As a result, the required capital for property risk increased.

The sensitivity of the solvency ratio to changes in property value is monitored on a monthly basis. Sensitivity of regulatory solvency (Solvency II) to changes in property prices is shown in the following table.

Solvency II sensitivities - property values

<table>
<thead>
<tr>
<th>Effect on:</th>
<th>Available capital</th>
<th>Required capital</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property values -10%</td>
<td>31 December 2017</td>
<td>31 December 2016</td>
<td>31 December 2017</td>
</tr>
<tr>
<td>Property values -10%</td>
<td>-8</td>
<td>-11</td>
<td>+3</td>
</tr>
</tbody>
</table>

Composition of property portfolio

The property risk depends on the total exposure to property, which includes both property investments and property held for own use. The fair value of property was € 2,844 million at year-end 2017 (2016: € 2,810 million).

The limited increase in 2017 is the per saldo effect of on the one hand the increases in property prices and on the other hand because of the sell of a participation in the Dutch Office Fund to external investors.

The property investments are diversified across the Netherlands. In 2017 a.s.r. leven reduced the exposure to offices and increased the exposure to the other categories.
C.2.4 Currency risk

Currency risk measures the impact of losses related to changes in currency exchange rates. The policy of a.s.r. leven is in principle to hedge the currency risk excluding investments in equities and investments that are externally managed. However, certain currency exposures are permitted from a tactical perspective within a specific risk budget.

The required capital for currency risk is determined by calculating the impact on the available capital due to a change in exchange rates. Both assets and liabilities are taken into account and a look-through approach is applied for investment funds. For each currency the maximum loss due to an upward and a downward shock of 25% is determined except for a small number of currencies where lower shocks are applied (Danish crown; Bulgarian lev).

### Currency risk - required capital

<table>
<thead>
<tr>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCR currency risk - required capital</td>
<td>218</td>
</tr>
</tbody>
</table>

Currency risk has decreased € 10 mln. This is mainly caused by a decrease in foreign bonds in externally managed funds.

**Specification currencies with largest exposure**

The foreign currency position is monitored on a quarterly basis. The total net exposure in foreign currency is € 872 million (2016: € 912 million). The largest net-exposure is in USD, which mainly consists of investments in equities and bonds. The majority of the net currency exposure is related to equities. The following figures show the currencies with the largest exposures, expressed in percentage of the above mentioned total:

<table>
<thead>
<tr>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>43%</td>
</tr>
<tr>
<td>Retail</td>
<td>21%</td>
</tr>
<tr>
<td>Residential</td>
<td>22%</td>
</tr>
<tr>
<td>Offices</td>
<td>14%</td>
</tr>
</tbody>
</table>

Foreign bonds in externally managed funds have substantially decreased in the following currencies: USD, AUD, and GBP.
C.2.5 Spread risk

Spread risk arises from the sensitivity of the value of assets and liabilities to changes in the level of credit spreads on the relevant risk-free interest rates. a.s.r. leven has a policy of maintaining a well-diversified high-quality investment grade portfolio while avoiding large risk concentrations. Going forward, the volatility in spreads will continue to have possible short-term effects on the market value of the fixed income portfolio. In the long run, the credit spreads are expected to be realised and to contribute to the growth of the own funds. The required capital for spread risk is determined by calculating the impact on the available capital 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, structured products and credit derivatives. The capital requirement depends on (i) the market value, (ii) the modified duration and (iii) the credit quality category.

<table>
<thead>
<tr>
<th>Spread risk - required capital</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCR spread risk - required capital</td>
<td>960</td>
<td>906</td>
</tr>
</tbody>
</table>

In 2017 a.s.r. leven sold government bonds, both core and non-core and bought corporates and financials. As a result the required capital for spread risk increased, because the government bonds had no charge.

The sensitivity to spread risk is measured as the impact of an increase of spread on loans and corporate bonds of 75 bps. At the same time, it is assumed that the Volatility Adjustment which is applied to the liabilities will increase by 21 bps.

<table>
<thead>
<tr>
<th>Solvency II sensitivities - spread risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect on:</td>
</tr>
<tr>
<td>Scenario (%-point)</td>
</tr>
<tr>
<td>Spread +75bps/VA +21bps</td>
</tr>
</tbody>
</table>

Composition of fixed income portfolio

Spread risk is managed on a portfolio basis within limits and risk budgets established by the relevant risk committees. Where relevant, credit ratings provided by the external rating agencies are used to determine risk budgets and monitor limits. A limited number of fixed-income investments do not have an external rating. These investments are generally assigned an internal rating. Internal ratings are based on methodologies and rating classifications similar to those used by external agencies. The following tables provide a detailed breakdown of the fixed-income exposure by (i) rating class and (ii) sector. Assets in scope of spread risk are, by definition, not in scope of counterparty default risk.

The total exposure of assets in scope of spread risk is € 19,066 million (2016: € 19,979 million). The decrease of the portfolio is mainly due to (i) the sell of core government bonds and (ii) the increase of the yield curve. Besides the sell of core government bonds, a.s.r. leven also sold non-core government bonds and bought corporates and financials. These transactions leads to changes in the portfolio decomposition:
• the relatively amount of government bonds decreased and the amount of corporates and financials increased;
• the relatively amount of AAA and AA rated bonds decreased and the amount of A and BBB rated bonds increased.

### Fixed income portfolio by sector

![Composition fixed income portfolio by sector 2017](image1)

![Composition fixed income portfolio by sector 2016](image2)

<table>
<thead>
<tr>
<th>Sector</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government core</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>Government non-core</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>Financials</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>Corporates</td>
<td>25%</td>
<td>22%</td>
</tr>
<tr>
<td>Structured instruments</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Deposits</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Loans</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Preference shares</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

### Fixed income portfolio by rating

![Composition fixed income portfolio by rating 2017](image3)

![Composition fixed income portfolio by rating 2016](image4)

<table>
<thead>
<tr>
<th>Rating</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>31%</td>
<td>35%</td>
</tr>
<tr>
<td>AA</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>A</td>
<td>26%</td>
<td>22%</td>
</tr>
<tr>
<td>BBB</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>Lower than BBB</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Not rated</td>
<td>3%</td>
<td>5%</td>
</tr>
</tbody>
</table>

### C.2.6 Market risk concentrations

Concentrations of market risk constitute an additional risk to an insurer. Concentration risk is the concentration of exposures to the same counterparty. Other possible concentrations (region, country, etc.) are not in scope. The capital requirement for concentration risk is determined in three steps:

1. determine the exposure above threshold. The threshold depends on the credit quality of the counterparty;
2. calculation of the capital requirement for each counterparty, based on a specified factor depending on the credit quality;
3. aggregation of individual capital requirements for the various counterparties.

According the spread risk module, bonds and loans guaranteed by a certain government or international organisation are not in scope of concentration risk. Bank deposits can be excluded from concentration risk if they fulfill certain conditions.

### Concentration risk - required capital

<table>
<thead>
<tr>
<th></th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCR concentration risk - required capital</td>
<td>15</td>
<td>52</td>
</tr>
</tbody>
</table>
C.3 Counterparty default risk

Counterparty default risk reflects possible losses due to unexpected default or deterioration in the credit standing of counterparties and debtors. Counterparty default risk affects several types of assets:

- mortgages
- savings-linked mortgage loans
- derivatives
- reinsurance
- receivables
- cash and deposits

Assets that are in scope of spread risk are, by definition, not in scope of counterparty default risk and vice versa. The Solvency II regime makes a distinction between two types of exposures:

- Type 1: These counterparties generally have a rating (reinsurance, derivatives, current account balances, deposits with ceding companies and issued guarantee (letter of credit). The exposures are not diversified.
- Type 2: These counterparties are normally unrated (receivables from intermediaries and policyholders, mortgages with private individuals or SMEs). The exposures are generally diversified.

The total capital requirement for counterparty risk is an aggregation of the capital requirement for type 1 exposure and the capital requirement for type 2 exposure by taking 75% correlation.

<table>
<thead>
<tr>
<th>Counterparty default risk - required capital</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>152</td>
<td>129</td>
</tr>
<tr>
<td>Type 2</td>
<td>373</td>
<td>371</td>
</tr>
<tr>
<td>Diversification (negative)</td>
<td>-28</td>
<td>-25</td>
</tr>
<tr>
<td>Total</td>
<td>497</td>
<td>475</td>
</tr>
</tbody>
</table>

The increase of counterparty default risk is almost entirely due to the increase of Type 1 risk. This is the result of (i) the increased cash position and (ii) the derivative portfolio.

C.3.1 Mortgages

Mortgages are granted for the account and risk of third parties and for a.s.r. leven's own account. The a.s.r. leven portfolio consists only of Dutch mortgages with a limited counterparty default risk. The fair value of a.s.r. leven’s mortgage portfolio was € 6,983 million at year-end 2017 (2016: € 6,746 million).

<table>
<thead>
<tr>
<th>Composition mortgage portfolio</th>
<th>2017</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHG</td>
<td>52%</td>
<td>58%</td>
</tr>
<tr>
<td>Loan-to-Value ratio &lt;75%</td>
<td>24%</td>
<td>23%</td>
</tr>
<tr>
<td>Loan-to-Value ratio &lt;100%</td>
<td>16%</td>
<td>13%</td>
</tr>
<tr>
<td>Loan-to-Value ratio &gt;100%</td>
<td>8%</td>
<td>6%</td>
</tr>
</tbody>
</table>

The Loan-to-Value ratio is based on the value of the mortgage according Solvency II principals with respect to the a.s.r. leven calculated collateral.

The default percentage (i.e. the percentage of mortgages which is in arrears for over three months) has decreased from 0.35% in December 2016 to 0.21% in December 2017. This drop is a consequence of the improved economic circumstances and of the organisation of preventive management, whereby the flow of short-term arrears to longer delays could be reduced.
C.3.2 Savings-linked mortgage loans
The counterparty default risk of the savings-linked mortgage loans depends on the counterparty. For 59% of the portfolio, the counterparties are Special Purpose Vehicles. The risk is limited due to the robust quality of the mortgages in the Special Purpose Vehicles in combination with the tranching. a.s.r. leven has a cession-retrocession agreement with the counterparty for 38% of the portfolio, for which the risk is limited. Effectively, a.s.r. leven receives the underlying mortgage loans as collateral, mitigating the counterparty default risk of the savings-linked mortgage loans.

Composition savings-linked mortgage loans portfolio

C.3.3 Derivatives
OTC derivatives are primarily used by a.s.r. leven to manage the interest-rate risks incorporated into the insurance liabilities. Interest-rate derivatives are traded with a well-diversified and qualitative dealer panel with whom there is an established International Swaps and Derivatives Association (ISDA) contract and a Credit Support Annex (CSA) in place. These CSAs include specific agreements on the exchange of collateral limiting market and counterparty risk. The outstanding value of the interest rate derivative positions is matched by collateral received from eligible counterparties, minimising the net counterparty default risk.

C.3.4 Reinsurance
When entering into reinsurance contracts for fire and catastrophe, a.s.r. leven requires the counterparty to be rated at least single A. With respect to long-tail business and other sectors, the minimum permitted rating is single A.

Composition reinsurance counterparties by rating

The table above shows the exposure to reinsurers per rating. The total exposure to reinsurers at year-end 2017 was € 180 million (2016: € 209 million).

C.3.5 Receivables

Composition receivables
**C.3.6 Cash and cash equivalents**

The current accounts amounted € 1,472 million in 2017 (2016: € 1,027 million).

<table>
<thead>
<tr>
<th>Composition cash accounts by rating</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>AA</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>A</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>Lower than A</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Total deposits amounted to € 326 million (2016: € 981 million).

**C.4 Liquidity risk**

Liquidity risk is the risk that a.s.r. leven is not able to meet its financial obligations to policyholders and other creditors when they become due and payable, at a reasonable cost and in a timely manner. Liquidity risk is not quantified in the Solvency Capital Requirement of a.s.r. leven and is therefore separately discussed here.

a.s.r. leven recognises different levels of liquidity management. Short-term liquidity, or daily cash management, covers the day-to-day cash requirements under normal business conditions and targets funding liquidity risk. Long-term liquidity management considers business conditions in which market liquidity risk materialises. Stress liquidity management looks at the ability to respond to a potential crisis situation as a result of a market event and an a.s.r. leven-specific event. Unexpected cash outflows could occur as result of lapses in the insurance portfolio, savings withdrawals or cash variation margin payments related to the ISDA/CSA agreements of derivatives. a.s.r. leven monitors its liquidity risk scenarios via different risk reporting and monitoring processes including daily cash management reports, cash flow forecasts and stress scenario liquidity reports.

a.s.r. leven’s liquidity management principle consists of three components. First, a well-diversified funding base is necessary in order to provide liquidity for cash management purposes. A portion of assets must be invested in unencumbered marketable securities that can be used for collateralised borrowing or asset sales. Second, the strategic asset allocation should reflect the expected and contingent liquidity needs of liabilities. Finally, an adequate and up-to-date contingency liquidity plan is in place to enable management to act effectively and efficiently in times of crisis.

In managing the liquidity risk from financial liabilities, a.s.r. leven holds liquid assets comprising cash and cash equivalents and investment grade securities for which there is an active and liquid market. These assets can be readily sold to meet liquidity requirements. As at 31 December 2017, a.s.r. leven had cash (€ 1,427 million), short-term deposits (€ 1,326 million), liquid government bonds (€ 8,470 million) and other bonds and shares.

The following table shows the contractual cash flows of liabilities (excluding insurance contracts on behalf of policyholders) broken down in three categories. For liabilities arising from insurance contracts, expected lapses and mortality risk are taken into account. Profit-sharing cash flow of insurance contracts is not taken into account, nor are equities, property and swaptions.
C.5 Operational risk

Operational risk is the risk of losses resulting from inadequate or failing internal processes, persons and systems, or from external events (including legal risk). The main areas where operational risks are incurred are operations, IT, outsourcing, integrity and legal issues.

Operational risk - required capital

<table>
<thead>
<tr>
<th></th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCR operational risk - required capital</td>
<td>147</td>
<td>144</td>
</tr>
</tbody>
</table>

The SCR for operational risk amounts to € 147 million at the end of 2017 and is determined with the standard formula under Solvency II. The operational risk is based on the basic solvency capital requirement, the volumes of premiums and technical provisions, and the amount of expenses.

C.6 Other material risks

As part of the regular ORSA process, the overall risk profile and associated solvency capital needs are assessed against a.s.r.’s actual solvency capital position. The most important risks to which a.s.r. is exposed, including risks that are not incorporated into the standard formula, are identified through a combined top-down (strategic risk assessment) and bottom-up (control risk self-assessments) approach. After assessment of the effectiveness of the mitigating measures, the risks with the highest ‘Level of Concern’ or ‘LoC’ are translated to the a.s.r. risk priorities and relevant risk scenarios for the ORSA.
The following risks, outside the scope of the standard formula, are recognised by a.s.r. as being potentially material:

- Inflation risk;
- Reputation risk;
- Liquidity risk;
- Contagion risk;
- Legal environment risk;
- Model risk;
- Risks arising from non-insurance activities (non-OTSOs);
- Strategic risk;
- Emerging risk.

As part of the appropriateness assessment of the standard formula mitigating measures regarding these risks are identified and evaluated.

C.7 Any other information

C.7.1 Description of off-balance sheet positions

Not applicable for a.s.r. leven.

C.7.2 Reinsurance policy and risk budgeting

C.7.2.1 Reinsurance policy

When deemed effective in terms of capital relief versus costs incurred, a.s.r. enters into reinsurance agreements to mitigate Non-life insurance risks. Reinsurance can be taken out for each separate claim (per risk), for the accumulation of claims due to natural disasters or to human actions (per event), or for both these risks.

The level of retention in the various reinsurance contracts is aligned with the size and the risk profile of the underlying portfolios, taking account of the cost of reinsurance on the one hand, and of the risk that is retained on the other. By determining the retention, the impact on the statement of financial position is taken into account as well.

To limit risk concentration, reinsurance contracts are placed with various reinsurance companies. a.s.r. requires the counterparties to be rated at least single A. A mass lapse reinsurance contract was entered into by a.s.r. leven whereby the required capital for a mass lapse event is reduced by the proceeds that are to be expected from a reinsurance arrangement (Mass Lapse Cover).

C.7.2.2 Risk budgeting

The FRC assesses the solvency position and the financial risk profile on a monthly basis. Action is taken where appropriate to ensure the predefined levels in the risk appetite statement will not be violated.

C.7.3 Monitoring of new and existing products

This paragraph contains a description of group policy, which is applicable for the solo entity. Group Risk Management, Compliance, and Legal Affairs participate in the product approval committee (PARP). All these departments evaluate whether risks in newly developed products are sufficiently addressed. New products need to be developed in a way that they are cost efficient, reliable, useful and secure. New products must also be strategically aligned with a.s.r. leven’s mission to be a solid and trustworthy insurer. In addition, the risks of existing products are evaluated, as requested by the PARP, as a result of product reviews.
D Valuation for Solvency purposes

This chapter contains information regarding the valuation of the balance sheet items. For each material asset class, the bases, methods and main assumptions used for valuation for solvency purposes are described. Separately for each material class of assets a quantitative and qualitative explanation of any material difference between the valuation for solvency purposes and valuation in the financial statements. When accounting principles are equal or when line items are not material, some line items are clustered together.

Valuation of assets is based on fair value measurement as described below. Each material asset class is described in paragraph D.1. Valuation of technical provisions is calculated as the sum of the best estimate and the risk margin. This is described in paragraph D.2. Other liabilities are described in paragraph D.3.

Information for each material line item is based on the balance sheet below. For each line item is described:
- Methods and assumptions for valuation
- Difference between solvency valuation and valuation in the financial statements

The numbering of the line items refers to the comments below.

Based on the differences in this template a reconciliation is made between IFRS equity and Solvency equity.

<table>
<thead>
<tr>
<th>Balance sheet</th>
<th>31 December 2017 IFRS</th>
<th>Revaluation</th>
<th>31 December 2017 Solvency II</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Deferred acquisition costs</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2. Intangible assets</td>
<td>26</td>
<td>-26</td>
<td>-</td>
</tr>
<tr>
<td>3. Deferred tax assets</td>
<td>269</td>
<td>-269</td>
<td>-</td>
</tr>
<tr>
<td>4. Property, plant, and equipment held for own use</td>
<td>146</td>
<td>-</td>
<td>146</td>
</tr>
<tr>
<td>5. Investments - Property (other than for own use)</td>
<td>1,407</td>
<td>-</td>
<td>1,407</td>
</tr>
<tr>
<td>6. Investments - Equity</td>
<td>4,299</td>
<td>-</td>
<td>4,299</td>
</tr>
<tr>
<td>7. Investments - Bonds</td>
<td>16,907</td>
<td>-</td>
<td>16,907</td>
</tr>
<tr>
<td>8. Investments - Derivatives</td>
<td>2,640</td>
<td>-</td>
<td>2,640</td>
</tr>
<tr>
<td>9. Unit-linked investments</td>
<td>7,674</td>
<td>-</td>
<td>7,674</td>
</tr>
<tr>
<td>10. Loans and mortgages</td>
<td>9,757</td>
<td>1,986</td>
<td>11,743</td>
</tr>
<tr>
<td>11. Reinsurance recoverables</td>
<td>189</td>
<td>11</td>
<td>200</td>
</tr>
<tr>
<td>12. Cash and cash equivalents</td>
<td>2,753</td>
<td>-</td>
<td>2,753</td>
</tr>
<tr>
<td>13. Any other assets, not elsewhere shown</td>
<td>586</td>
<td>8</td>
<td>594</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>46,653</strong></td>
<td><strong>1,710</strong></td>
<td><strong>48,363</strong></td>
</tr>
<tr>
<td>14. Technical provisions (best estimates)</td>
<td>28,796</td>
<td>1,223</td>
<td>30,019</td>
</tr>
<tr>
<td>15. Technical provisions (risk margin)</td>
<td>-</td>
<td>1,563</td>
<td>1,563</td>
</tr>
<tr>
<td>16. Unit-linked best estimate</td>
<td>9,804</td>
<td>-2,061</td>
<td>7,743</td>
</tr>
<tr>
<td>17. Unit-linked risk margin</td>
<td>-</td>
<td>92</td>
<td>92</td>
</tr>
<tr>
<td>18. Pension benefit obligations</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>19. Deferred tax liabilities</td>
<td>-</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>20. Subordinated liabilities</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>21. Other liabilities</td>
<td>3,816</td>
<td>-</td>
<td>3,816</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td><strong>42,416</strong></td>
<td><strong>846</strong></td>
<td><strong>43,262</strong></td>
</tr>
<tr>
<td><strong>Excess of assets over liabilities</strong></td>
<td><strong>4,237</strong></td>
<td><strong>864</strong></td>
<td><strong>5,101</strong></td>
</tr>
</tbody>
</table>
This chapter contains also the reconciliation between the excess of assets over liabilities to EOF.

<table>
<thead>
<tr>
<th>Reconciliation excess of assets over liabilities to Eligible Own Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>31 December 2017</strong></td>
</tr>
<tr>
<td><strong>IFRS equity</strong></td>
</tr>
<tr>
<td><strong>4,237</strong></td>
</tr>
<tr>
<td><strong>Revaluation assets</strong></td>
</tr>
<tr>
<td>i. Intangible assets</td>
</tr>
<tr>
<td>ii. Loans and mortgages</td>
</tr>
<tr>
<td>iii. Reinsurance recoverables</td>
</tr>
<tr>
<td>iv. Cash and cash equivalents</td>
</tr>
<tr>
<td>v. Any other assets, not elsewhere shown</td>
</tr>
<tr>
<td><strong>1,986</strong></td>
</tr>
<tr>
<td><strong>Revaluation liabilities</strong></td>
</tr>
<tr>
<td>i. Technical provisions (best estimates)</td>
</tr>
<tr>
<td>ii. Technical provisions (risk margin)</td>
</tr>
<tr>
<td>iii. Unit-linked best estimate</td>
</tr>
<tr>
<td>iv. Unit-linked risk margin</td>
</tr>
<tr>
<td>v. Subordinated liabilities</td>
</tr>
<tr>
<td>vi. Other liabilities</td>
</tr>
<tr>
<td><strong>11</strong></td>
</tr>
<tr>
<td><strong>8</strong></td>
</tr>
<tr>
<td><strong>Total gross revaluations</strong></td>
</tr>
<tr>
<td><strong>1,188</strong></td>
</tr>
<tr>
<td><strong>tax percentage</strong></td>
</tr>
<tr>
<td><strong>25%</strong></td>
</tr>
<tr>
<td><strong>Total net revaluations</strong></td>
</tr>
<tr>
<td><strong>891</strong></td>
</tr>
<tr>
<td><strong>Revaluation tax exemptions</strong></td>
</tr>
<tr>
<td>i. Goodwill</td>
</tr>
<tr>
<td><strong>-26</strong></td>
</tr>
<tr>
<td><strong>Solvency II equity</strong></td>
</tr>
<tr>
<td><strong>-</strong></td>
</tr>
<tr>
<td><strong>5,101</strong></td>
</tr>
<tr>
<td><strong>Own fund items</strong></td>
</tr>
<tr>
<td>i. Subordinated liabilities</td>
</tr>
<tr>
<td><strong>-</strong></td>
</tr>
<tr>
<td><strong>Eligible Own Funds Solvency II</strong></td>
</tr>
<tr>
<td><strong>5,101</strong></td>
</tr>
</tbody>
</table>

D.1 Assets

Valuation of most financial assets is based on fair value. In the paragraph below, this valuation methodology is described. For different line items will be referred to this method. In this paragraph line items 1 – 15 from the simplified balance sheet above are described.

D.1.1 Fair value measurement

In accordance with the Delegated Regulation, Solvency II figures are based on fair value. In line with the valuation methodology described in article 75 and further of the Solvency II directive and articles 9 and 10, the following three hierarchical levels are used to determine the fair value of financial instruments and non-financial instruments when accounting for assets and liabilities at fair value:

Level 1: Fair value based on quoted prices in an active market

Level 1 includes assets and liabilities whose value is determined by quoted (unadjusted) prices in the primary active market for identical assets or liabilities.

A financial instrument is quoted in an active market if:

- quoted prices are readily and regularly available (from an exchange, dealer, broker, sector organisation, third party pricing service or a regulatory body); and
- these prices represent actual and regularly occurring transactions on an arm’s length basis.
**Level 2: Fair value based on observable market data**
Determining fair value based on Level 2 involves the use of valuation techniques that use inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices of identical or similar assets and liabilities). These observable inputs are obtained from a broker or third-party pricing service and include:
- quoted prices in active markets for similar (not identical) assets or liabilities;
- quoted prices for identical or similar assets or liabilities in inactive markets;
- input variables other than quoted prices observable for the asset or liability. These include interest rates and yield curves observable at commonly quoted intervals, volatility, early redemptions spreads, loss ratio, counterparty default risks and default percentages.

**Level 3: Fair value not based on observable market data**
At Level 3, the fair value of the assets and liabilities is determined using valuation techniques for which significant inputs are not based on observable market data. In these situations, there can also be marginally active or inactive markets for the assets or the liabilities. The financial assets and liabilities in this category are assessed individually.

Valuation techniques are used to the extent that observable inputs are not available. The basic principle of fair value measurement is still to determine a fair, arm’s length price. Unobservable inputs therefore reflect management’s own assumptions about the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk). These inputs are generally based on the available observable data (adjusted for factors that contribute towards the value of the asset) and own source information. In the unlikely event that the fair value of a financial instrument cannot be measured, it is carried at cost.

**D.1.2 Assets per asset category**
The balance sheet reports specify different asset categories. In this section, we describe the valuation of each material asset category. The figures correspond to the extended balance sheet which has been reported as QRT S 2.01.

1. **Deferred acquisition costs**
a.s.r.’s accounting policy until and including 2014 was to capitalise commission fees for non-life and life insurance contracts and to amortise it over the period over which the relevant premiums are realised. With effect from 1 January 2015, all costs incurred to acquire insurance contracts (acquisition costs) are charged directly to the income statement, generally within one year. Furthermore, to ensure matching of premium earned and the commission paid within the Non-life segment the prepaid commissions are included in other assets and these expenses are incurred in line with the premium earned, generally within one year. For solvency purposes accrued assets are not recognised.

2. **Intangible assets**
The intangible assets related to goodwill and other intangible assets are not recognised in the Solvency II framework and are set to nil.

3. **Deferred tax assets**
The basis for the DTA / DTL position in the IFRS balance sheet is temporary differences between fiscal and commercial valuation. This DTA / DTL position is the base for this line item on the Solvency II balance sheet, adjusted for Solvency II revaluations:
- The largest DTL mutation is mainly caused by the higher (valuation) mortgages and savings linked mortgages.

In accordance with the Delegated Regulation the DTA / DTL position is netted in the balance sheet. The balance sheet of a.s.r. contains a DTL.

The deferred tax effects involve a correction related to the fact that (most of) the revaluations as described in this chapter are gross of tax. The tax effect is calculated as 25%.

4. **Property plant, and equipment held for own use**
a.s.r. leven recognises property at market value, equal to Solvency II measurement.
5. Investments - Property (other than for own use)

a.s.r. leven owns the following categories of investment property; the method for calculating their fair value has been added:

- Residential – based on reference transaction and discounted cash flow method (DCF method);
- Retail – based on reference transaction and income capitalisation method;
- Rural – based on reference transaction and DCF method;
- Offices – based on reference transaction and DCF method;
- Other – based on reference transaction and DCF method;
- Under construction - based on both DCF and income capitalisation method.

6. Investments – Equity

Valuation of listed equities is based on the level 1 method of the fair value hierarchy. Unlisted fixed-interest preference shares are valued based on the level 2 method of the fair value hierarchy. The valuation techniques for financial instruments start from present value calculations; derivatives are valued based on forward-pricing and swap models. The observable market data contains yield curves based on company ratings and characteristics of unlisted fixed-interest preference shares. The main non-observable market input for private equity investments is the net asset value of the investment as published by the private equity company (or partner).

Valuation of private equity investments is based on the level 3 method of the fair value hierarchy. The main non-observable market input for private equity investments is the net asset value of the investment as published by the private equity company (or partner).

7. Investments – Bonds

The valuation of these assets is consistent with the IFRS fair value hierarchy as described in paragraph D.1.1.

8. Investments – Derivatives

The valuation of these assets is consistent with the fair value hierarchy as described in paragraph D.1.1 The valuation of listed derivatives is based on the level 1 method of the fair value hierarchy. The valuation of unlisted interest rate contracts is based on the level 2 method of the fair value hierarchy. The valuation techniques for financial instruments start from present value calculations; derivatives are valued based on forward-pricing and swap models. The observable market data contains yield curves based on company ratings and characteristics of unlisted fixed-interest preference shares.

9. Unit-Linked investments

The valuation of these assets is consistent with the IFRS fair value hierarchy described in paragraph D.1.1

10. Loans and mortgages

The valuation of loans is based on the level 2 and level 3 (mortgages) method of the fair value hierarchy. The fair value of the loans is based on the discounted cash flow method. It is obtained by calculating the present value based on expected future cash flows and assuming an interest rate curve used in the market that includes an additional spread based on the risk profile of the counterparty. This asset category includes savings linked mortgages.

Many of the savings-linked mortgages that a.s.r. leven has sold in the past were combined with a mortgage loan from an external bank. This bank has undertaken to pay mortgage interest on the savings accrued in the insurance policy. To this end, the insurer transfers the premiums to a special deposit account with the bank. According to IFRS, both the insurance policy and the loan are measured at amortised cost. For the purpose of Solvency II, they are both measured at fair value, allowing for any securities the insurer receives on the funds deposited with the bank. The liability is measured separately (in accordance with the Delegated Regulation and the guidance provided by Dutch Central Bank).

The valuation method used to determine the fair value of a.s.r. leven’s mortgage portfolio bases the spread on the interest rate curve for discounting the mortgage portfolio cash flows on consumer rates. The valuation according to IFRS is based on amortised cost.

11. Reinsurance recoverables

Contracts that transfer a significant insurance risk from a.s.r. leven to third parties are accounted for as reinsurance contracts, and are classified as outgoing reinsurance.
The amounts that can be collected from reinsurers are estimated using a method that is in line with the reinsurance contract and the fair-value method for determining liabilities arising from reinsurance contracts described in Section D2.

Assets arising from reinsurance contracts are recognised under reinsurance contracts, except for current receivables from reinsurers, which are included under reinsurance receivables. At each reporting date, a.s.r. leven assesses whether objective evidence of impairment exists. If a reinsurance asset is impaired, its carrying amount is reduced to its recoverable amount. Therefore, current receivables from reinsurers are valued comparable with IFRS.

12. Cash and cash equivalents
The valuation of cash and cash equivalents is based on the level 1 method of the fair value hierarchy. Cash and cash equivalents include cash in hand, deposits held at call with banks, cash collateral and other short-term highly liquid investments with original maturities of three months or less.

13. Any other assets, not elsewhere shown
The valuation of these assets is based on the IFRS fair value hierarchy as described in paragraph Section D.1.1. Other assets include different investments and interest income, property developments, tax assets and accrued assets.

D.2 Technical provisions

D.2.1 Introduction
In this section, the policies regarding methodology and assumptions for the technical provisions are described. These liabilities arise from insurance contracts issued by a.s.r. leven that transfer significant insurance risks from the policyholder to a.s.r. leven.

In this paragraph line items 14-18 from the simplified balance-sheet above are described

D.2.2 Technical provisions methods
In this paragraph the methodology for calculating the technical provisions is described.

14 and 16. Technical Provisions and Unit – linked (best estimates)

Intrinsic Value
The intrinsic value is the net present value of projected cash flows from insurance contracts, i.e. benefits and claims, profit-sharing liabilities and costs less premiums. These cash flows are estimated using best estimate assumptions with respect to mortality, claims experience, lapse, expense and inflation. Where applicable, the participating features of the insurance contracts, such as profit sharing, are taken into account in the future cash flows.

The cash flows are discounted using the term structure of risk-free interest rates (including volatility adjustment) as prescribed under Solvency II for the valuation of underwriting liabilities. The best estimate assumptions regarding mortality and longevity include recent trend assumptions for life expectancy in the Netherlands, as provided by the Dutch Actuarial Association.

In unit-linked contracts, the best estimate equals the fund value of the contract less the net present value of future margins on mortality and expense. For unit-linked contracts with a guaranteed minimum benefit on maturity the best estimate is increased with the loss on maturity date because of this guarantee if a loss occurs in the best estimate scenario.

Time value of options and guarantees
The TVOG is calculated using stochastic techniques with respect to interest scenario’s. The time value of options and guarantees (TVOG) – payment guarantees connected to profit-sharing liabilities in particular – is added to the expected value.

The valuation of a guarantee on maturity value in some index-linked and unit-linked policies is calculated policy by policy, with a closed form methodology that is based on the stochastic Black Scholes formula. The TVOG is equal to this value less the intrinsic value that has already been recognised in the expected value.
The value of other options and guarantees (for policies with profit sharing) is based on 1.000 interest scenarios. This value is explicitly determined using stochastic methods and concerns the costs associated with the granted financial options and guarantees, such as profit-sharing, to the extent that they have not been recognised in the expected value. In other words, this concerns the time value of these options; their intrinsic value has already been recognised in the expected value.

15. and 17. Technical Provisions and Unit – linked (risk margin)

The risk margin is determined using the Cost of Capital (CoC) method, using a Cost-of-Capital rate of 6%, in line with the Delegated Regulation. The risk margin is based on the Solvency Capital Requirement (SCR) of all insurance risks, operational risk, unavoidable market risk (excluding interest rate risk) and counterparty default risk for reinsurance arrangements, SPVs and other material exposures which are closely related to insurance liabilities.

The SCRs involved are determined at the valuation date under the assumption that no VA is applicable. They are projected separately into the future using suitable risk drivers per risk group. These SCRs are aggregated in each future year, making allowance for the correlations between risks using correlation factors as define in the standard model.

In determining the risk margin, allowance is also made for diversification benefits between risk groups within a legal entity.

The risks that are factored into the risk margin are mortality risk, longevity risk, disability-morbidity risk, lapse risk, catastrophe risk, expense risk and operational risk.

Best estimate assumptions

The valuation date is the end date of the reporting period and the starting point for projecting. Assumptions are calculated on the presumption that a.s.r. will pursue its business as a going concern reflecting the organisation’s or industry’s most realistic view.

Assumptions are considered to be best estimates when they represent the mean or probability-weighted average of possible outcomes of an uncertain event. The assumptions distinguish between economic assumptions and operating assumptions:

Economic assumption
Volatilities and correlations:
- The volatilities are set for each asset category: equities, property and fixed income.
- The correlations are set between each of the asset categories.

Expense inflation
Inflation is used as long-term expense inflation. Inflation is expressed as a curve and based on available and liquid market instruments for price inflation plus a weighted spread for the main types of expenditures. The reference for the inflation curve is based on the European inflation swap sourced from Bloomberg with ticker EUSWIT.

Spreads for most categories are based on their relative size in the Dutch Harmonized Index for Consumer Prices (HICP). The spread for the category salaries is based on the historical wage inflation in the Dutch insurance industry over the last ten years. The inflation curve is set every quarter. At year end, the inflation curve is based on a reference date (month before valuation date). The spreads are set at least once a year. At the valuation date, 31 December 2016, the expense inflation was set 1.74% (inflation curve: 1.66%; spread: 0.08%).

Operating assumptions
Operating or non-economic assumptions generally capture risks directly related to movements and uncertainty as a result of underwriting. Operating assumptions are generally based on analyses of recent experience. The goal is to make a best estimate of future experience, but staying cautious if there is broad scope for judgment. Operating assumptions are specific to the entity and rely on a combination of analysis of past experience and assessments of future trends. The operating assumptions are updated once a year. Operating assumptions are set by the product lines.

Mortality, longevity
The principles underlying mortality are two-fold: assumptions for developments in the mortality of the average population and assumptions for developments in the difference between the mortality rate of insured persons and the general population (mortality experience).
a.s.r. leven bases its assumptions for developments in the mortality rate of the general population on recent external life expectancy tables. As of the third quarter of 2016 this is based on ‘Prognosetafel AG 2016’.

a.s.r. leven considers Prognosetafel AG 2016 the best table for forecasting the mortality rate of the Dutch population. It is the most recent life expectancy table and it is based on the latest academically validated techniques.

Depending on the portfolio, the experience factors for the mortality rate among insured persons are derived from market data or own portfolio observations. These factors, which are broken down by age and gender, concern the mortality rate measured in insured amounts.

**Surrenders, lapses, paid-up**

A policy is assumed to become paid-up when the policyholder decides to terminate the contractual payments before the end of the policy term. A policy is assumed to be surrendered/lapsed when the policyholder decides to terminate the contract before the end of the policy term and agrees to receive the applicable contractually agreed surrender benefits.

In the product lines Life Individual and Funeral, the principles for lapses and early surrenders were determined based on:

- the elapsed duration of the policy.
- a series of historical observations for each system of records and by type of product.

On this basis, frequencies were extrapolated for the surrender of regular premium policies, conversion of regular premium policies into paid-up policies, surrender of paid-up policies and surrender of single premium policies. The surrender pattern for individual unit-linked portfolios has been subject to a different pattern since the miss-selling of such policies came to light in 2010. The determination of best estimate lapse rates for unit linked policies is based on the usual statistical methods, including back testing, taking into account the increased lapse after 2010 but with special attention to the most extreme years in the historical data.

Pension policies do not usually lend themselves to lapses and early surrender. The pension contracts and/or master agreements that a.s.r. leven signs with employers can be terminated only at the expiry date of the contract. Only then can a policy be renewed, converted into a paid-up policy or transferred.

**Expenses**

The total of expenses allocated to modelled insurance activities in scope represents the actual expenses for the reporting period. They include direct operating expenses, local overhead expenses as well as investment expenses and group head office expenses. Expenses allocated to modelled business covers all expenses incurred to manage the total business, including investments in current systems required to support that business.

Investment expense assumptions are set per asset class as a percentage of the underlying market value. These assumptions are based on the actual incurred expenses and observed market values in the reporting period. The modelled investment expenses per asset class are in principal equal to the applicable investment expense assumption multiplied with the projected market value of assets allocated to the projected technical provision. Investment expenses related to managing assets that have already been deducted from related service fees are not included in the expenses. Investment expense that is already included in the valuation of the asset, which is the case for mortgages, are not included in the valuation of the best estimate.

The maintenance expense assumption is set before information about the actual expenses is available. The assumption is based on available data from the first two quarters of 2017 and an estimate of the expenses incurred in the remaining period of 2017. The expenses related to the insurance portfolio are divided between acquisition and maintenance expenses according to their nature. Projected maintenance expenses include expense inflation.

The maintenance costs are divided into fixed costs, partially variable costs, variable costs and highly variable costs. Highly variable costs are considered to be scalable. On the other hand, the fixed costs are considered not to be scalable with a maximum. It is not realistic to assume that the remaining policies have to carry exponential costs. It is not possible to use a fixed component combined with a maximum in the used projection system. Therefore, the choice has been made to include the fixed component using a fixed spread which has been added to the inflation rate. These fixed spreads are determined for every product line separately. The ratio of the fixed to variable costs, the maximum of the fixed costs and the run-offs of the portfolio are used to determine these fixed spreads.
Expected or anticipated expense reductions, e.g. because of productivity gains, are excluded from the calculations beyond what has been achieved in the current reporting period. Recurring expenses include development costs when they are recurrent and arise to safeguard the ability of the total business to continue as a going concern. These development costs are typically run off over a shorter term than other recurring expenses. These current costs are included for the estimated duration.

**Expense allocation**
Costs are allocated in line with IFRS financial statements. Costs are carefully allocated using cost apportionment keys. This also applies to the cost allocations to the various products. Cost allocation is documented and reported.

**Profit sharing/bonus rate**
Some of the portfolio is subject to profit-sharing. The portfolio has been divided into groups with similar profit-sharing systems and rules. The time value and intrinsic value of any profit-sharing option is calculated for each group (model point).

**Renewal assumptions**
The renewal assumption for the collection commission has been determined for each portfolio based on the accounting records for 2016. The recognised collection commission is divided by gross premiums.

**Morbidity and Disability**
The assumption for disability-morbidity has been determined for each portfolio based on the accounting records for Q3 2017 and prior years. The provision, premiums, benefits and results relating to disability-morbidity have been used to define the assumption.

**Risk-free yield curve**
The basis for the reference rate of the best estimate is the swap rate at the date of valuation (31 December 2017). The following adjustments have been made to the swap curve:
- Reduction by ten basis points to account for counterparty default risk (31 December 2017: 10 bps);
- Extrapolation from year 20 to the ultimate forward rate of 4.2% in year 60 using the Smith-Wilson extrapolation method;
- Inclusion of a volatility adjustment of 4 basis points, as provided by EIOPA, to the zero rates for the first 20 years (31 December 2016: volatility adjustment 13 bps).

**Impact volatility adjustment**
a.s.r. leven applies the volatility adjustment for discounting cash flows to determine the best estimate and in determining the Required Capitals for the SCR. In the next table the impact is shown of this volatility adjustment on the financial position and own funds of a.s.r.

<table>
<thead>
<tr>
<th>Impact of applying VA = 0 bps</th>
<th>VA = 4 bps</th>
<th>VA = 13 bps</th>
<th>VA = 0 bps</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 December 2017</td>
<td>31 December 2016</td>
<td>31 December 2017</td>
<td>31 December 2016</td>
<td>31 December 2017</td>
</tr>
<tr>
<td>TP</td>
<td>39,418</td>
<td>40,732</td>
<td>39,577</td>
<td>41,293</td>
</tr>
<tr>
<td>SCR</td>
<td>2,741</td>
<td>2,654</td>
<td>2,754</td>
<td>2,697</td>
</tr>
<tr>
<td>MCR</td>
<td>1,053</td>
<td>1,022</td>
<td>1,058</td>
<td>1,039</td>
</tr>
<tr>
<td>Basic own funds (total)</td>
<td>5,101</td>
<td>4,825</td>
<td>4,982</td>
<td>4,405</td>
</tr>
<tr>
<td>Eligible own funds</td>
<td>5,101</td>
<td>4,825</td>
<td>4,954</td>
<td>4,272</td>
</tr>
</tbody>
</table>

Table: impact of applying VA = 0 bps

**D.2.3 Level of uncertainty**
a.s.r. leven distinguishes between two sources of uncertainty with regard to the level of the technical provisions. These sources are model risk and process risk. The uncertainty associated with these risks has been mitigated as described below.

**Process risk**
The process risk is mitigated using the Management in Control framework (MIC), which creates a reasonable degree of assurance as to the reliability of financial reports. Key controls have been identified and implemented for the calculation process. In addition, the effectiveness of the MIC framework is verified by an independent party
and supplementary checks are performed where needed. As part of MIC or the additional checks, the four-eye principle has demonstrably been applied to the calculation of the technical provision.

**Model risk**
The second risk that a.s.r. has identified in relation to the technical provisions is model risk. Regular procedures have provided adequate certainty with regard to this risk. To illustrate, a model validation process mitigates the risk of material misstatements or that key facts have been omitted. In addition, FRM, in its role as the second line of defence, performs an independent internal review of the technical provisions as described in the previous phase.

**D.2.4 Reinsurance and special purpose vehicles (SPVs)**
Contracts that transfer a significant insurance risk from a.s.r leven to third parties are accounted for as reinsurance contracts, and are classified as outgoing reinsurance.

a.s.r. leven has reinsured a substantial part of all underwriting risk of a certain group pension contract on a proportional basis. In addition, a reinsurance on a stop-loss basis is applicable to the risk of a mass lapse event for a selected part of the portfolio with considerable lapse risk. A claim is paid out by the reinsurer if the one-year mass lapse exceeds 15%.

a.s.r. leven does not make use of special purpose vehicles (SPVs).

**D.2.5 Technical provisions**
In this table a reconciliation is made between the Solvency II and the IFRS valuation of provisions. Solvency figures are part of the Balance Sheet S.02.01. The next paragraph describes a brief explanation of these differences.

<table>
<thead>
<tr>
<th>Technical provisions: IFRS versus Solvency II</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 December 2017</td>
</tr>
<tr>
<td>Life</td>
</tr>
<tr>
<td>Best estimate</td>
</tr>
<tr>
<td>Risk margin</td>
</tr>
<tr>
<td>Technical provision</td>
</tr>
<tr>
<td>Index-linked and unit-linked</td>
</tr>
<tr>
<td>Best estimate</td>
</tr>
<tr>
<td>Risk margin</td>
</tr>
<tr>
<td>Technical provision</td>
</tr>
</tbody>
</table>

**D.2.6 Reconciliation between IFRS and Solvency II**
Under Solvency II, the technical provisions are calculated using a different method compared to IFRS. In this section the reconciliation between IFRS and Solvency II is described per business line.

**Life**
The IFRS technical provisions are determined with assumptions that are equal to the assumptions underlying the premium. For longevity risk additional provisions are set up. Also under IFRS provisions are set up for realised capital gains, interest rate swaptions and shadow accounting (unrealised gains on bonds). In case that the policy-duration exceeds the length of the premium-paying period, a provision for administrative expenses is set up for the period where no premiums are due.'

The Solvency II provision consists of a best estimate and a risk margin. The best estimate includes a time value of option and guarantees with respect to profit sharing. The best estimate is determined on best estimate assumptions and covers future benefits and future expenses to the extent that they are not covered by future premiums.

**Index-linked and unit-linked**
The technical provision for unit-linked policies under IFRS equals the fund value of the underlying assets of the units. Extra provisions are set up in case of minimum guarantees on the maturity-value provided by a.s.r. leven and for the transparency issue.
The Solvency II technical provision consists of the fund value less the net present value of the best estimate value of the future profits. For policies where a guarantee with respect to the maturity-value is given, the value of the guarantee is determined on a market consistent basis. Also for the transparency issue some provision is set up.

**Technical provisions Pension scheme a.s.r.**

For a.s.r. leven the pension scheme of a.s.r.-employees is involved on the balance sheet under technical provision life. On a.s.r. group level this scheme is mentioned as an employee benefit obligation.

**D.3 Other liabilities**

**D.3.1 Valuation of other liabilities**

In line with the valuation of assets, the accounting principles for other liabilities used in the Pillar III reports are generally also based on the IFRS as adopted by the EU. Any differences between the valuation methods for IFRS and Solvency II purposes are addressed in detail per liability category. In this paragraph line items 20 – 23 from the simplified balance-sheet above are described.

**18. Pension benefit obligations**

Not applicable for a.s.r. leven.

On group level a.s.r. has in place a number of defined benefit plans for own staff. Current service costs for the OTSO’s are included in operating expenses.

**19. Deferred tax liabilities**

See 3. Deferred tax assets.

**20. Subordinated liabilities**

Not applicable for a.s.r. leven.

**21. Other liabilities**

Other Liabilities contains different small line items:

- **Debts owed to credit institutions**
  
  The valuation of these liabilities follows the Solvency II fair value hierarchy as described in paragraph D.1.1.

- **Financial liabilities other than debts owed to credit institutions**

  The valuation of these liabilities follows the IFRS fair value hierarchy as described in paragraph D.1.1.

  Subsequent valuation has to be consistent with the requirements of Article 75 of the Solvency II directive. Therefore, no subsequent adjustments to take account of the change in own credit standing shall take place. However, adjustments for changes in the risk-free rate must be accounted for subsequently. This means that the subordinated loans are discounted using the risk-free rate plus a credit spread at inception of the liability.

- **Insurance and Intermediaries payables**

  The valuation of these liabilities follows the Solvency II fair value hierarchy as described in paragraph D.1.1. This category is subject to the same valuation as the asset category Cash and Cash equivalents.

- **Trade payables (non-insurance)**

  The valuation of these liabilities follows the Solvency II fair value hierarchy as described in paragraph D.1.1. This category is subject to the same valuation as the asset category receivables.

- **Any other liabilities not disclosed elsewhere**

  The valuation of these liabilities follows the Solvency II fair value hierarchy as described in paragraph D.1.1. This item consists primarily of tax payables.

- **Contingent liabilities**

  Contingent liabilities are defined as:

  - a possible obligation depending on whether some uncertain future event occurs, or
  - a present obligation but payment is not probable or the amount cannot be measured reliably.
Contingent liabilities are recognised on the IFRS balance sheet if there is a probability of >50% that the contingent liability leads to an ‘outflow of resources’. These liabilities are also recognised on the Solvency II balance sheet.

Solvency II prescribes that all contingent liabilities be recognised on the Solvency II balance sheet. This covers cases where the amount cannot be measured reliably or when the probability is <50%. For these cases, a regular process is in place to determine whether contingent liabilities should be recognised on the Solvency II balance sheet.

The a.s.r. leven Solvency II capital ratio does not include contingent liabilities.

**D.3.2 Reconciliation from Solvency II equity to EOF**

The differences described in the above sections are the basis for the reconciliation of IFRS equity to equity Solvency II. To reconcile from Solvency II Equity to EOF, the following movements are taken into consideration:

**Subordinated liabilities**

Not applicable for a.s.r. leven.

**Foreseeable dividends and distributions**

Not applicable for a.s.r. leven.

**Deductions for participations in financial and credit institutions**

Participations in financial and credit institutions exceeding 10% are not supervised by the Solvency II framework and are therefore excluded from the eligible own fund items.

**Tier 3 Limitations**

In accordance with the Delegated Regulation EOF is divided in tiering components. There are boundary conditions related to the size of these components. Excess of this limits results in capping of EOF. For a.s.r. leven capping does not apply per Q4 2017.

**D.4 Alternative methods for valuation**

a.s.r. leven does not apply alternative methods for valuation.

**D.5 Any other information**

Not applicable for a.s.r. leven.
The solvency ratio stood at 186% as at 31 December 2017 after distribution of the proposed dividend of €127 million and based on the standard formula as a result of €5,101 million EOF and €2,741 million SCR.
An extensive explanation of the reconciliation from IFRS equity to Solvency II eligible own funds was presented in section D.3.2.

E.1 Own funds

E.1.1 Capital management objectives

Management
Overall capital management is administered at group level. Capital generated by operating units and future capital releases will be allocated to profitable growth of new business or repatriated to shareholders, beyond the capital that is needed to sustain commercial capital levels at management’s targets. a.s.r. actively manages its in-force business, which is expected to result in substantial free capital generation over time. Additionally, business improvement and balance sheet restructuring should improve the capital generation capacity while advancing the risk profile of the company. The legal entities are capitalised separately, and excess capital over management’s targets are intended to be up-streamed to the holding company to the extent local regulations and within the internal risk appetite statement allow.

Objectives
a.s.r. is committed to maintain a strong capital position in order to be a robust insurer for its policyholders and other stakeholders. The objective is to maintain a solvency ratio well above the minimum levels as defined in the risk appetite statements and above the relevant solvency targets. Sensitivities are periodically performed for principal risks and annual stress tests are performed to test a.s.r.’s robustness to withstand moderate to severe scenarios. An additional objective is to achieve a combination of a capital position and a risk profile that is at least in line with a ‘single A’ rating by Standard & Poor’s.

The SCR is reported on a quarterly basis and proxies are made on a monthly basis. The internal minimum solvency ratio for a.s.r. leven as formulated in the risk appetite statement is 120%. The lower limit solvency target is 140%. The management target for the solvency ratio is above 160%. The solvency ratio stood at 186% at 31 December 2017, which was comfortably higher than the internal requirement of 120% and the management target of 160%.

In accordance with a.s.r.’s dividend policy, the liquidity of the underlying entities is not taken into account for the liquidity position of the group. However, the capital is recognised in the capital position of the group, since a.s.r. has the ability to realise the capital of this OTSO, for example by selling the entity.

The table below shows how the eligible own funds of a.s.r. leven relate to the different capital targets.
**E.1.2 Tiering own funds**

The table below details the capital position of a.s.r. leven as at the dates indicated. With respect to the capital position, Solvency II requires the insurers to categorise own funds into the following three tiers with differing qualifications as eligible available regulatory capital:

- Tier 1 capital consists of Ordinary Share Capital and Reconciliation reserve.
- Tier 2 capital consists of ancillary own funds and basic Tier 2. Ancillary own funds consist of items other than basic own funds which can be called up to absorb losses. Ancillary own fund items require the prior approval of the supervisory authority. a.s.r. leven has no ancillary own fund items.
- Tier 3 consists of Deferred tax assets.

The rules impose limits on the amount of each tier that can be held to cover capital requirements with the aim of ensuring that the items will be available if needed to absorb any losses that might arise.

<table>
<thead>
<tr>
<th>Eligible Own Funds to meet the SCR</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 capital - unrestricted</td>
<td>5,101</td>
<td>4,428</td>
</tr>
<tr>
<td>Tier 1 capital - restricted</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tier 2 capital</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tier 3 capital</td>
<td>-</td>
<td>397</td>
</tr>
<tr>
<td>Eligible own funds to meet SCR</td>
<td>5,101</td>
<td>4,825</td>
</tr>
</tbody>
</table>

**E.1.3 Own funds versus MCR**

The MCR calculation is based on the standard formula.

<table>
<thead>
<tr>
<th>Eligible Own Funds to meet the MCR</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 capital - unrestricted</td>
<td>5,101</td>
<td>4,428</td>
</tr>
<tr>
<td>Tier 1 capital - restricted</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tier 2 capital</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tier 3 capital</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Eligible own funds to meet MCR</td>
<td>5,101</td>
<td>4,428</td>
</tr>
</tbody>
</table>

According to Delegated Regulation article 248 to 251 the MCR of a.s.r. leven is calculated as a linear function of premiums, technical provisions and capital at risk.
E.1.4 Description of grandfathering
There is no grandfathering at a.s.r. leven.

E.2 Solvency Capital Requirement

Capital requirement
The required capital stood at € 2,740 million per 31 December 2017. The required capital (before diversification) consists for € 2,256 million out of market risk and the insurance risk amounted to € 1,427 million as per 31 December 2017.

a.s.r. leven complied during 2017 with the applicable externally imposed capital requirement. The table below presents the solvency ratio as at the date indicated.

<table>
<thead>
<tr>
<th>Eligible Own Funds Solvency II</th>
<th>31 December 2017</th>
<th>31 December 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required capital</td>
<td>€ 2,741</td>
<td>€ 2,654</td>
</tr>
<tr>
<td>Solvency II ratio</td>
<td>186%</td>
<td>182%</td>
</tr>
</tbody>
</table>

Under Solvency II it is permitted to reduce the required capital with the mitigating tax effects resulting from a 1-in-200-year loss (‘Shock loss’). There is a mitigating tax effect to the extent that the Shock loss (BSCR + Operational risk) is deductible for tax purposes and can be compensated with taxable profits. This positive tax effect can only be taken into account when sufficiently substantiated (‘more likely than not’). a.s.r. included a beneficial effect on its solvency ratio(s) due to the application of the LAC DT. The LAC DT benefit is € 553 million.

Relevant regulation and current guidance (Delegated Regulation, Level 3 guidelines, Dutch Central Bank Q&As and IAS12) is taken into account in the development of the LAC DT methodology.

Since 2016 a.s.r. uses an advanced model for the LAC DT of a.s.r. leven and a ‘basic’ model for the other OTSO’s. In the advanced model also future fiscal profits are used to underpin the LAC DT, while in the basic model no future profits are used. Both models are and will be updated in case constrained by additional guidance or legislation provided.

The a.s.r. leven solvency ratio does not include any contingent liability potentially arising from any of the current and/or future legal proceedings in relation to unit-linked insurance contracts or for other products sold, issued or advised on by a.s.r. leven’s insurance subsidiaries in the past, the reason being that it is impossible at this time to make reliable estimates of the number of expected proceedings, possible future precedents and the financial impact of current and possible future proceedings.

Standard & Poor’s confirmed the single A rating of ASR Levensverzekering N.V. on August 10, 2017.

<table>
<thead>
<tr>
<th>Ratings</th>
<th>Type</th>
<th>Rating</th>
<th>Outlook</th>
<th>Rating &amp; outlook since</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASR Levensverzekering N.V.</td>
<td>CCR</td>
<td>A</td>
<td>Stable</td>
<td>August 23, 2012</td>
</tr>
<tr>
<td>ASR Levensverzekering N.V.</td>
<td>IFSR</td>
<td>A</td>
<td>Stable</td>
<td>August 23, 2012</td>
</tr>
</tbody>
</table>

CCR: counterparty credit rating
IFSR: insurer financial strength rating

Rating reports can be found on the a.s.r. website: http://asrnl.com/investor-relations/ratings.
E.3 Use of standard equity risk sub-module in calculation of Solvency Capital Requirement

Transitional measure for equity risk applies for shares in portfolio at 01-01-2016. The SCR equity shock is 22% at 01-01-2016, and linear increasing to (i) 39% + symmetric adjustment for type I shares and (ii) 49% + symmetric adjustment for type II shares.

E.4 Differences between Standard Formula and internal models

a.s.r. solvency is governed by a standard formula, rather than the self-developed internal model. The Executive Board believes that this should enhance transparency and consistent interpretation.

E.5 Non-compliance with the Minimum Capital Requirement and non-compliance with the Solvency Capital Requirement

As a.s.r. leven 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, no further information is included here.

E.6 Any other information

E.6.1 Dividend policy and capital management actions

a.s.r. has formulated its dividend policy in line with its current strategy. a.s.r. leven intends to pay an annual dividend that creates sustainable long-term value for its shareholders. a.s.r. leven aims to operate at a solvency ratio, calculated according to the standard formula, above a management threshold level. This management threshold level is currently defined as above 160% of the SCR.

In general, a.s.r. expects to not pay cash dividends if the a.s.r. solvency ratio (calculated according to the standard formula) falls below 140%. a.s.r. leven currently intends to consider investing capital above the solvency ratio (calculated according to the standard formula) of 160% with the objective of creating value for its shareholders. If and when a.s.r. leven operates at a certain level safely above the 160%, and a.s.r. leven assesses that it cannot invest this capital in value creating opportunities for a prolonged period of time, a.s.r. leven may decide to return (part of this) capital to shareholders. If a.s.r. leven elects to return capital, it intends to do so in the form that is efficient for shareholders at that time.

Events after the balance sheet date

In September 2017, a.s.r. announced the acquisition of 100% of the shares in Generali Nederland N.V., an insurer focusing on non-life and life insurances. The closing for the transaction of Generali Nederland took place on 5 February 2018. The impact on the a.s.r. leven Solvency II ratio is expected to decrease by 5%-points.