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Valuation of Life Insurance contracts: a comparison of IFRS 17 and Solvency II with Local GAAP

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"Necessitas dat legem, non ipsa accipit"
Publilius Sirus
Need imposes Law, it does not accept it

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Introduction

Since the start of the globalization process across the financial industry, countries have been moving towards International Financial Reporting Standards (IFRS) for accounting and financial reporting in order to offer a more comparable picture of their balances and companies as a whole. Indeed, the objective of financial statements is to provide information about the financial position and performance of an entity that is useful to a wide range of users in making economic decisions, so financial statements must disclose information so as to give stakeholders the chance to assess the clearest picture of the business they are involved in.

For what concerns financial institutions, such as banks and insurance companies, there is a higher degree of compliance they have to deal with: actually, they face a variety of risks that must be assessed, controlled and managed in the most efficient way to prevent financial distress and crises. For this reason, these financial organizations have become subject to two different sets of regulatory accords with the aim of improving regulation, supervision and risk management within the two financial sectors: Basel I, II and III for banks, and Solvency I and II for insurance companies.

The insurance sector, generally perceived as subject to distinct and fragmented accounting practices, should benefit most from a coherent accounting framework that ensures comparable information amongst different insurers within the European Economic Area (EEA) and globally. This is so because global comparability of financial information fosters international activities and an efficient allocation of capital and resources in general.

In Italy as in other countries, the insurance industry has recently been involved in a massive disruption of locally established standards and rules towards a more transparent and harmonized way of disclosing financial information due to the implementation of Solvency II and the prescription of IFRS 17 application from 2022. Both reform sets encourage comparability and transparency from a regulatory and accounting perspective for insurers, but there are important differences, starting from the objectives behind their application.

While Solvency II has been adopted by Europe and therefore Italy from January 2016, IFRS 17, published on May 2017, is going to be effective for annual reporting periods after January 1, 2022, with earlier application along with IFRS 9 and IFRS 15 implementation for some companies. The inspirational principles behind the two projects are similar: to create a new framework, from either a normative or an accounting perspective, more modern, complete and risk-oriented within the EU with the aim of harmonizing and making the entire sector more transparent and uniform across the different jurisdictions.

Both schemes entail a shift in paradigm and a complex set of concurrent changes in financial statements and process organization of the companies, which have required a long journey of preparation for institutions and regulatory bodies. As IVASS guide to Solvency II states, "a supervisory system, especially if it is of continental dimensions, is like a large transatlantic ship that, to change route, needs an ample period of time and space to maneuvering that requires the entire crew to not only take the right route, but also to search for it while the weather outside is inclement and the ocean buffets the ship."

From 2016, insurance companies have the duty of preparing two financial statements: the supervisory financial statement, compliant with Solvency II, and the accounting financial statement, following Italian GAAP for the individual statements and IFRS for the consolidated one. The choice of using the IFRS only for the consolidated financial statements was due to the absence of a sectoral standard, now represented by the IFRS 17, which will be the only guideline in preparing the accounting financial statements from 2021 on.

Among the main transformations attached to the IFRS 17, there are the different valuation techniques for the estimation of insurance contracts and their representation on the financial statements. Those imply the introduction of new accounting items and the modification of the way in which current items are presented in the balance sheet and income statement.

The purpose of this dissertation is to give a broad overview of the new financial reporting principle, focusing on the different valuation methods for the reserves for life insurance companies and the impact of these on their representation in most of the areas of financial statements, above all in Profit & Loss. The outline of the principle is going to be described on the basis of the comparison with the previously implemented IFRS 4 and Solvency II.

In the first chapter, the paper aims at describing the IFRS 17 from its definition of insurance contracts to its representation in the financial statement. The focus is on life insurance contracts. Given this picture of the principle, there will be depicted the similarities and differences with Solvency II standards and local GAAP in the second chapter.

In fact, the second chapter examines the extent to which the implementation of the standard is going to impact the information about the value of insurance obligations and information about the profitability of the company. The valuation methods of insurance obligations and the new structure of the income statement will be considered. The latter is going to result in a different reading of the operating income, also given by the

adoption of financial indicators, able to exemplify the magnitudes in the financial statement. The impact will be assessed from the accounting, audit and regulatory points of view, with a distinctive interview to Salvatore Rossi, the previous Senior Deputy Governor of the Bank of Italy and the President of the Italian Insurance Supervisory Authority, IVASS.

For what concerns the third chapter, one model from an insurance company data will be constructed with characteristics coherent to the insurance market. It follows an analysis and application of the valuation methods for life insurance obligations, according to the discussed standards: the main technique from IFRS 17 (the *Building Block Approach*), whose results are compared to IFRS 4. A sensitivity analysis will be performed in order to assess the variables which influence the valuation the most.

The effects on the financial results arising from the adoption of each of the methods will be discussed and conclusions about the consistency and applicability of the different principles will be drawn in the fourth and last chapter.

Chapter 1

The IFRS 17 main characteristics and challenges

1.1 The rationale behind the IFRS 17

1.1.1 Historical background

Twenty years ago, the process of renovating insurance regulation has been started either from a European perspective through the "Project Solvency" or from the wider "Project Insurance" sponsored by the International Accounting Standards Committee (IASC). The two supporting boosts highlight the need for a more coherent and internationally-viable insurance sector where there is a convergence of objectives between accounting practices and regulation.

Both projects have been planned on the same building blocks: the idea is to construct an accounting and regulatory framework more modern, complete, risk-oriented and harmonized within the European Union. The characteristics of this planned framework have the goal to allow the insurance sector to "keep up with the times (and other markets)" in order to make it more transparent and understandable.

The most important supranational bodies which have been promoting the ambitious harmonizing process are the European Economic Community (EEC) first, the European Union (EU) then, and the International Accounting Standards Committee (IASC), currently denominated International Accounting Standards Board (IASB).

The coordinating role of the European Commission could be divided into two distinct phases, which coincide with two different periods even in chronological terms. The first step is identified in the synchronization of accounting treatments according to the application of Directive IV (78/660/EEC), right after the first transposition of the directives enacted by the European Economic Community (EEC) into national legislative frameworks. Directive IV represents an important milestone in the process of accounting coordination within the Member States at the European level, enhanced by the further Directive VII (83/349/EEC) and Directive VIII (84/253/EEC). Each of the directives took an additional step towards the harmonization, although some discrepancies still existed due to the different application methods, left to the specific judgement of national authorities.

The second phase of the coordinating action by the European Union could be traced back to 1995: the Commission decided to channel its efforts towards the analysis of coherence between the accounting standards prescribed by Directive IV and International Accounting Standards (IAS) promulgated by the IASC. This choice was guided by the need of many European companies to enlarge their business and research for capital outside the European Union, thus the need to converge to the same measurement methods so as to allow comparability from investors' perspective.

On the other hand, the IASC was founded in 1973 with the purpose of improving and harmonizing the procedure of arrangement of financial information and companies balance sheet in particular, through the processing and publishing of international accounting standards to be applied widely across the globe. The organization became soon the European *alter ego* of the FASB[1], with which the IASC has in common role and structure.

The adoption of the International Accounting Standards (IAS) was at first spontaneous by many public companies and surely influenced at the national level by professional organizations adherent to the Committee which guided the works. In 1995, the IOSCO[2] (International Organization of Securities Commissions) recognized formally the accounting harmonization process and positively valued the standards promulgated by the IASC. This acknowledgement permitted the recognition and acceptance of the IAS within international financial markets, hence designating the birth of a common accounting language, even if limited to public companies.

In the early 2000s, the IASC was profoundly restructured and converted into the IASB. The latter is a private organization, based in London, supported by the contributions of the most important companies in the industrial and financial sector, central banks, consulting companies and professional associations. After it has been appointed for the institutional role of defining a series of internationally-recognized and used accounting principles, the Board has adopted all previously-issued *International Accounting Standards* (IAS) and has developed others under the denomination of *International Financial Reporting Standards* (IFRS). From 2004, the IASB is actively involved, together with the FASB, in the convergence process of IFRS with national accounting principles both in Europe and in the other parts of the world.

1.1.2 The normative transition towards the IAS/IFRS in Europe

[1] The FASB (Financial Accounting Standards Board) was established in 1973 as a private regulatory foundation in the US for what concerns the accounting principles in the country. In particular, it was charged of the production of the *US Generally Accepted Accounting Principles* (GAAP).

[2] The IOSCO is an association of organizations regulating mainly stock exchanges and in general securities and futures markets.

An International Accounting Standard achieves legislative force at the European level when, subsequently the issuance by the IASB, it is examined and considered in its ability to preserve the guardianship of the public interest in Europe by the authorities working together with the European Commission which are the *European Financial Reporting Advisory Group* (EFRAG) and the *Accounting Regulatory Committee* (ARC). Therefore, the European Commission ratifies the decision, following the positive but not binding opinion of the European Parliament, and the Standard becomes lawful with the publication on the Official Journal of the European Union after twenty-one days.

The EFRAG is a private association whose mission is to develop and promote European views in the field of financial reporting. It ensures that those examinations are properly scrutinized in the process of standard-setting by the IASB and in related international discussions. On the one hand, the *European Financial Advisory Group* is entitled with the technical revision of the IFRS, which represents the first step in the approval.

On the other hand, the ARC is responsible for the second step of the endorsement at the political level: it approves and officially recognizes the new standard giving it full legitimacy. The *Accounting Regulatory Committee* is constituted by representatives of the European Union countries and is presided by the European Commission. It was established in accordance with the Article 6 of Regulation (EC) No 1606/2002[3] (from now on just "Regulation"). Its scope is to provide opinion to the European Commission on proposals adopting IFRSs under Article 3 of the Regulation.

The Regulation is the result of two previous communications of the European Commission in the context of the internationalization of accounting norms:

1. Communication EC No 508/1995: "*Accounting Harmonization: a new strategy vis-à-vis international harmonization*";
2. Communication EC No 359/2000: "*EU Financial Reporting Strategy: the way forward*".

The two were guided by three main norms which opened the path towards a more international standard-setting within the European Union, with a view on other Western capital markets (i.e. the US). Company law harmonization is based upon Article 54(3) (g) of the European Community Treaty of 1957. The Fourth Council Directive ((78/660/EEC)) had as objective the comparability and equivalence of financial information. Furthermore, the Seventh Council Directive (83/349/EEC) concerns the preparation of consolidated accounts.

[3] Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards, entered into force on 14 September 2002.

The two Directives were followed by two sectoral Directives, which contained derogations from the last two Directives necessary to consider the particular characteristics of the entities which the sectoral Directives addressed to. Actually, Council Directive 86/635/EEC and Council Directive 91/674/EEC dealt with the disclosure of financial information by banks and other financial institutions, and insurance companies, respectively.

All the Directives had a real positive impact on the quality of financial reporting, which facilitated the circulation of comparable financial information. It is a fundamental condition for the proper functioning of the Internal Market and a coadjutant to competition.

Communication EC No 508/1995 suggested a new approach: it consisted of "putting the EU weight behind the international harmonization process"[4] and ensuring "that existing international standards (IAS) are consistent with the Community's Directives and that IAS which remain to be formulated remain compatible with Community Law"[5]. The influence of the EU has improved consistency of application of agreed standards in the Member States, especially for consolidated accounts of groups of companies.

Successively, Communication EC No 359/2000 was fostered by the Lisbon European Council Conclusions[6], which underlined the necessity to build a transparent and an efficient capital market in order to promote growth and employment in the EU. The proposal of the communication was the requirement for all listed EU companies to prepare their consolidated accounts in accordance with one single set of accounting standards, specifically the International Accounting Standards (IAS), to be enacted at the latest from 2005 onwards. Transitional arrangements were determined together with the establishment of the two-tier endorsement mechanism, specified in Regulation (EC) No 1606/2002 (aka "Regulation", in this paper).

The Regulation required the proposal delivered by Communication EC No 359/2000: transparency and comparability of accounts of public companies was improved by the use of common accounting standards. This had the power to increase market efficiency and reduce the cost of raising capital for companies. It prescribed the permission or requirement, in accordance with the single Member States choice, to use IFRSs. It was mandatory for public companies when preparing their consolidated accounts. The right political oversight was ensured by the introduction of a new EU endorsement mechanism to give the IFRSs

[4] 14.11.1995, Brussels, COM(95) 508 final
[5] ibidem
[6] The European Council held a special meeting on 23-24 March 2000 in Lisbon to agree a new strategic goal for the EU in order to strengthen on main topics such as employment, economic reform and social cohesion.

enforceability within the EU. Commission Regulation (EC) No 1126/2008 seeks the endorsed IFRSs and related interpretations. The regulations have been frequently amended and in June 2015 the Commission adopted a report concerning the evaluation of the Regulation's action, concluding that it had been successful in improving the efficiency of capital markets and moreover heightening the transparency and comparability of financial statements.

The approval of International Accounting Standards was validated by the EU with Regulation No 1725 of 29 September 2003, through which all existing, at 14 September 2002, IAS and IFRS had been adopted, with the exception of IAS 32 and IAS 39, related to Financial Instruments. The following Regulation No 707 of 6 April 2004 modifies Regulation No 1725/2003, substituting the SIC Interpretation No 8[7] with IFRS 1 "*First-Time Adoption of International Financial Reporting Standards*". The regulation had the aim of regulating the transition methods towards the IAS/IFRS in the companies entitled to adopt them.

In 2004, three other regulations were delivered:

I. Regulation (EC) No 2086/2004, concerning the adoption of IAS 39 "*Financial Instruments: Recognition and Measurement*", in exception of some dispositions[8];
II. Regulation (EC) No 2236/2004 on the adoption of IFRS 4 "*Insurance Contracts*";
III. Regulation (EC) No 2237/2004 about the adoption of IAS 32 "*Financial Instruments: Presentation*".

The second regulation is the end of the first phase of what is known as "*Insurance Project*", started by the IASC in 1997 and culminating in the issuance of IFRS 17 in 2017.

1.1.3 The Insurance Project

The activity characterizing the insurance sector is an extremely complex endeavor, therefore the construction of a specific accounting structure for insurance companies has represented a challenge for standard-setters and institutions. The importance of such a creation guided in 1997 the launch by the IASC of a definite project for insurance companies named "*Insurance Project*", whose objective was finding a definition of a standard to be applicable within the Union capable of harmonizing the accounting treatment of insurance contracts through

[7] "*First-Time Application of IASs as the Primary basis of Accounting*". A SIC, now known as IFRIC, is an interpreting integration document to IAS/IFRS which provide guidance on financial reporting issues.
[8] The excluded provisions were the ones in contrast with IAS 32. The choice of disregarding the most controversial parts was taken in order to permit the on-time date of 1 January 2005. The debate involved the IASB, the European Central Bank, Supervisory Authorities and banking sector representatives. It concerned the dispositions about the accounting of the fair value of financial liabilities, the verification criteria on hedging transactions for financial instruments portfolios, and the possibility to apply *hedging accounting* for the financial backing of demand deposits.

the *fair value*[9] approach. Indeed, a generally accepted treatment for the accounting record of insurance contracts was not considered in any of the international accounting standards concerning financial instruments (i.e. IAS 32, 37, 38 and 39). Besides, the different methods used in the Member States were so significant not to allow a reliable comparison of information aimed at a financial analysis[10].

For this reason, in 1997 the IASC established a particular committee tasked with the insurance contracts topic, the *Insurance Steering Committee*, which was substituted, with the advent of the IASB, with another committee, the *Insurance Advisory Committee*, with analogous responsibilities.

In 2001, the IASB presented the *Draft Statement of Principles of Insurance Contracts* (DSOP) through which the Board plans to build the base of IFRS for insurance contracts. The principles included in the DSOP incorporated various comments and recommendations suggested by organizations both in the public and private sector, enclosed in a document published in 1999, "Insurance" Issues Paper published by the Steering Committee[11].

In May 2002, during a meeting, the IASB, realizing that deadline of 2005[12] was too ambitious to entirely complete the *Insurance Project*, proposed a compromise solution: the project is divided into two phases, as shown in Figure 1, which depicts the intermediate steps of the entire project.

Figure 1 – Insurance Project Iter (before the effective date deferral from 2021 to 2022 was defined)

Source: Blackrock, 2017

[9] IFRS 13 defines fair value as *the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price),* more on https://www.ifrs.org/issued-standards/list-of-standards/ifrs-13-fair-value-measurement/

[10] I. Avegno, "Assicurazioni e IFRS: dallo IASB norme transitorie", *Amministrazione & Finanza*, n.3/2004

[11] John Wiley & Sons, "*International GAAP 2015: Generally Accepted Accounting Principles under International Financial Reporting Standards*", Ernst & Young LLP, 2015

[12] 2005 is the year from which the Council of EU has adopted an IAS Regulation requiring listed companies, including financial intermediaries to prepare their consolidated statements in accordance with IAS and IFRS. It is the year in which Regulation (EC) No 1606/2002 entered into force.

Phase I of the project has provided for the definition of insurance contracts, a temporary exemption of the same contracts from the application of other accounting standards, and a guide for the application of the other international reporting standards. For all other issues, excluding the contracts, it is mandatory for insurance companies to the observance of IAS/IFRS, as for any other kind of company in the EU. The scope of this phase is to allow the application of IAS/IFRS for the insurance companies within the deadline of 2005.

On July 2003, the *Exposure Draft 5 (Insurance contracts)* (ED 5) was published with some controversies. The proposal in the document stated that insurers, together with assets, needed to record at the market value even insurance liabilities. Although the ED 5 had not been approved, it had opened a discussion between different private and public organizations, whose comments and recommendations could be seen as the starting point for the following preparation of IFRS 4.

The final stage of Phase I is the issuance of "*IFRS 4 – Insurance Contracts*"[13] on 31 March 2004, which has been applied since 2005. It represents the result of Phase 1, finalized in a relatively short period in order to allow the application of the standard in time for the EU adoption of IFRS. The standard opens a transition period which has ended with the introduction of the new IFRS 17 and the subsequent completion of Phase II of the *Insurance Project*.

With Phase I, the IASB intended to offer a short-term solution to the accounting treatment of insurance contracts, that would have been perfectionated with the more complete IFRS 17. Indeed, the standard allows the derogation from the general principles contained in IAS 8 – *Accounting Policies, Changes in Accounting Estimates and Errors* and the continual application of the existing accounting principles, before the transition towards IAS/IFRS. This needed to be a transitory situation as it would favor the diffusion and coexistent of dissimilar accounting standards, undermining the comparability of financial statements across countries. Nevertheless, this was not the case since it took more than ten years to develop and publish the new standard, and almost twenty years for its implementation.

The topics addressed in the first phase concerned essentially:

a. Definition of an insurance contract;
b. Presentation in financial statements and integrated information;
c. Elimination of some of the existing practices, incompatible with the IAS/IFRS dispositions (e.g. the regulation of catastrophic and equalization reserves);

[13] More on the topic will be addressed in section 2.1.1 "*Differences and similarities with IFRS 4*" of this paper

d. Different treatment of financial assets and insurance liabilities (financial assets valued according to IAS 39, while insurance liabilities according to national accounting standards).

The last point is often considered the most controversial and that of major concern by the IASB, that was not able to address the mismatching of financial assets and insurance liabilities, valued under IAS 39 and local GAAP respectively. The mismatching is severe as liabilities and the assets covering them are valued under different methods, thus, impeding a real comparison of risks in the valuation of assets and liabilities and of the Cash Flow Statements. Furthermore, it induces a significant increase in the artificial volatility[14] of economic results and in the capital structure.

Specifically, the mismatching takes this form: according to IAS 39, many financial investments are held at fair value and, if those assets are classified as available-for-sale, unrealized fair value movements are recognized in other comprehensive income. By contrast, all changes and movements in insurance liabilities are typically recognized in profit or loss and most non-life insurance liabilities, under the majority of existing local GAAP models, are not discounted.

A number of respondents to ED 5 suggested the creation of an investment category called "investments held to back insurance contracts", that would be held at amortized cost. Though, the IASB concluded that changing the measurement requirements for financial assets in IAS 39, even temporarily, would diminish the relevance and reliability of an insurer's financial statements. This conclusion was taken because according to the Board the mismatching is caused by imperfections in the measurement model of insurance liabilities rather than by deficiencies in the model for financial investments measurement[15].

The transition from Phase I to Phase II had been heavily influenced by the concern about the valuation of insurance liabilities. Indeed, the adoption of a methodology involving the use of market value would have been considered an experiment due to the absence of a similar approach in any other sector. Furthermore, the method would have caused an extreme asymmetry between the banking sector and the insurance sector, causing a significant competitive disadvantage for the latter.

[14] The term volatility is often used to refer to both economic and accounting mismatches. In this case, the term is used as "accounting mismatch", which arises if changes in economic conditions affect the value of assets and liabilities to the same extent, but the carrying amounts of those assets and liabilities do not respond in the same way to those economic changes because they are measured on different bases. Accounting mismatches distort a company's financial position and performance and therefore should be eliminated where possible.

[15] See IFRS 4. BC116-174

Insurance companies would have been obliged to adopt a liability valuation at market price, while this obligation would have not burden on banks as well. There have coexisted different valuation criteria applied to subjects, banks and insurers, having analogous characteristics.

On the one hand, we would have seen banks, which have maintained some freedom of choice in valuing a big part of their primary assets at amortized cost. On the other, insurance companies, obliged to value the majority of the assets at market value and liabilities at cost value, according to local GAAP[16].

In this situation, insurance companies needed to face a substantial mismatching between assets and liabilities above all in the case of changes in market discount rates. Certainly, a change in discount rates produces an oscillation of assets value, while it does not pass on liabilities which are expressed in terms of cost. This causes a higher volatility, in accounting terms, of profits and equity of insurance companies related to banks, with evident negative effects on investors decisions and evaluation by rating agencies and analysts, especially in case of an inappropriate external disclosure about the origin of such a volatility.

Phase II is officially opened with the issuance from the IASB of a Discussion Paper, "*Preliminary Views on Insurance Contracts*", focusing on the development of a global accounting model on an insurer's assets and liabilities deriving from the pure insurance activity.

In the Discussion Paper, the measurement system for insurance liabilities was supposed to be based on economic valuations, explicitly on the *current exit value approach*[17], where the *current exit value* is defined as the amount the insurer expects to pay at measurement date to transfer to another entity all residual duties and rights of the contract.

The model is based on a fair value measurement judgment and it is more market oriented than contract/service oriented. This is why it was heavily criticized by sectoral operators, who have highlighted the opportunity of

[16] The asset side of banks' balance sheet is typically made up of cash funds, financial assets, trading assets, receivables, property, plant & equipment, investments in associates and goodwill. Financial assets are valued at market price, receivables and others are initially reported at the historical cost, then measured at amortized cost and subject to impairment test. Thus, opposite to insurance companies, whose majority of assets is valued at market price, banks can classify most of the financial assets at amortized cost. Look at S.Marasca, 2003, "*Il bilancio d'esercizio di banche, assicurazioni e fondi pensione*", FrancoAngeli, Milano.

[17] Exit value accounting is a form of current cost accounting which is based on valuing assets at their net selling prices (exit prices) at the balance sheet date and on the basis of orderly sales. This normative accounting theory was developed by Raymond Chambers and labeled as Continuously Contemporary Accounting (CoCoA). The exit value accounting model is based on immediate sale, which seems under the control of the entity although some estimation of the future may be included. More on Joerg-Markus Hitz, "*The Decision Usefulness of Fair Value Accounting – A Theoretical Perspective"*, European Accounting Review, 10.1080/09638180701390974, 16, 2, (323-362), (2007).

a substitution in favor of a valuation model better able to reflect the nature and primary essence of insurance contracts.

Nevertheless, the advantage of the current exit value accounting system is the relevance of the information it provides. With this methodology, the balance sheet becomes a statement of the net liquidity available to the enterprise in the ordinary course of operations. Hence, it depicts the firm's adaptability, or the ability to shift its currently existing resources into new opportunities.

Furthermore, it is important to underline that the *current exit value approach* is the valuation model adopted by Solvency II directive[18]. This is another reason why a substitution with a more contract-oriented valuation method, as suggested by sectoral operatives, would not be a good choice. It would create a mismatching between the value of the reserves recorded in the balance sheet and the value used for the determination of the Solvency Capital Requirement.

In fact, the *Insurance Project* has been highly influenced, and partially delayed, by other important projects involving the IASB as for example the development of IFRS 9 "Financial Instruments", in substitution to IAS 39, Solvency II directive and the intent convergence with the FASB, above all throughout Phase II. The first did not forcefully impact the insurance industry, although the standard is concentrated on the fair value record of assets and liabilities. The second, released by the European Commission for the revision of supervisory rules of insurance companies (Directive 2009/138/EC), has some touching points with *Insurance Project* Phase II that will be covered in section 1.4 of this paper. Finally, the third has the quality of having encompassed US insurance companies in the debate, even though it had conveyed into a deferral of the new standard realization.

In 2007, the conditions for the birth of the collaboration between IASB and FASB which will produce a conjunctive working table for the *Insurance Project*. In August 2007, the FASB releases an Invitation to Comment – *A FASB Proposal: Accounting for Insurance Contracts by Insurers and Policyholders*- which includes the Discussion Paper from the IASB. Later in October, the FASB decides to participate to the *Insurance Project*. From that moment, the two Boards discussed various proposals which would contribute to the development of the common standard.

[18] More on this topic will be addressed in section 1.5 "*Differences and similarities with Solvency II*" in this paper. Look at D.Duverne, J. Le Douit, "IFRS Phase II and Solvency II: Key Issues, Current Debates", *The Geneva Papers*, n. 34/2009, pp.47-55

On July 30, 2010, the IASB published the Exposure Draft – *Insurance contracts* from the collaboration with the FASB which, once ended, would allow the delivery of the new IFRS. On September,17,2010, the FASB parallelly issues a Discussion Paper, "*Preliminary Views on Insurance Contracts*", which includes a confrontation with the ED of the IASB and an initial opinion on the topic by the US Board. Even though some aspects of the models discussed by the two Boards shared a common ground of discussion and debate, the project is not included in the Memorandum of Understanding (MoU) with the FASB[19].

The new IFRS outlined in the ED of 2010 provides a measurement approach that eliminates current weaknesses and incoherent practices, existent in IFRS 4, and can be applied to all insurance contracts, issued either by insurance companies or by companies in other sectors, and reinsurance contracts held, with a modified methodology only for short term contracts. The rationale behind the method is that an insurer generally fulfills its contractual obligations timely paying the insured customers, instead of a principle where the insurer transfers its liabilities to a third party, typical of the *current exit value approach* presented in the Discussion Paper of May 2007.

After many comments were received, the IASB confirmed the majority of the prescriptions and proposals contained in the ED 2010, as for the example:

- The definition of the various contracts;
- The liability valuation on the basis of the liquidation value;
- The delineation of the *building blocks* of the method (the *fulfillment cash flows* calculated through the best estimate approach, the discount rate to adjust the cash flows to their present value, the *risk adjustment*, and the *residual margin*)[20].

Still, some topics required to be readdressed and discussed, for this reason the IASB in September 2012 announced the need for a better elaboration of the proposals because of two main factors: the prolonged time dedicated to the project and the importance of a definitive standard to be issued. The decision to take time and re-target the entire project is truly depicted in this speech from Hans Hoogervorst, the Board President:

"*We are very aware of the difficulties faced by insurance companies and pension funds in the current low interest environment. As such we realize the importance of establishing a workable Standard based on current measurement as soon as possible. However, it is of equal importance that we get this Standard right.*

[19] The MoU defines the convergent topics between the two Boards. Look at D.Duverne, J. Le Douit, "IFRS for Insurance: CFO Forum Proposals", *The Geneva Papers*, n. 32/2007, pp. 62-74

[20] More on the building blocks will be addressed in section 1.2.3 "*The estimation building blocks at initial recognition and subsequent measurement*"

In light of some changes made since the original Exposure Draft and the benefit that we believe can be gained from obtaining constituents' input on these targeted areas, I believe that targeted re-exposure is the right decision. Limiting the questions in this way will enable us to avoid re-opening issues which have already been decided and sufficiently re-deliberated."[21]

As a result, in 2013 a new ED was published and build upon proposals contained in 2010 ED, and reflected the feedbacks received during the general public discussion period that followed the publication of such proposals. They aimed to provide a consistent basis for accounting for insurance contracts in order to facilitate the understanding by financial statements users of how insurance contracts affect an entity's financial performance and position, and cash flows. Therefore, the IASB proposed solutions by "introducing enhancements to the presentation and measurement of the contracts while seeking to minimize artificial accounting volatility"[22].

After several meetings of the various bodies involved in the project (e.g. IASB, FASB, Accounting Standards Advisory Forum) from January 2014 until April 2017, on 18 May 2017 the IASB finally issued the first truly international IFRS Standard for insurance contracts, IFRS 17 *Insurance Contracts*, in replacement of IFRS 4 *Insurance Contracts*. On 14 November 2018, the IASB voted for the one-year deferral of the effective date for IFRS 17 from 2021 to 2022. This proposal is even extended to the temporary exemption for insurers to apply IFRS 9, so that both standards could be applied conjunctly. The transition process is still in act and the IASB just published in June 2019 the Exposure Draft (ED/2019/4) whose aim is to target amendments on topics such as the presentation in the statement of financial position and other amendments. Many steps are still needed to be taken until the final applicability of the standard.

1.1.4 The need for a consistent framework

IFRS 4 was supposed to be a stop-gap measure as it was considered an interim Standard. It did not prescribe a unique and consistent measurement method for insurance contracts in all jurisdictions. On the contrary, it allows companies to continue to use different practices based on national accounting principles. Different standards may give divergent results: the same company making a loss under one standard might record a profit under another. In the table below (Table 1), an example of this situation is illustrated: an insurance company is reporting the same set of results using the GAAPs from two distinct jurisdictions.

[21] IASB Meeting of 26 September 2012
[22] https://www.ifrs.org/projects/2017/insurance-contracts/comment-letters-projects/revised-ed-insurance-contracts/

Table 1: Differences IFRS 4 permits

Differences IFRS 4 permits			
(in millions of currency units)	The same insurance company		
	Measured using GAAP A (current value)	Measured using GAAP B (non-current value)	Differences
Revenue	17,248	13,156	(24%)
Net income	949	1,303	37%
Total equity	12,851	13,277	3%
GAAP A and GAAP B represent national GAAP applied in leading insurance markets and currently used by insurers as a basis for developing their insurance accounting policies when applying IFRS 4. GAAP A requires the use of updated assumptions for the measurement of insurance obligations, as does IFRS 17 (ie a current value measurement).			

Source: IFRS Standards Project Summary, May 2017

The results show a large artificial volatility caused by the different accounting treatments, stemming from the analysis of the same company and same contracts. Furthermore, some of the current practices used have evolved in light of particular circumstances of the country and often address only the most locally prevalent insurances products. The features of the different accounting models used by the insurance industry are inconsistent with the IFRS Standards applied, thus, limiting comparisons with other industry sectors even in the same country.

This situation is unsatisfactory for investors since it is extremely important to have insight for investors of how the insurance company is performing, and the risks they are exposed to. A consistent standard is therefore essential for financial stability of the economic system as a whole, because a fair representation of the economic health of a company may prevent the birth of a crisis either firm-specific (e.g. the Enron case) or more widespread, as in the case of September 2008 banking sector crisis in the US.

The most evident and problematic consequences of IFRS 4 were the ones the IASB wanted to address through the issuance of a comprehensive standard:

a. The economics of the business poorly depicted;
b. The little comparability at multiple levels.

The former consists of the lack of relevant and transparent information about the true underlying financial positions and performance arising from the contracts.

An accounting practice may use information reflecting only the insurer's expectations when the contract was started without an adequate updating of the expectations, and/or may represent incomplete information about the current value of complex features embedded in some types of contracts (e.g. interest-rate guarantees or financial options).

The most typical example of this information deficiency stands in the discount rates used, since many companies are using old or outdated assumptions, or they are calculating the discount rate using the *expected return on assets held*[23]. Some insurers usually use as discount rate on future cash-flows for long-term insurance contracts historical rates. Some other insurers use current discount rates, and some multinational insurers might use a combination of the two, depending on the jurisdiction they are working in.

IFRS 17 prescribes the application of current discount rates which reflect the characteristics of the cash flow arising from the contract liabilities throughout all the involved countries.

The lack of transparency of about profitability derives from the different points at which profits are recognized by insurers, and from the value at which they measure insurance contracts. For regulatory purposes, some insurance companies may already use current value, although the primary goal of regulatory frameworks focus on customer protection and support of economic stability, rather than providing to general purpose users beneficial and practical data of the financial accounts. For this reason, prudential frameworks usually do not account for performance reporting metrics, concentrating all their attention and effort towards capital requirements.

Useful information about current and future profitability of insurance contracts provided by IFRS 17 will contribute to the enhancement of sustainability and long-term vision of a company. Data on differences in profitability among contracts will improve the transparency of reporting both for investors and for all users of financial statements.

[23] Margin on Services (MOS) actuarial practice attributes to liabilities a discount rate varying with the yield on assets and independent of the risk inherent to the liabilities. MOS discount rates are based on the yield on the actual assets held. More from Allen Truslove, *Risk discount rates for market valuation of life insurance business*, Institute of Actuaries of Australia Centenary Convention 4 (1997).

The explanations, especially the one required when the company expects to recognize in Profit or Loss the *contractual service margin*[24] that remains on the balance sheet at the end of the reporting period, forces the company to assess its expected future profitability in order to provide sufficient insurance coverage. Moreover, the Standard requires the company to classify contracts into portfolios so as to distinguish the groups of contracts to be loss making from the others, in order to visualize immediately the difference in profitability among them. Indeed, a company recognizes in P&L for a group of contracts:

a. the expected profit for providing coverage as the coverage is provided over time; and
b. the expected loss as soon as the company determines that losses are expected.

The grouping of contracts in cohorts according to their economic differences allows companies to timely reflect in financial statements the information about the change in profitability. If a contract at initial recognition is expected to be onerous, losses are immediately recorded. In this way, profits and losses are not offset by grouping together profitable and loss-making contracts. The only exemption from this requirement is permitted when those differences in profitability are the result of regulatory restrictions, where regulators prevent the companies from reflecting the risk arising from a specific characteristic.

For what concerns the little comparability, it can be recognized as a multi-level problem, which can be analyzed over three dimensions: among companies across countries, among insurance contracts, and among industries.

As previously mentioned, multinational companies operate in different countries where there might be different accounting procedures. This kind of companies may even record the same type of insurance contracts in different countries using different accounting policies if compared to their subsidiaries, causing a non-uniform reporting within groups. Some inconsistency with other industries exists in insurance companies' balance sheet and income statement as some companies record cash or deposits received as revenues, while this is not possible within the banking and investment management.

Currently, in the income statement of insurance companies the source of earnings is difficult to identify: *gross premiums* are cash-based and include the deposits collection; *gross claims, benefits and expenses* include repayment of deposits, which in both cases is inconsistent with most other industries where the deposit component is excluded; and the change in insurance contract liabilities is a confusing adjustment metrics that

[24] One of the building blocks of IFRS 17 which will be better described in section 1.3.2 "*The estimation building blocks at initial recognition and subsequent measurement*"

incorporates multiple and undefined factors. As a result, the *Profit before Tax* is an inconsistent measure capturing different elements which cause the incomparability across different sectors.

For what concerns the elements in the balance sheet, the existing practices allow the presence of multiple line items with an inconsistent terminology and measurement method, which make it difficult to properly understand changes. *Insurance contracts liabilities*, which represent the most discussed measure of IFRS 17, measurement is separated from the acquisition cost cash flows, premium receivable and unearned premiums; groups of insurance and reinsurance contracts in an asset position are presented conjunctly with those in a liability position.

When insurance companies will first apply IFRS 17, financial statements will deliver a clearer picture of the performance and the heath of the company, the information content will be finer with amounts readily comparable and more relevant. Besides, the involved jurisdictions will move to a one consistent new accounting framework for their insurance contracts starting from different points. The effect of changes in accounting requirements differs across companies and jurisdictions for any new Standard, however, for what concerns IFRS 17, the variability will be substantially more pronounced. This is due to the fact that, even for identical insurance contracts, different accounting practices currently still apply.

1.2 The Standard

IFRS 17 – *Insurance Contracts* is considered to be the first truly international IFRS Standard which sets out the requirements that a company should apply in reporting information about insurance contracts issued and reinsurance contracts held. It is planned to replace the interim Standard IFRS 4 – *Insurance Contracts*, which makes it difficult for investors, analysts and all financial statement users to: detect which of the groups of contracts are onerous and which are profitable; and evaluate trend information about insurance contracts as a whole.

In its place, the new Standard provides current and revised information about the most important features of contracts such as the obligations, the risks and performance. Indeed, financial risks and economic mismatches are revealed as well as the source of earnings, enhancing disclosure and making accounting more intuitive and understandable.

The Standard determines the principles to recognize, measure, present and disclose insurance contracts within the scope of the standard. The primary goal of IFRS 17 is to guarantee that an entity represents those contracts according to relevant and faithful information, which gives a basis for users of financial statements to clearly evaluate the effect that insurance contracts have on the entity's financial position, financial performance and cash flows.

However, the transition to such a groundbreaking set of rules will not be an easy task for all companies issuing or holding insurance contracts.

1.2.1 The scope

Like IFRS 4, IFRS 17 is centered around types of contracts rather than types of entities, whether or not they are regulated as insurance companies. The addressed entities should apply IFRS 17 to contracts that meet the definition of insurance contract.

An insurance contract is "*a contract*[25] *under which one party (the issuer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder"*[26]. In the case the insured event occurs, then the policyholder has a right to obtain compensation from the issuer under the contract.

The contract establishes the relationship between the insurer and the policyholder. Those contracts with legal form of insurance but that transfer all significant insurance risk back to the policyholder are not considered as insurance contracts to be treated according to IFRS 17, this is the case of some reinsurance contracts that provide the cedant with all significant insurance risk by adjusting the payments made by the policyholder as a direct result of incurred losses.

For what concerns insurance contracts issued by an entity to another within its group, the contracts are not represented in the group's consolidated financial accounts but only in the individual statements of the issuing entity. The same applies to mutual entities that generally accepts significant insurance risk from individual policyholders and pool those risks, beard by policyholders, which are perceived as separate entities accepting insurance risk.

[25] A contract is an agreement between two or more parties that creates enforceable rights and obligations, whose enforceability is a matter of law, according to IFRS 17.2
[26] See IFRS 17, Appendix A - Definitions

Insurance risk is a risk, other than financial risk[27], that is transferred from the policyholder to the issuer of a contract, by the definition contained in IFRS 17 Appendix A. Insurance risk examples include risks such as death or survival, injury, illness, disability, and a possible change in a non-financial variable that is specific to a party to the contract.

Indeed, the risk of a potential event causing a change in a non-financial variable is considered as insurance risk only in the case the variable is specific to the contractual party. For example, a contract that covers weather events causing damage to a definite asset of the policyholder meets the definition of insurance contract, while for contracts covering the same kind of damage in a particular region do not. Non-financial variables usually considered are:

a. Catastrophe-type;
b. Residual value guarantee-type.

The former applies not only to contracts covering the risk of occurrence of a particular event causing damage to an asset of the insured party, but also to insurance swaps and other kinds of contracts that generate a payment contingent to changes in climatic, geological and other physical variables (that need always be specific to the insured party). *Weather or catastrophe indices*[28] (e.g. an index of earthquake losses in a particular region) and *catastrophe bonds* do not meet the definition.

Catastrophe bonds (aka cat bonds) are financial assets that accustom the coverage on the incidence of a certain trigger established at the issuance date. The trigger selection is established upon the covered risks and the way in which the indemnity process is structured so as to maximize its transparency and minimize the basis risk of insufficient coverage, from the perspectives of the investor and of the sponsor respectively[29].

The latter consider changes in the condition of the asset and market prices in those contracts covering the risk of changes in the fair value of a specific non-financial asset held by a party of the contract. Covering only changes in market prices do not guarantee the meeting of the definition and the entity issuing the contract is

[27] Financial risk is a type of danger that can result in the loss of capital to interested parties (e.g. businesses, government entities, the financial market as a whole, and the individual). There are several specific risk factors that can be categorized as a financial risk. Any risk is a hazard that produces damaging or unwanted results. Some more common and distinct financial risks include credit risk, liquidity risk, and operational risk.

[28] Weather index insurance underwrites a weather risk, typically highly correlated with agricultural production losses, as a proxy for economic loss. More on Benjamin Collier, Jerry Skees and Barry Barnett, *Weather Index Insurance and Climate Change: Opportunities and Challenges in Lower Income Countries*, The Geneva Papers on Risk and Insurance. Issues and Practice, Vol. 34, No. 3, SPECIAL ISSUE ON CLIMATE CHANGE AND INSURANCE (July 2009), pp. 401-424

[29] M.J. Perez-Fructuoso, *Modeling Loss Index Triggers for Catastrophe (Cat) Bonds: An Alternative Continuous Approach*, Harvard Deusto Business Research. Volume VI. Issue 2. Pages 84-101.

crucial for the identification of the type of risk. In detail, the same residual value guaranteed issued by an insurer, rather than by a manufacturer, dealer or retailer, can be considered an insurance contract.
According to the contract definition, the insurance risk needs to be significant, and it is so only if there is a scenario that has commercial substance[30] in which, on a present value basis, there is a possibility that an issuer could suffer a loss caused by the insured event and pay significant additional amounts beyond what would be paid if the insured event had not occurred.[31]

To assess the significance of insurance risk the contract needs to be evaluated on a single basis. Therefore, although there is a minimal probability of significant losses for a portfolio of contracts, insurance risk can still be significant on a contract-by-contract basis. Moreover, the risk can be significant even in case of:

a. Small proportion of expected probability-weighted present value of the contingent cash flows on the present value of all remaining cash flows;
b. Extreme unlikelihood of occurrence of the insured event.

The insured event is a specified future event, whose most relevant and essential characteristic is uncertainty. It is required at the contract' commencement over at least one of the following aspects of the insured event: the probability of occurrence, the timing, and the magnitude of its effects on the insurer. The insurance contract can still be applicable even if the events has already occurred, but there is still uncertainty over the ultimate payout, as for example contracts covering adverse development of existing claims.

The effects on the policyholder are adverse by contract and represent the *ex-ante* requirement for compensation. Through the contract, the insurer becomes exposed to persistency and expense risk. The former is the risk that the policyholder will cancel the contract at a time other than when the issuer expected when pricing the contract. While the latter is the risk of unexpected increases in the costs associated with servicing a contract, and it includes only administrative costs and not costs related to the insured event or insurance risk.

The timing of insurance risk is crucial for the recognition of an insurance contract. Indeed, at inception, some contracts do not transfer any insurance risk to the risk but only later. So, the contract is considered an insurance contract only when the transfer of risk occurs and until all rights and obligations expire.

For what concerns reinsurance contracts, it is required for them to meet the definition of insurance contracts to fall into the prescriptions of IFRS 17. Even if a reinsurance contract does not expose the reinsurer to the

[30] Commercial substance is considered if it has a discernible effect on the economics of the transaction.
[31] See IFRS 17, Appendix B, B18-B21

possibility of a significant economic damage, it is still deemed to transfer significant insurance risk if it transfers substantially all of the insurance risk relating to the reinsured portions of the underlying insurance contracts to the reinsurer[32].

The entity shall apply IFRS 17 to contracts that meet the definition of insurance contract, that generally include insurance and reinsurance contracts issued and reinsurance contracts held. There are among those exceptions to this general principle which are:

- Investment contracts with direct participation features (DPFs);
- Scope exceptions outlined in section 7 of the Standard;
- Fixed-fee service contracts; and
- Financial guarantees contracts.

Investment contracts with DPFs are financial instruments providing an investor with a contractual right to receive, additionally to an amount not subject to the discretion of the issuer, amounts that have the following characteristics. First, it is expected that those amounts are a significant quota of the total contractual benefits. Second, the issuer discretionally (concerning time and/or amount) contractually pays those amounts. Third, they are contractually based on:

a. returns from a specified pool of contracts or type of contract;
b. realized and/or unrealized investment returns on a specified pool of assets held by the issuer; or
c. the profit/loss of the entity or fund issuing the contract.

They do not transfer insurance risk and therefore do not meet the definition and are not treated under IFRS 17. They only do so if they are issued by an entity also issuing other types of insurance contracts. This limited scope is not required under IFRS 4 and this has created opportunities to structure contracts artificially to qualify for insurance contract accounting. Now, that kind of contracts will be considered in scope of IAS 32 *Financial Instruments: Presen*tation, IFRS 7 *Financial Instruments: Disclosure*, and IFRS 9.

Similarly, other accounting standard(s) apply to the contracts listed under scope exceptions presented in section 7 of the Standard and listed in the table below (Table 2).

[32] See IFRS 17, Appendix B, B19

Table 2 – Scope exceptions and relative applicable accounting standards

Type of contract	Applicable accounting standard
Warranties issued by a manufacturer/dealer/retailer in connection with a sale of its goods or services to a customer	IFRS 15 *Revenues from Contracts with Customers*; IAS 37 *Provisions, Contingent Liabilities and Contingent Assets.*
Employers' assets and liabilities under employee benefit plans	IAS 19 *Employee Benefits;* IFRS 2 *Share-based Payment.*
Retirement benefit obligations reported by defined benefit retirement plans	IAS 26 *Accounting and Reporting by Retirement Benefit Plans.*
Contractual rights or obligations that are contingent on the future use of, or right to use, a non-financial item	IFRS 15; IFRS 16 *Leases;* IAS 38 *Intangible Assets.*
Residual value guarantees provided by a manufacturer/dealer/retailer, and a lessee's residual value guarantee embedded in a lease	IFRS 15; IFRS 16.
Financial guarantee contracts[33]	IAS 32 *Financial Instruments: Presentation*; IFRS 7 *Financial Instruments: Disclosure*; IFRS 9 *Financial Instruments*.
Contingent consideration payable or receivable in business combination	IFRS 3 *Business Combinations*.
Insurance contracts in which the entity is the policyholder[34]	IAS 37; IAS 16 *Property, Plant and Equipment*.

Fixed-fee service contracts are contracts under which the level of service depends on an uncertain event. It meets the definition of insurance contract even though the issuer to settle its obligation to compensate the policyholder for insured event providing goods or services to the latter, rather than cash. IFRS 17 permits to apply IFRS 15 to this kind of contracts, on a contract-by-contract basis and irrevocably, if their primary purpose is the provision of a service. This is so if three conditions apply.

[33] Unless the issuer has met certain requirements and has made an irrevocable election to apply IFRS 17 to the contract, otherwise they fall into one of the categories listed above of the exceptions to the general application of the new Standard.
[34] Unless these are reinsurance contracts held by the entity.

First, the entity sets the contract price so as not to reflect a risk assessment associated with an individual customer. Second, customers are compensated by the contract through the provision of a service and not in form of cash payments. Third, the contract transfers an insurance risk that arises primarily from uncertainty about the frequency of the customer's use of the service, instead of about its cost.

The types of financial guarantee contracts that meet the definition of an insurance contract guarantee to the policyholder the right to be reimbursed by the issuer for a cost that incurs in case a specified debtor fails to pay when due under the terms of a debt instrument. In this case, however, it is not compulsory for an entity to apply IFRS 17 for these contracts, while in its place financial instruments standards.

It is possible to account for the contracts under IFRS 17 if they meet the following requirements: the entity should have *previously asserted explicitly*[35] that it recognizes them as insurance contracts, and it has accounted for the on that basis. The choice is made contract-by contract and is irrevocable.

1.2.2 Unbundling and contract boundaries

When underwriting an insurance contract, a set of rights and obligations is created in order to work together generating a package of cash flows. For measurement purposes, the insurance contract is represented only by the cash flows remaining after non-insurance components are separated. Indeed, before the insurer works on the measurement of the contract liability and decides on the valuation method to use, it needs to assess the contract terms and whether they are covered by IFRS 17.

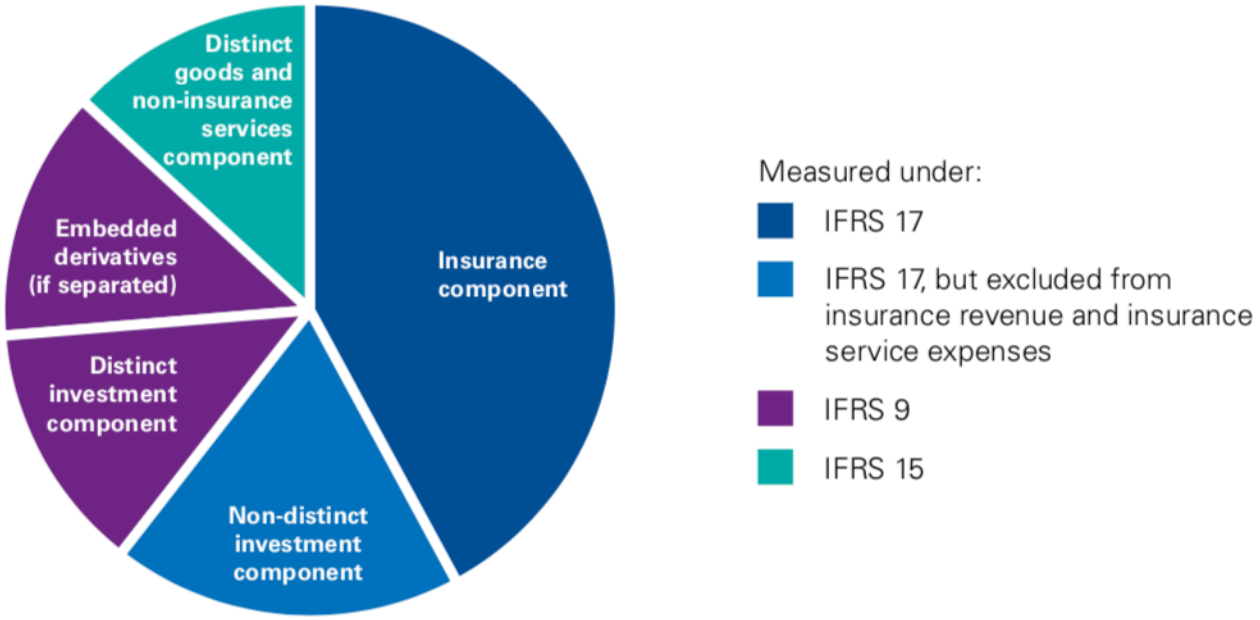
Due to the fact that an insurance contract may combine different features, it needs to be unbundled. *Unbundling* is the term used to identify the separation of insurance component from other non-insurance components within a contract. This is made so as to allow the different components to be treated according the most relevant and appropriate accounting standards.

The different features composing some kinds of insurance contracts that do not transfer insurance risk are known as "non-insurance components", and examples include derivatives, deposits and asset management services. IFRS 17 prescribes the entity to separate the non-insurance component as a separate contract if its features applied to the separate contract would be in the scope of other financial reporting standards, in case applying them to the separate content. In order to separate the non-insurance component, it must be not highly

[35] This kind of requirement did not change in the shift from IFRS 4 to IFRS 17, so companies are already prepared for this point.

correlated with the insurance component, so they can be valued separately without losing their nature, and the separated component must be readily available for purchase in the same market or jurisdiction.

Table 3 – Insurance contracts components and relative applicable accounting standards



Source: KPMG, 2017

In the chart above (Table 3) are shown the different non-insurance components that may be present in an insurance contract and the chart attaches to each component its relative standard to apply. Table 2 distinguishes between "distinct" and "non-distinct" components, whose difference stands in the previously mentioned requirements IFRS 17 imposes to account for these components as separate contracts. An entity is prohibited to apply a different IFRS, IFRS 9 and IFRS 15, when separation is not required.

The separation criteria have the peculiar purpose of enhancing and improving transparency for two main reasons. First, the non-insurance component accounted separately will be more comparable to similar contracts, either investment or services contracts. Second, the separation may make it easier to understand the risks undertaken by entities in different businesses which become, as a consequence, more comparable. The condition opposing the separation is consistent with these objectives: the cashflows of the two components need not to be highly correlated and interdependent so as to prevent the result of a more complex and non-comparable reporting.

Investment components are defined as "the amounts that an insurance contract requires the entity to repay to a policyholder even if an insured event does not occur"[36]. Many discussions about this definition were raised to the IASB which decided to clarify the concept contained in paragraph BC34 of the Basis for Conclusions on IFRS 17 that states that the payment to the policyholder should be made *in all circumstances*. The drive of determining if an insurance contract includes an investment component the entity requires the assessment of whether scenarios in which no payments are made have *commercial substance*. The entity does not consider a scenario for which no payment is made if that scenario has no commercial substance.[37]

Non-distinct investment components are not separated from the insurance contract, thus accounted for together with the non-discriminable insurance component but are not completely reported according to the general principles of IFRS 17. Hence, the discrepancy with the normal procedure for insurance contracts concerns the exclusion of receipts and payments from insurance contract revenue and insurance service expenses presented in Profit or Loss.

Therefore, IFRS 17 does not apply to three types of distinct components:

1. Distinct investment components;
2. Embedded derivatives (if separated); and
3. Good and service components.

Distinct investment components include pure deposits and all financial instruments whereby the entity receives a quantified amount, that undertakes to repay with interest. Once separated, they are accounted of in accordance with IFRS 9.

The same IFRS applies to *embedded derivatives*[38] when they are accounted separately from the insurance contract. The principles behind the separation between the embedded derivative and the host contract are stated in IFRS 9. Separation occurs when "*the economic characteristics and risks of the embedded derivative are not closely related to those of the host contract; and the embedded derivative would not be an insurance contract as a stand-alone instrument*"[39]. The last condition is met if the embedded derivative meets the definition of derivative prescribed by IFRS 9 and it is in the standard scope. Separation needs the consideration of the nature

[36] Appendix A, IFRS 17 Insurance Contracts
[37] Transition Resource Group for IFRS 17 Insurance Contracts "*Investment components within an insurance contract*", IFRS Staff Paper, April 2019
[38] An embedded derivative is defined as a component of a hybrid contract that also includes a non-derivative host—with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative (IFRS 9.4.3.1).
[39] IFRS 9.4.3.3

of both the insurance contract, defined as host contract, and the underlying derivative. If similarity in the economic characteristics and essential risks exist, there is no basis for the unbundling of the two components.

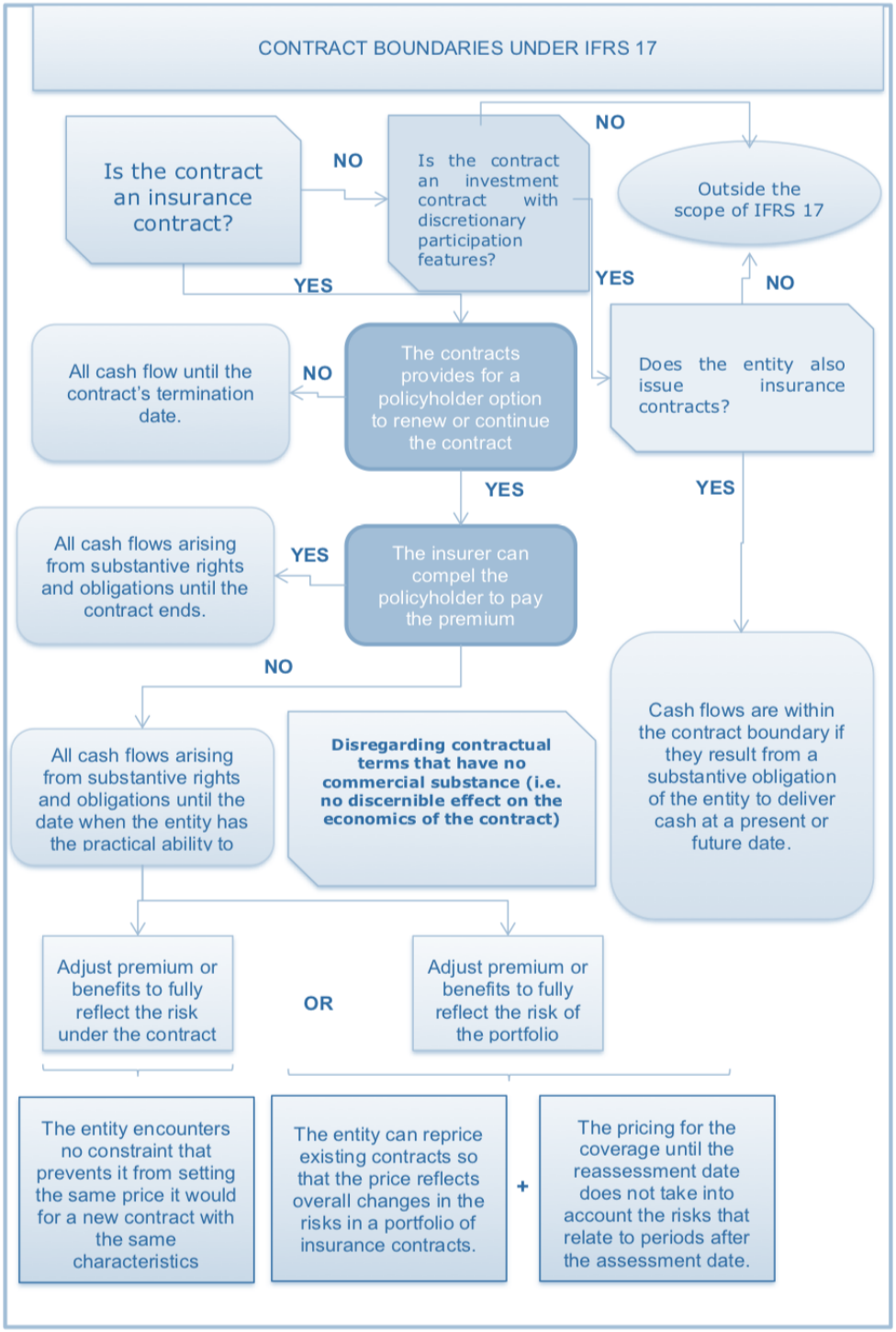
Non-insurance services such as pension administration, asset management and custody services are examples of what are considered good and service components. The goods and services component is separable from the insurance contract if the policyholder can benefit from the goods and services either on their own or with resources already and readily available to the policyholder. If the entity does not transfer a good or service to the policyholder when activities that the company has to undertake in order to fulfill the contract occur, these cannot be considered for separation. IFRS 15 applies to this kind of components if the following conditions for distinction pertain: there is no high interrelation between the cash flows and risks arising from the good or service and those arising from the insurance component, and there is a significant service of integrating the two components by the entity. IFRS 15 and IFRS 17 are applied so as to attribute the correct accounting standard to the different kinds of cashflows arising from the contract.

On initial recognition, there are cash inflows and outflows pertaining to the insurance component, and those attributable to the promise to transfer distinct good or non-insurance services. Any remaining cash outflow between the two components are attributed on a rational and systematic basis, mirroring expected costs in case of the issuance on the distinct component as a separate contract.

The attribution of cash flows nature is therefore the essential criteria for the unbundling procedure. The entity attributes the cash flow to the different components on a stand-alone basis, so it measures the components as separate contracts. Then, it separate components after the assessment of the cash flow types attached to the components and applies the recommended IFRS accordingly.

The attribution of cashflows not in qualitative but in temporary terms is the rationale behind the concept of contract boundary. In fact, the boundary stands at the point at which coverage is no longer delivered or the issuer of the contract has the right to revalue the benefits underlying the contract and the price. It acts as a wall between cash flows relating to the existing contract from those relating to future contracts. The concept already existing under Solvency II framework and this arising from IFRS 17 application usually provide similar results: any material difference may be caused by the unbundling prescribed by the new IFRS.

Figure 2 – Contract boundaries under IFRS 17



Source: EIOPA-18-717 18/10/2018

Figure 2 sets the decisional framework behind the criteria for assessing contract boundaries under IFRS 17. EIOPA[40] in its analysis of IFRS 17 Insurance Contracts states that there is a similarity in the way IFRS 17 and

[40] EIOPA is the acronym for European Insurance and Occupational Pensions Authority. It is the European Union financial regulatory and supervisory authority, established in 2010 in replacement of the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS). EIOPA's core responsibilities are to support the stability of the financial system, transparency of markets

Solvency II define the contract boundaries. They both set out provisions for the definition so as to include in the valuation all relevant expected future cash flows until the date at which the insurer can cancel or has the *legal right* to re-price the contract.

Most of the attention must concentrate on the specification of *legal unilateral right* which is the only decisional criteria to consider, according Solvency II. The only differing criterion added by the new IFRS is that "*the pricing of the premiums for coverage up to the date when the risks are reassessed does not take into account the risks that relate to periods after the reassessment date*"[41] in case of contracts repriced at portfolio level, if policy terms require so, potentially creating effects on the valuation of insurance obligations[42].

1.2.3 Level of aggregation

Contracts with homogeneous risk characteristics are aggregated into groups or portfolios, defined as groups of "*insurance contracts subject to similar risks and managed together*"[43]. The grouping is performed with the aim of limiting the offsetting of profitable contracts against non-profitable ones. This is done having concern about how insurers manage and evaluate their financial performance. Indeed, the requirements about the level of aggregation of contracts contained in IFRS 17 affect the reporting in financial statements through different allocation and identification methods of the primary measurement inputs.

When compared to Solvency II criteria for the level of aggregation, IFRS 17 allows an entity to estimate the fulfilment cash flows at whatever level of aggregation, which is most appropriate from a practical perspective. The only requirement for the insurer is to be able to allocate such estimates to groups of insurance contracts so that the resulting *fulfilment cash flows* of the group comply with IFRS 17. In fact, the level of aggregation is the basis for the calculation and evaluation of the building blocks of IFRS 17 (fulfilment cash flows and contractual service margin, that will be discussed later in this paper).

The aims of such separation are: the determination of the fulfilment cashflows, so the identification of the expected cashflows of a group of contracts to be allocated to individual contracts; and the allocation of insurance revenues and profits to the appropriate group and period, through the disaggregation of the portfolio

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and financial products as well as the protection of insurance policyholders, pension scheme members and beneficiaries. To achieve its tasks, EIOPA was also conferred the powers to develop draft regulatory technical standards and implementing technical standards, to issue guidelines and recommendations, to take individual decisions addressed to competent authorities or financial institutions in the specific cases, develop common methodologies for assessing the effect of product characteristics and distribution processes, and so on. More on the topic at https://eiopa.europa.eu/.

[41] EIOPA report 18-717, *EIOPA's analysis of IFRS 17 Insurance Contracts*, 18/10/2018

[42] See IFRS 17, paragraph 34(b)(ii) and BC 162.

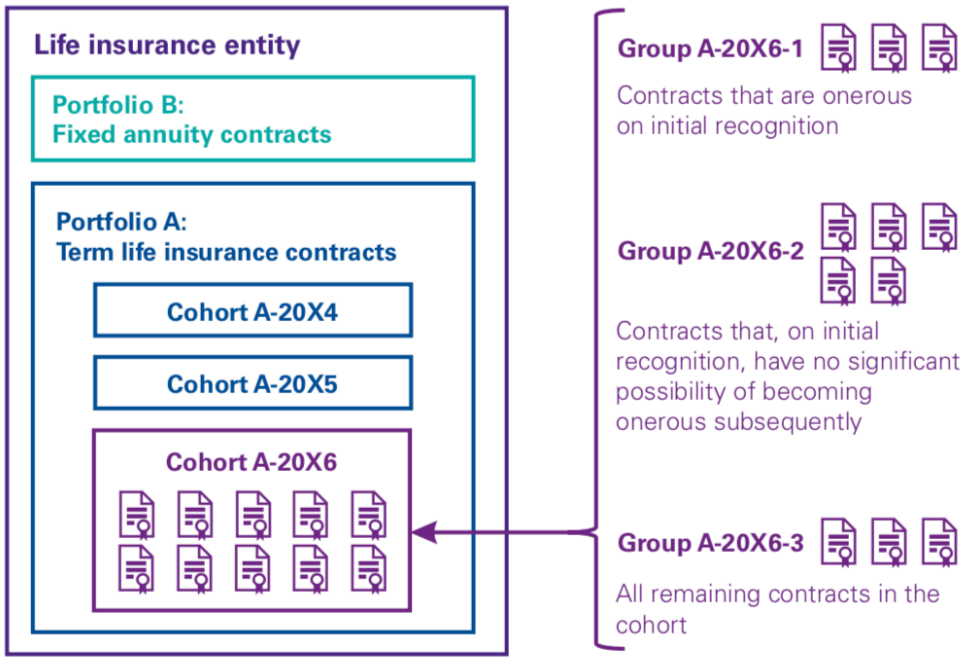
[43] See IFRS 17, Appendix A – definitions.

first into groups and further into annual cohorts within the same group, in order to measure and release the contractual service margin.

Figure 3 (*Figure 3 - The aggregating process for a life insurance entity*) below shows the steps for the identification of portfolios, groups and cohorts. The process is made up of three main phases:

1. Identification of portfolios of insurance contracts held by the entity;
2. Identification of contracts within each portfolio and distinction between profitable and onerous contracts; and
3. Assessment of remaining contracts possibility of becoming onerous after initial recognition.

Figure 3 - The aggregating process for a life insurance entity



Source: KPMG, 2017

At initial recognition, the entity identifies portfolios of insurance contracts for the determination of the level of aggregation. The insurer must include within a portfolio contracts with homogeneous risks and managed together, usually assembling contracts in the same product line. Each portfolio is divided into a minimum of the three groups: a group of contracts onerous at initial recognition, a group of contracts with no significant possibility of becoming onerous in subsequent periods, and all remaining contracts in the cohort.

The initial recognition occurs at the earliest of:

a. The beginning of coverage period of the group of contracts; or

b. The date in which the first payment is received by a policyholder in the group, if no due date is specified in the contract terms.

For what concerns, contracts considered onerous, the initial recognition is when onerousness starts.

The recognition date is important for the determination of the contractual service margin and the discount rates to apply for the calculation of the present value of the future cashflows that become then the fulfilment cashflows. Indeed, on initial recognition the insurer measures the fulfilment cashflows arising from the group of contracts and determines the contractual service margin, subsequently recognized over the coverage period.

The discount rate is used in two of the three valuation models prescribed by IFRS 17, the general measurement model and the simplified one. The chosen rate accretes the interest on the contractual service margin, measures the changes in the cashflows to adjust the contractual service margin, and then, presents the insurance finance income or expense recognized in profit or loss. On initial recognition, entities are permitted to use as discount rates weighted-averages over the period during which the contracts in the group are issued.

The assessment about the onerousness of contracts can be made at a higher level, considering a set of contracts if the set is within the same group, otherwise the determination of the group belonging must be made on an individual basis. The entity may have some reasons to price contracts without generating a profit margin, as for example in case of the launch of a new product line for regulatory or competitive purposes it may underprice the premium so as to not be sanctioned or gain market share.

Once the recognition process has been concluded, the onerous contracts will form a group and for them the entity will estimate the fulfilment cashflows to determine the liability for remaining coverage and the loss to recognize in profit or loss.

Consistent with the assessment of onerousness of some groups of contracts at initial recognition, the entity must consider also the assessment of groups of contracts that have no significant possibility to become onerous subsequently. This process can be done either at sets level, if there is reasonable and supportable information for concluding the homogeneity of the set, or at individual contractual level.

In order to complete this evaluation, the entity needs to exercise judgement by using estimation data developed by the internal reporting or by considering the assumptions used for estimation and their likelihood of change that would result in the contracts becoming onerous. The contemplated assumptions are those about the

estimates of future cashflows relating to the future service before a claim is incurred would result in a contractual service margin of zero.
The assumptions to consider are the ones more sensitive to changes that could significantly affect the contractual service margin. Furthermore, the entity must identify those contracts with such low levels of profitability on initial recognition that any change, even small, in assumptions could result in them becoming onerous. The assessment may include sensitivity analyses, focusing on product features and risks.

Any other contract that does not belong to the first two identified groups is included in the third group as "remaining contracts". However, further disaggregation into more than the three groups is permitted. Another criterion for the grouping is the reporting period: an entity cannot include contracts with more than one year between the two issuing dates in the same group. Each portfolio indeed is divided into annual cohorts or cohorts covering periods less than a year.

The disaggregation into annual cohorts will require entities to apply a new assessment each year, leveraging past grouping decisions and gauging any differences between past and current year in the main features of the contracts, such as pricing, offering of benefits and guarantees and costs related to distribution and commissions.

1.3 The general measurement model overview

As we have previously mentioned, insurance contracts can create complex bundles of interdependent rights and obligations and may combine features different from the pure insurance contracts such as those of financial instruments or of service contracts. The different characteristics provide different source of income within the same contract. IFRS 17 introduces a general measurement model offering a comprehensive framework able to reflect these different features and sources of income. This measurement model is applied after the disaggregation of contracts into groups.

1.3.1 An introduction about the accounting model

When an insurance company prices a policy with its customers, the company usually records in its balance sheet an *insurance contract liability* which reflects its obligation to provide insurance coverage to customers and, if claim occurs, its obligation to pay the claim to the customers.

To measure this obligation the company considers the cash flows expected from the contract (i.e. the amounts the company expects to collect from premium and payout for claims) and discounts them to reflect their timing of collection and payment: thus, calculating the present value of future cash flows. Then it considers an amount for the uncertainty of these cashflows which is called the *risk-adjustment*.

The sum of the present value and the risk-adjustment component is referred to as the *fulfilment cash flows*. If expected cash in for premiums are higher than expected cash out for claims and other expenses, there is an expected profit from the insurance contract, which is known as the contractual service margin.

This profit is not recognized as a gain in P&L when the contracts are written because the company has not provided any coverage yet. Instead, the profit is presented as part of the insurance contract liability in the balance sheet. When the company starts to provide coverage, it starts to recognize the *Contractual Service Margin* (from now on just *CSM*) in P&L as the difference between revenues for coverage provided in the period and the expected claims and other insurance service expenses relative to the same period. As time passes, the effect of discounting is unwound, and the risk-adjustment is released in P&L.

At each reporting date, the *fulfilment cash flows* are updated using revised cash flows, current discount rates and reviewed adjustment for risk. Changes in cash flows and the risk-adjustment that relate to the coverage to be provided in the future adjust the *CSM* and therefore affect the P&L in the future to the recognition of the adjusted *CSM*. Changes related to the coverage provided in the period and in the past are immediately recognized in P&L. Changes in discount rates are recognized when they occur and are presented either in P&L or in Other Comprehensive Income: this is a presentation choice of the company.

In terms of presentation, the unwound of discount rates and the effects of changes in discount rates are presented in a line called "*Insurance Finance Expenses*". Revenues for coverage provided in the period and revenues for release of risk-adjustment in the period are presented in the line "*Insurance Revenues*". The expected claims and other insurance services expenses together with the changes in cash flows and risk-adjustment that relate to coverage provided in the period and in the past are presented in a line called "*Insurance Service Expenses*". This line also considers the effect of the release of risk-adjustment within the liability for incurred claims which reduces "*Incurred Claims*" in P&L.

The difference between *Insurance revenues* and *Insurance service expenses* represents the *Insurance service result* for the company. What illustrated so far is known as the General Accounting Model of IFRS 17. To complete the picture, it is important to notice that the General Accounting Model is modified for some

contracts, which are referred to as contracts with variable fee. It is effectively the same accounting model with a difference in the *CSM*, which is adjusted also for the changes in the variable fee.

Finally, there are some optional simplifications for short-term contracts to measure the insurance contract liability. If the company chooses to apply these simplifications, it can measure the liability for remaining coverage in a simplified way based on unearned premiums, and, when determining the liability for incurred claims, the company can avoid discounting payments for claims if those payments are due within one year.

1.3.2 The estimation building blocks at initial recognition and subsequent measurement

According to IFRS 17 general measurement model, two key components are identified for the valuation of the liability components within a group of insurance contracts: the *fulfilment cashflows* and the *CSM*.

On initial recognition, the liability or asset recognized for a group of insurance contracts is the result of the sum of:

a. The fulfilment cashflows: risk-adjusted, explicit, unbiased and probability-weighted estimate of the future cashflows arising from the fulfilment of the contracts, adjusted at their present value through discounting;
b. The CSM: the amount representing the unearned profit the entity is going to recognize in profit or loss at the service provision.

The former consists of three components: the future cashflows arising from the fulfilment of the contract, the discounting factor, adjusting the cashflows in order to reflect the time value of money and financial risks, and the risk adjustment for non-financial risk, which mirrors compensation required by the entity for bearing the uncertainty caused by non-financial factors and their attached risks about the amount and timing of cashflows.

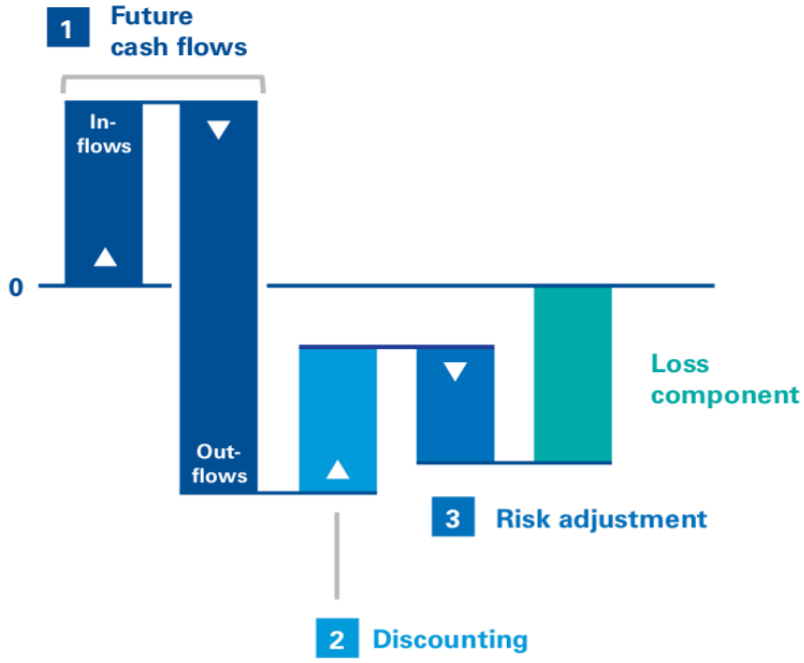
As we previously highlighted in section 1.2.3, the level of aggregation of contracts determines different valuation outcomes for contracts' fulfilment cashflows and CSM, depending on the onerousness of the contract or group of contracts. These scenarios are presented in the tables below (*Table 4 – Onerous contracts at initial recognition* and *Table 5 – Profitable contracts at initial recognition*).

Table 4 and Table 5 presented below show the procedure for measuring the liability of an insurance contract or a group of contracts when it is recognized as onerous and profitable, respectively. If the total of the fulfilment cashflows, the recognition of any asset or liability recognized for *insurance acquisitions*

cashflows[44], and any cashflows arising from the group of contracts at initial recognition is a net cash outflow, then the group of contracts is onerous, and a loss is immediately recognized in profit or loss for the total amount. Otherwise, the net cash inflow of the profitable group of contracts will be recorded as the CSM.

The CSM for the contracts which are recognized as non-onerous is equal and oppositely valued at initial recognition to the fulfilment cashflows, plus any cashflows arising from the group at and before the recognition date. It is so as the contract entire value is related to services provided in the future, for which profit has to be earned in the future as well.

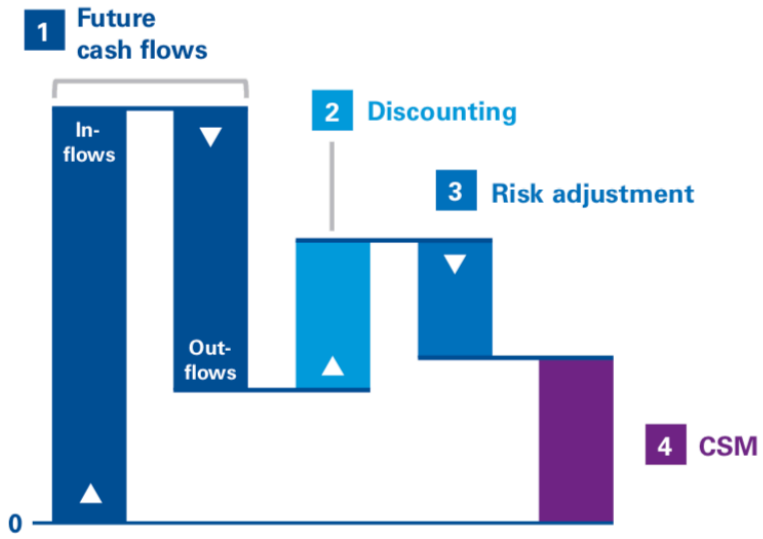
Table 4 – Onerous contracts at initial recognition



Note: Depending on the facts and circumstances, the size and direction of the components could vary.

[44] The insurance acquisition cashflows are the cashflows attached to the starting of the contract. Recognizing insurance acquisition cashflows paid as assets or liabilities until the related group of insurance contracts has been recognized ensures that these cashflows are not immediately reported as an expense. When the group of insurance contracts is recognized, the entity performs a derecognition of the asset or liability, so as to attach the arising expense or income to the correct timing.

Table 5 – Profitable contracts at initial recognition



Note: Depending on the facts and circumstances, the size and direction of the components could vary.

Source: KPMG, 2017

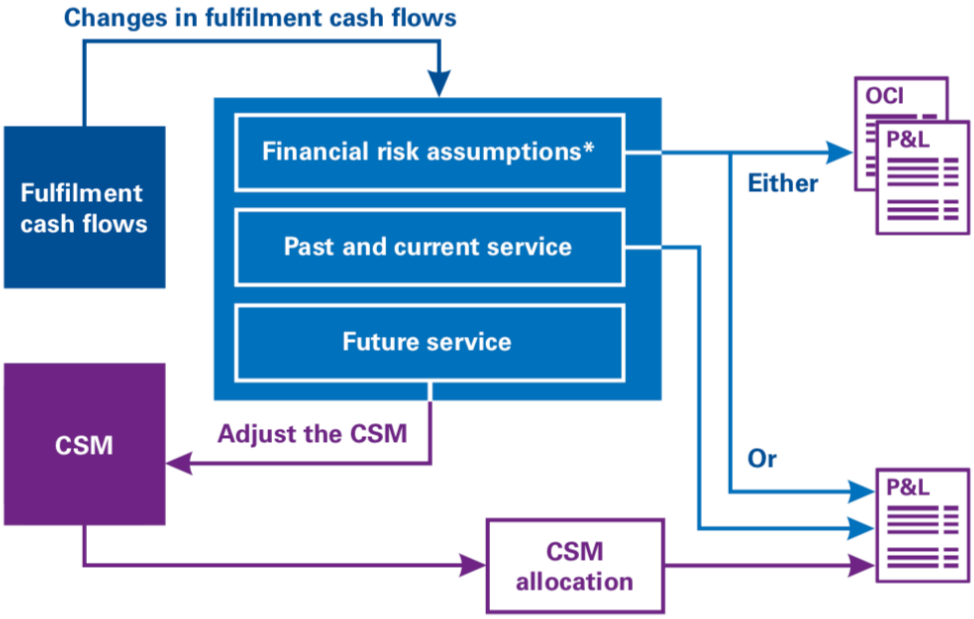
After the initial recognition, the total liability of a group of insurance contracts is made up the liability for remaining coverage and the liability for incurred claims.
The former represents the obligation for insured events related to the unexpired portion of the coverage period to be fulfilled by the entity. This is measured as the fulfilment cashflows relating to the coverage to provide in the future according to the contract terms and the remaining unearned profit, expressed as the CSM.

The latter is defined as "*the entity's obligation to investigate and pay claims for insured events that have already occurred, even if not reported yet, plus other incurred insurance expenses*"[45]. It is measured as the fulfilment cashflows for claims and expenses incurred but not paid.

At each reporting date, fulfilment cashflows and the CSM are remeasured and updated so as to reflect changes in estimates based on the same assumptions as the ones used at initial recognition. The changes in estimates of fulfilment cashflows are reported in profit or loss or Other Comprehensive Income. The balance of CSM is allocated to profit or loss so as to reflect the service provision in the period. The diagram below, Table 6, illustrates the subsequent measurement process and outcomes.

[45] See IFRS 17.40, A, BC25.

Table 6 – Subsequent measurement for the general measurement model



Source: KPMG, 2017

Chapter 2
IFRS 17 Presentation, transition and implementation

2.1 The current normative and regulatory panorama

The major aim attached to IFRS 17 has been to address the inadequacies of the insurance sector reporting, above all for the wide set of accounting practices for insurance contracts used according to IFRS 4 *Insurance Contracts*. The IASB has been considering, since the start of the project, all concerns from all stakeholders and challenges attached to the implementation activities and for this reason has regularly proposed discussion through Exposure Drafts in order to provide meaningful solutions and support to the involved entities.

At the European level, on a parallel track with the supervisory regulation for banks, which have taken the denomination of Basel I, II and III, the insurance supervisory bodies have developed a similar regulatory framework concerning insurance companies: Solvency I and Solvency II. The main focus of these supervisory regulations is the capital requirement financial institutions must have in order to fulfill their obligations towards their customers and any potential distress from the financial market as a whole.

All characteristics, objectives and finalities attached to IFRS 17 need to be considered in the path of the *Insurance Project* and only by defining the precedent basement and therefore the starting point on which the Standard has been built, we can address correctly the enhancements brought by it. For this reason, we start considering the differences and similarities with the two columns supporting the development of the Standard.

2.1.1 Differences and similarities with IFRS 4

IFRS 4 *Insurance Contracts* was issued by the IASB in March 2004 and was meant to be an interim standard for insurance companies so as to align their financial statements and reports with other entities, whose accounting practices were already covered by International Accounting Standards, prior 2001, and International Financial Reporting Standards from then on.

Already from its development, IFRS 4 could have not been considered a complete and finished IFRS because the standards published by the IASB are established in order to create a common and consistent accounting language, so that companies could be more transparent and easier to compare either nationally or internationally. However, IFRS 4 allows some discretion in the accounting treatment of insurance contracts

and only aims at defining the disclosure methods of insurance contracts. This inconsistency of treatments and therefore of reporting is the main pitfall attached to this standard.
This is the first IFRS to deal with insurance contracts, for which accounting practices have been various and have often diverged from practices in other industries. Because many entities will adopt IFRSs in 2005 after the publication in 2004, so issuance and implementation were less than a year apart, the IASB has made limited improvements in accounting practices, whose final accomplishment will be made during Phase II, and has required only a different disclosure framework to insurance companies.

IFRS 4 Phase I (from now defined as "IFRS 4") provides a temporal exemption from some requirements of other IFRSs; however, it has stimulated the use of common, and more risk-oriented practices. It has prohibited provisions for possible claims under contracts that are not in existence at the end of the reporting period (e.g. catastrophe and equalization provisions[46], previously used to absorb unexpected losses).

Moreover, IFRS 4 requires a test for the adequacy of recognized insurance liabilities and an impairment test for reinsurance assets. The Liability Adequacy Test ("LAT") affect contracts classified as pure insurance contracts and as investment contracts with discretionary participation features (DPF). It requires that the company must verify net reserves are able to cover the obligations towards the policyholders defined by the present value of the future cashflows. This value is denominated "realistic reserve" and will present the comparison term to use when valuing the adequacy of the reserves reported in the balance sheet. If there is a positive difference between the realistic reserve and the actual one, it must be reported directly in P&L.

Finally, the Standard requires an insurer to keep insurance liabilities in its statement of financial position until they are discharged, cancelled or expired. The record insurance liabilities must be done without offsetting them against related reinsurance assets. For what concerns technical provisions, they are still addressed and reported according to local-GAAP, valued according to the ultimate cost criterion[47].

It is beyond the scope of phase I to create a comprehensive accounting procedure and framework for insurance contracts. For this reason, the IFRS does not specify:

a. The determinant criteria for the establishment of contracts end and start, for existing and future contracts respectively;

[46] According to IFRS 4, catastrophe provision is neither a present obligation nor the result of a past event. This argument typically defines a past event as an occurrence that, by contract wording, results in an obligation to pay a certain specific amount to the policyholder. It does not recognize that it is the element of risk, and not the event itself, that triggers an obligation of the enterprise. More on the topic of
https://www.actuaires.org/LIBRARY/Submissions/IASC_Insurance_Issues/Catastrophe_Provisions.pdf
[47] F.Rubino, *Riserve tecniche e margine di solvibilità nelle imprese di assicurazione*, FrancoAngeli, Milano 2000.

b. The discount factor nature for the cashflows, reflecting whether the time value of money or the adjustment for risk and uncertainty;

c. The LAT consideration of both the time value and the intrinsic value of embedded options and guarantees; and

d. The recognition of additional losses due to LAT recognized whether by reducing the carrying amount of deferred acquisition costs or by increasing the carrying amount of the related insurance liabilities.

Due to its interim nature, IFRS 4 carried limited changes to existing insurance accounting practices. For the reasons listed above, we can convey on two main pitfalls of the standard:

I. Divergence in the information and transparency; and
II. Lack of comparability.

The former is almost completely based on the fact that the standard does not address the measurement model to evaluate insurance contracts. This accepts a multitude of insurance accounting practices that vary either across jurisdictions or across products, which causes the lack of comparability.

The divergence of information and transparency can be split into two broad categories of information fallacies: one attached to the measurement methods for insurance obligations and one related to the reporting of profitability and adjustments defined locally through non-GAAP measures.

The most critical and essential problem related to the information about insurance contracts is the mismatch between the insurance liabilities, reported according local GAAP and non-GAAP measures, and the assets covering those liabilities assessed at fair value, as prescribed by IAS 39 before, and IFRS 9 from January 2018. The mismatch of treatment and measurement is carried even in the measurement and matching of durations[48] when companies build the portfolios of insurance contracts and the investment portfolios whose activity is needed to cover expected claims and losses of any kind.

Other problems are related to the assumptions insurance companies make. For example, they might use out-of-date assumptions, usually those assessed at the contract issuance date that are not updated to reflect economic changes. This of course affects the expected future cashflows used in valuation. Another example

[48] Matching is the process of constructing an investment portfolio which replicates the timing and amounts of future liability outgo. More on the topic will be addressed in Chapter 3 when the construction of insurance portfolios will be discussed. Source: Fangyuan Yan y José Miguel Rodríguez-Pardo, *ALM en Gestión de Riesgo del Seguro de Vida,* Análisis Financiero n° 128. 2015. Págs.: 78-91

is associated with the choice of the interest rates used to adjust the future cashflows to their present value, indeed sometimes the choice falls on the expected return on assets held as the discount rate for insurance contract liabilities, distorting their value as they may not be directly linked to those assets and may have a different duration as well.

Time value of money is not only related to the selection of discount rates, it also is present in the measurement of liabilities expenses for incurred claims. In fact, the reported expense for the claim does not always reflect the economic expense incurred for those contracts whose claim settlement is years apart. IFRS 17 solution to this problem is to report the estimated future payments to settle incurred claims on a discount basis. The time value of money is directly considered in the measurement of insurance contracts, the reported expense for claim will reflect the economic expense in the right way.

IFRS 17 will provide companies with the correct instruments to overcome the underlined problems. It enables the companies to assess the insurance contracts value using updated assumptions about cashflows, discount rate and risk at each reporting date so as to facilitate the exact recognition and expected settlement of the liabilities, even reflecting the current value of interest rates guarantees, by now not fully reflected in the financial statements. Furthermore, financial statements will displace any economic mismatch between the current value of assets and liabilities and therefore will ponder risks from insurance obligations not economically matched by assets with equivalent risk and duration through the use of the correct discount rate which directly takes into consideration the characteristics of the cashflows.

For what concerns the reporting of profitability metrics, before IFRS 17 some insurance companies did not provide consistent or complete information about the sources of profit recognized from insurance contracts, above all if revenues recognition was made on a cash basis. From 2022, the companies must provide a detailed prospectus of the components of current and future profitability of the contracts. Revenues will be reported as they deliver insurance coverage.

Due to the incompleteness of information, companies usually provided non-GAAP measures to supplement the information, not defined by IFRS requirements, as for example embedded value information, which was not presented on a consistent basis for all companies. As IFRS 17 provides a clear picture of profitability, the use of non-GAAP measures will decline in order to enhance comparability among insurers.

Indeed, the lack of comparability is the second main issue attached to IFRS 4, as explained in Chapter 1. It is a multi-level problem that IFRS 17 will solve through a consistent workstream to fulfill in all processes and procedures attached to an insurance contract and a subsequent framework for recognition and reporting.

Companies operating in different jurisdictions now still apply different discount rate (current vs historical), some may capitalize and amortize over years the incurred costs attached to the issuance of a new insurance contract, while others may expense them directly at incurrence. The same difference applies for revenue recognition which may happen when all premia are received, or they might exclude the deposit components received through them.

The new Standard will force a multinational company to measure insurance contracts regularly across the group in order to increase the comparability of results, in this way finally bringing the full benefits of IFRS financial statements comparability across the same industry in most geographical areas. For what concerns revenue recognition, it will reflect the insurance coverage provided, excluding deposit components, conformally to other industries, enhancing comparability and understanding of P&L. This will empower cross-industry comparability and accelerate the understanding process for non-specialist investors.

IFRS 4 is a stepping stone to Phase II of this project, whose completion has started right after the issuance of Phase I in September 2004. Its limits stand in its "mixed" nature where comparability between assets and liabilities cannot be completed and where the mismatch induced a significant increase in artificial volatility of economic results and capital structure of insurance companies.

Phase II starts in May 2007 when the IASB issues a Discussion Paper – Preliminary Views on Insurance Contracts- whose focus is on the development of a global accounting model concerning the assets and liabilities of an insurer which can be directly attributed to the insurance activity. The process continues through the Exposure Draft – Insurance Contract in July 2010 which determines the path to follow for the new phase of IFRS 17.

The general measurement model developed in the ED on insurance liabilities, to be applied to every entity issuing and holding insurance and reinsurance contracts, stands on the principle under which a insurer usually fulfills its contractual obligations offering during the life of the contract the right amounts to the policyholders, rather than transferring its liabilities to a third party (principle discussed in the Discussion Paper of 2010 and basis point of the current exit value approach).

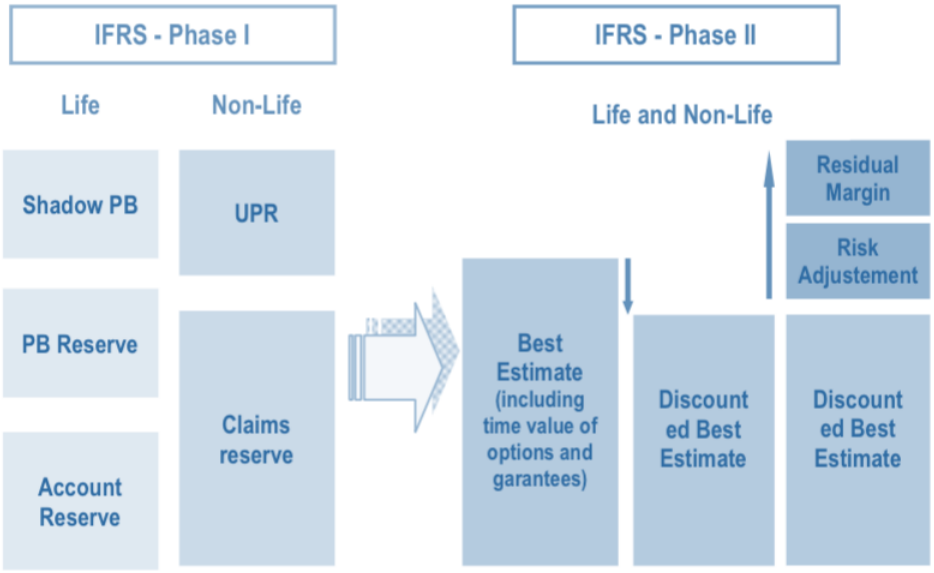
Therefore, there is a transition from a market consistent valuation approach towards a more entity specific approach, which enables to put the correct consideration on some aspects. This change in view impact in the

same way life and non-life insurance companies as shown in Table 7 (Valuation of insurance liabilities: the transition from Phase I to Phase II). The current approach is based on the rationale that an insurance contract creates a bundle of rights and obligations which concur in the generation of a series of cash inflows (the premiums or premia[49], and cash outflows (the claims).

The objective of this measurement model is that of valuing the insurer fulfilment according to the current obligations deriving from the insurance contract. The company will use estimation techniques for the present value based on the following building blocks, presented in Table 7 below:

1. A current estimation of future cashflows, accounting for different scenarios and attributing to each of them a realization probability (best estimate approach);
2. A discount rate adjusting the cashflows according to the time value of money;
3. A risk adjustment measure[50] considering the uncertainty of estimated future cashflows; and
4. A residual margin eliminating any possible profit from the initial recognition of the liability[51]

Table 7 - Valuation of insurance liabilities: the transition from Phase I to Phase II



Source: Mazars, n° 53/2012

[49] For Latin words, I usually prefer to use the correct plural declension in -a for neuter names in -um, like premium.
[50] The risk adjustment corresponds to the maximum amount an insurer should be able to pay so as to be covered on the risk that future cashflows to fulfill the contractual obligations are above expectations.
[51] At initial recognition, this profit is determined by the difference between the premium and the estimated insurance liability at that time.

The insurer should identify different possible scenarios, every one of which contains the amount and timing of the cashflows, assigning to each of them a probability level, so as to come up with a weighted estimate of the outcomes. For the purpose of valuation, all available information and variables should be considered, some of them taken from the market (interest rates, market prices of considered securities etc.), others from the experience of the insurer (frequency, average claim costs, mortality tables etc.).

Concerning the discount rate to adjust the future cashflows to their present value, it should be a market risk-free rate related to a financial instrument with the same timing and currency characteristics as the insurance liability, adjusted at the end of each reporting period so as to account for the less liquidity of an insurance liability when compared to a financial instrument. Credit risk should not be considered in this framework.

The objective of this IFRS is that to establish the principles an insurance company should apply when reporting useful information for financial statement users about the amount, timing and uncertainty arising from: issued insurance contracts, held reinsurance contracts, and financial instruments issued with discretionary participation features.

Consequently, IFRS 17 will enable investors, analysts and others to make better economic decisions using transparent and timely information about the risks from, and variability in, obligations arising from insurance contracts. IFRS 17 is projected to reflect volatility in the balance sheet of insurers through a current valuation based on current inputs from financial markets, since both insurers assets and liabilities are indeed exposed to interest rate and other financial risks, reflecting economic reality. To the extent that it is reproduced, the effect on financial stability is nonetheless positive, as market participants do expect changes in the valuation and equity when economic reality changes. Insurers hedging their interest rate and other financial risk consequently will experience less volatility in equity than insurers that do not hedge those risks.

2.1.2 Differences and similarities with Solvency II

Together with IFRS 4 Phase II, insurance companies have been affected by the entrance into force from 2016 of Solvency II Directive (Directive 2009/138/EC), adopted in 2009 and amended by Directive 2014/51/EU of the European Parliament and of the Council of 16 April 2014 (Omnibus II Directive).

The European banking and insurance sectors have been subject, over the last decades, to some fundamental alterations. Hard conditions suffered by financial intermediaries and the shortfalls in the current regulatory

and supervisory framework, Basel I[52] and Solvency I[53], have encouraged European policymakers to change the way in which the solvency positions of intermediaries' undertakings are regulated. Risk-based financial supervision is different for Banking and Insurance. Business models are different, risks are different and thus regulatory measures are also different, that is why there exist two separate regulatory frameworks for these financial intermediaries. However, capital can be considered the main block in common between these industries[54] and this is the reason why both systems are based on capital requirements.

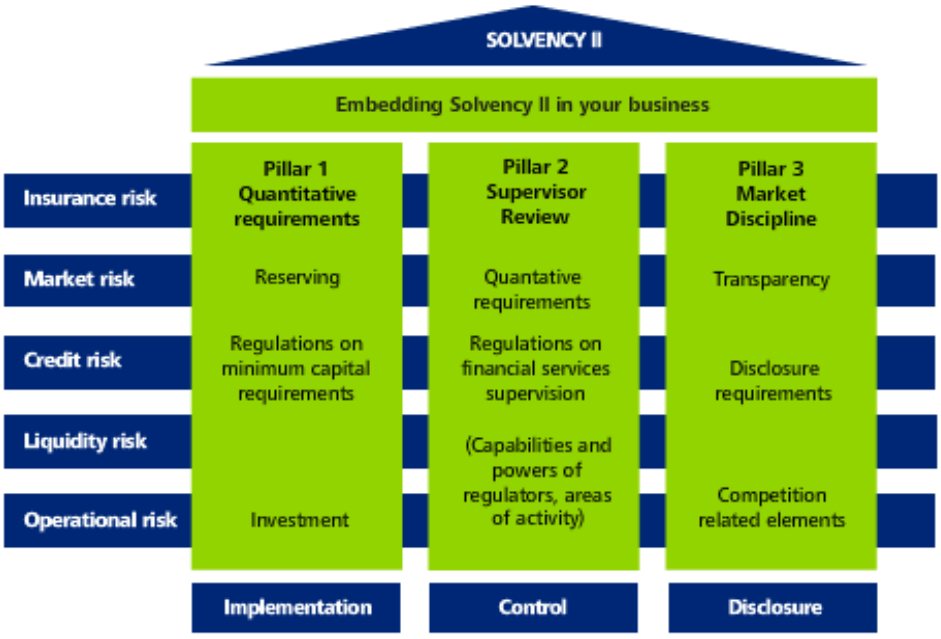
In fact, Solvency II introduces a consistent EU-wide insurance regulatory regime which replaced more than ten European Union insurance directives. Its main focus is on capital, but it is a more comprehensive framework, whose requirements for insurer stem from authorization, corporate governance, supervisory reporting, public disclosure and risk assessment and management, to, of course, solvency and reserving.

The rationale behind Solvency II is that of facilitating the development of a single market for insurance services within the EU and deepening market integration, while securing an adequate level of consumer protection and increasing international competitiveness across EU insurers. It can be seen as a modern regulatory framework as it focuses on the evaluation of insurers' risk profiles and the quality of their risk management and governance systems, rather than on compliance monitoring and capital.

Its three key components are often referred to as "pillars", each recalling the area involved by the program as shown in Table 8 (Solvency II pillars), together with the types of risks that are transversely addressed by each of the pillars.

[52] Basel I, issued in 1988, is a set of international banking regulations put forth by the Basel Committee on Bank Supervision (BCBS) that sets out the minimum capital requirements of financial institutions with the goal of minimizing credit risk. Basel I, followed by Basel II and III, laid framework for banks to mitigate risk as outlined by law.
[53] Solvency I Directive 73/239/EEC was introduced in 1973. It was replaced by Solvency II in 2009.
[54] The twin towers of banking are capital and funding, whereas the twin towers of insurance are capital and risk. More on the topic at https://actuary.eu/documents/SII vs Basel II_Dec_12_final.pdf.

Table 8 – Solvency II Pillars



Source: http://asymptotix.eu/l4a

Pillar 1 consists of the quantitative requirements about reserving, regulations on minimum capital requirements and investments. Pillar 2 is based on the control of insurance companies, so it is more related to the old-style supervision, whose requirements regulate the governance and risk management of insurers, as well as the effective supervision system of insurers. Finally, Pillar 3 focuses on disclosure and transparency requirements, in order to promote competition and confidence in the financial stability of the insurance sector as a whole.

The first pillar is about the quantitative requirements of the system, which include the calculation of technical provisions, the rules relating to the calculation of the solvency capital requirements and investment management. This pillar prescribes a valuation standard for liabilities to policyholders and the capital requirements firms will be required to meet, which are two:

I. the Minimum Capital Requirements (MCR), which is the minimum level of security below which the amount of financial resources should not fall, and

II. the Solvency Capital Requirements (SCR), set at a level that ensures that insurers and reinsurers can meet their obligations to policyholders and beneficiaries over the following 12 months with a 99.5 percent probability, which limits the chance of falling into financial ruin to less than once in 200 cases.

Whenever the available capital lies between the SCR and the MCR, the supervisor and the insurance company take it as an early indicator for which action needs to be taken. An insurance company can choose whether to calculate the SCR using a standard formula set down by the regulator or whether to develop its own internal model to reflect the specific risks the entity faces, in this case the approval from the supervisor is needed.

Then, Pillar 2 describes the qualitive aspects of a company's internal controls, risk management process and the approach to supervisory review, as for example the Own Risk and Solvency Assessment (ORSA) and the Supervisory Review Process (SRP). Higher capital requirements may be imposed by supervisors if they are not satisfied with the specific assessment by the company of the risk-based capital and/or the quality of the risk management arrangements under the SRP.

The ORSA can be defined as "*the entirety of the processes and procedures employed to identify, assess, monitor, manage, and report the short and long-term risks a (re)insurance undertaking faces or may face and to determine the own funds necessary to ensure that the undertaking's overall solvency needs are met at all times*"[55]. While the SRP refers to "*all the activities conducted by the supervisory authority in order to comply with its obligations arising under Article 36 of the Solvency II Directive that includes the evaluation of strategies, processes and reporting procedures in insurance and reinsurance undertakings which they have established in order to comply with Solvency II*"[56].

Finally, Pillar 3 is concerned with augmenting disclosure requirements with the aim of increasing market transparency. Companies, whose onus is that of designing and implementing the disclosure requirements, foster a strategy for disclosure and train key stakeholders on the potential impact. The information choice of what will be available to regulators, analysts, rating agencies and shareholders, is up to the entities. Furthermore, the companies should develop internal processes in order to generate these reports.

Unlike Solvency I and Basel I whose main focus was on credit risk, Basel II and III and Solvency II address most of the risks present in the financial system: insurance risk, market risk, credit risk, liquidity risk, and operational risk.

[55] CEIOPS, *Issues Paper*, 2008
[56] EIOPA-BoS-14/179 EN, *Guidance on supervisory review process*, 2014

Solvency II was implemented as EU legislation. Since 2001, the EU has sought to effect financial services legislation though a standard framework, termed the "Lamfalussy Process"[57], which has four levels.

Due to its regulatory nature, Solvency II focus in reporting is on the financial strength of a company, represented by its capital resources, while the reporting of financial position and performance is the driver for IFRS regime. This difference in aim is the basis on which the two reporting systems diverge. In this paper, the focus for the comparison between the two regimes will be on the contract liabilities, granularity of information about the contracts, and the variables which IFRS 17 considers as its building blocks (cashflows, discount rate, risk adjustment, and residual margin).

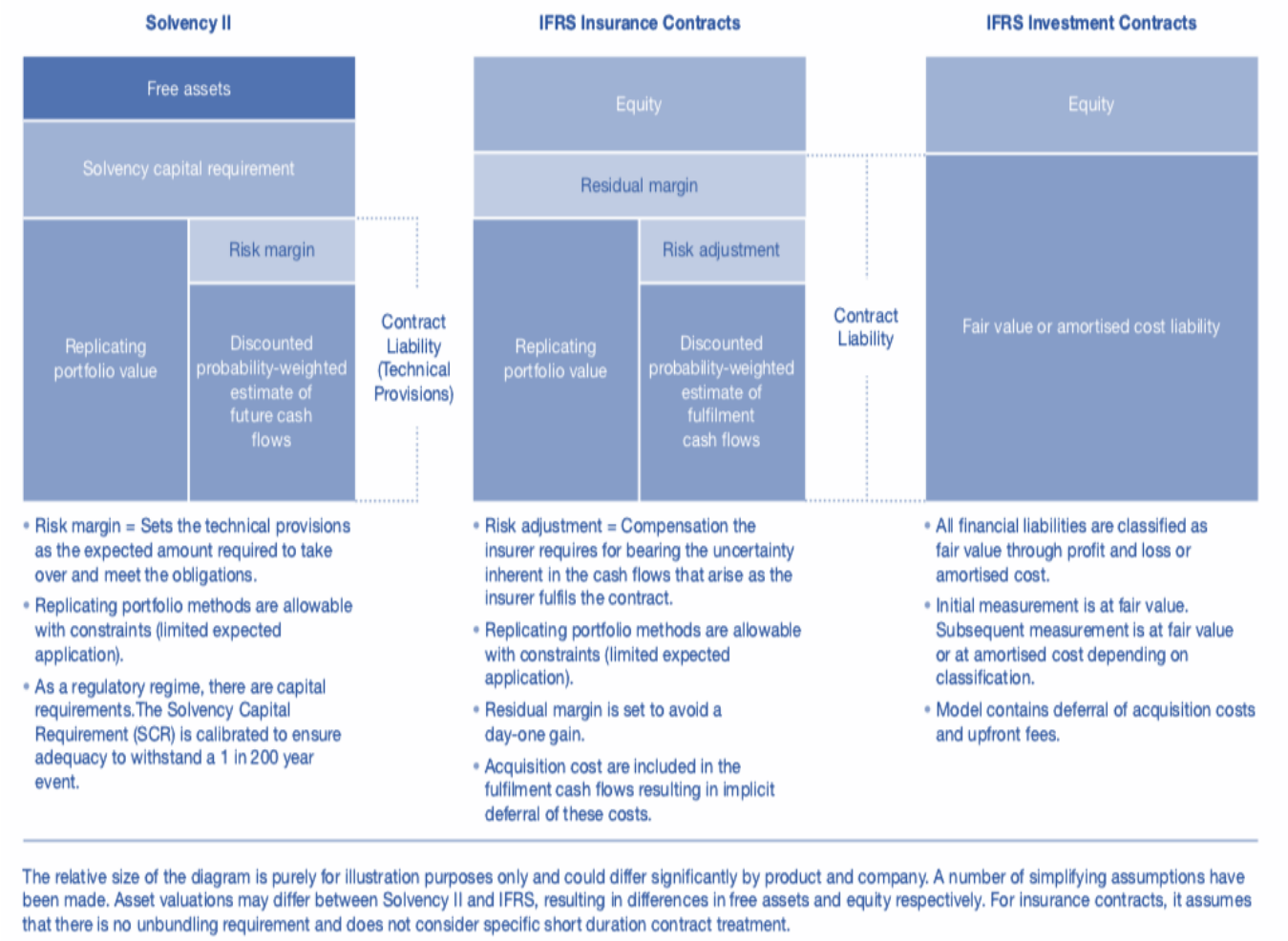
When assessing the different measurement models of Solvency II and IFRS 17, we first to define the scope of Solvency II which does not consider significant insurance risk as the threshold for different valuation methods, while applies a consistent approach to all insurance contracts, regardless of their nature (pure insurance or financial instruments – for this reason, IFRS 9 will be considered as well in this comparison, as shown in Table 9 - *Solvency II versus IFRS requirements for measuring contract liabilities*). Indeed, no unbundling takes place according to Solvency II, which makes no distinction between insurance and investment components. However, contract boundaries are defined in both systems, but in Solvency II there is a requirement to separate contracts into components, where the boundary differs between them.

The two regimes share a common conceptual framework for the measurement of contract liabilities, made up of probability-weighted estimate of future cashflows, discount rate to express the time value of money, and an allowance for risk. The only building block missing from Solvency II is the residual margin, which is included by IFRS 17 to eliminate the profit generated at initial recognition.

For what concerns the granularity of information, IFRS 17 requires the information tracking at group level for contracts, divided into portfolios and cohorts according to their expected probability at inception and the timing when they were written. Such a subdivision and fragmentation of data is not required by Solvency II and this requires additional data storage and management.

[57] The *Lamfalussy Process* levels are as follows: Level 1 - Primary legislation ("Directive on the taking up and pursuit of the business of insurance and reinsurance" of 2009), level 2 - Implementing measures (Delegated Regulation 2015/35 of 10 October 2014), level 3 – Guidance (designed by the EIOPA), and level 4 - Post-implementation enforcement (the European Commission is responsible for ensuring that member states are complying with the legislation).

Table 9 - *Solvency II versus IFRS requirements for measuring contract liabilities*



Source: PwC, 2017

The variables to take into consideration represent the inputs of the measurement model for contract liabilities and the differences and similarities between them in the two procedures can result in a major difficulty or simplification of implementation of the two.

A large degree of correspondence in the cashflows to include exist between IFRS 17 and Solvency II, with a distinction in the treatment of some expenses (i.e. acquisition and certain overhead) and of the cashflows arising from participating contracts. Acquisition expenses, for example, are directly attributable at portfolio level, according to the IFRS system, while expensed as incurred in Solvency II framework. Here, there is a separate contract boundary for those contracts which would typically be non-participating investment contracts in IFRS. The boundary is defined so as not to include future premiums in the cashflows, and for this reason, embedded profits arising from these future premiums are not included on the balance sheet. In IFRS, as these contracts are often unit-linked, there is no estimation of future cashflows and the liability is measured at fair value or amortized cost (typically the unit balance).

For what concerns the discount rate to use in order to assess the time value of money, there is a theoretical difference between Solvency II and IFRS 17.

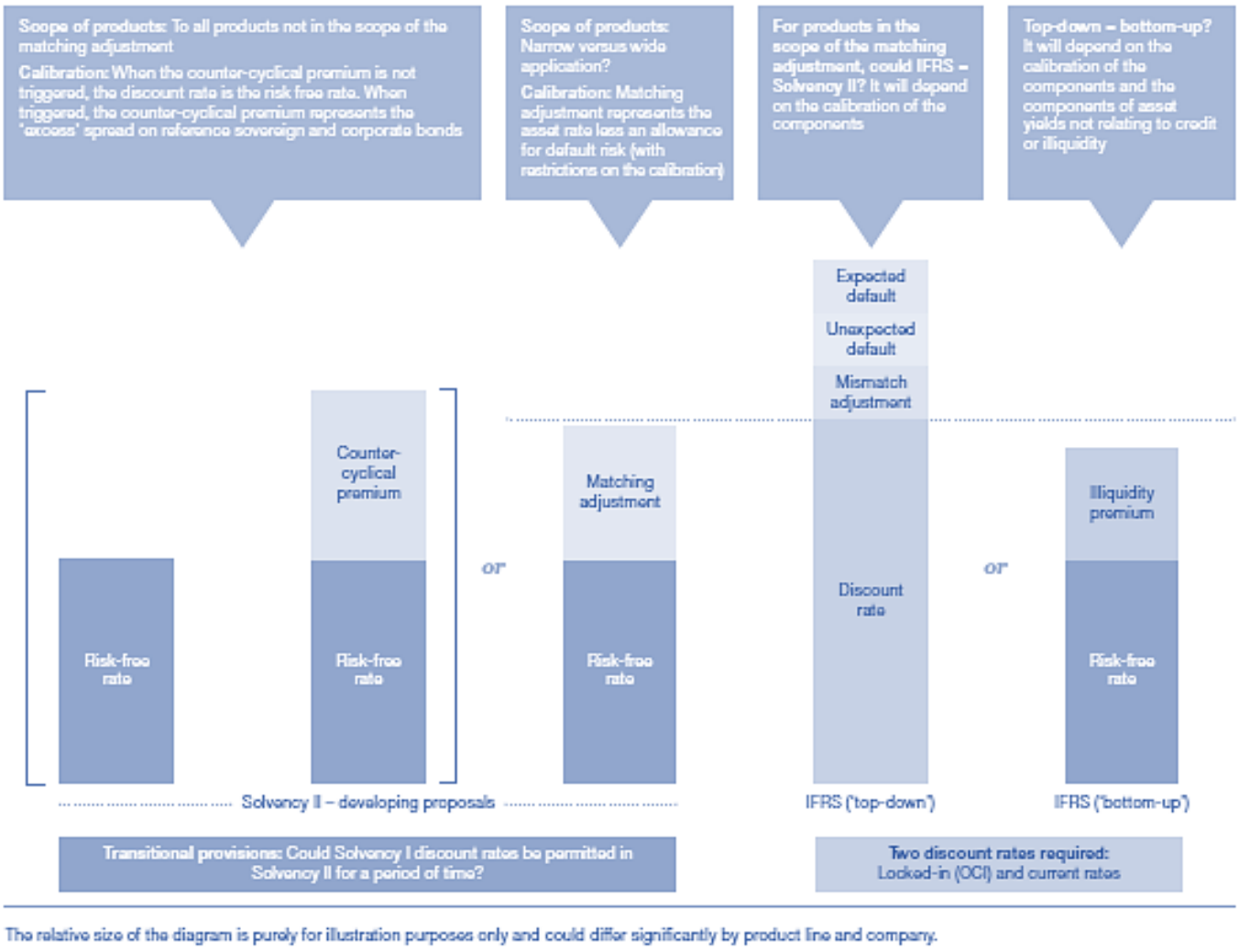
The former largely prescribes it, based on swaps and a matching adjustment or counter-cyclical premium (CCP)[58]. The first is intended to reflect the chance that there may be no (or limited) exposure to spread risk, excluding default risk, due to the characteristics of the liabilities and the asset-liability matching strategies adopted. The second is designed, when activated by the regulatory entity, to provide short-term relief during periods of 'excess' spread widening in sovereign and corporate bond markets.

The latter is a more principle-based approach where the only categorization is given by the reflection of the characteristics of the cashflows. Two approaches exist: top-down or bottom-up. The first starts with the yield on the reference assets with adjustments for default and mismatch risk to make adjustment for differences in the timing of asset and liability cashflows, it is usually applied to "spread-base" insurance contracts. The second starts with the risk-free reference rate plus an illiquidity premium.

The three discount rates used are shown and deconstructed in Table 10 (*Illustrative discount rate comparison Solvency II versus IFRS 17*).

[58] The CCP is designed to adjust the swap curve for "excess spread" in government and corporate bond markets.

Table 10 – Illustrative discount rate comparison Solvency II versus IFRS 17



Source: PwC, 2017

While these differences will generally not require changes to the models themselves, they will increase the number of model runs required in each reporting period and potentially put pressure on reporting time scales. It is important to remember that the choice of the discount rate becomes fundamental for insurers writing long-term contracts, as liabilities, solvency ratios and accounting profit are highly sensitive to its selection.

The closest similarity between Solvency II and IFRS 17 is represented by the concept of constructing an explicit adjustment for risk. The allowance for risk in the first framework is determined following a "cost of capital" approach with a prescribed calibration. In the second system, there is no specified method and the calibration is set according to the principle that "*the compensation the insurer requires for bearing the uncertainty inherent to the cashflows that arise as the insurer fulfills the contract*".

In contrast, the concept of residual margin is developed just in IFRS 17, it is determined at the portfolio level and its release is to the period in which the service is provided. There exist no unit of account for it and it is unclear how it will be developed in practice by insurers. The margin is increased for interest at each reporting period at the locked-in rate and any changes in estimates of future cashflows are immediately offset in it, rather than recorded in P&L.

In the end, the focus on the differences and similarities between those systems is made to the extent that they will have significant operational impacts on data and systems. They stem from the different reporting procedures and requirements, which oblige companies to prepare two different financial statements, one for regulatory purposes, and one for accounting purposes, to different supervisory and auditing procedures regulatory institutions and external auditors will have to put in place in the next years.

2.2. Effects on disclosure and presentation

IFRS 17 is going to augment the package of disclosure already prescribed by IFRS 4 and will require specific presentation methods for assets and liabilities, and revenue and expenses under the general measurement model. The required level of detail is expected to be more burdensome that the current accounting and regulatory requirements, together with Solvency II private and public reporting and disclosure requirements.

The level of aggregation is relevant for both measurement purposes and presentation purposes: the entity has to identify the position, either asset or liability, of each cohort of contracts so as to ensure the appropriate reporting. Contracts are recognized as liabilities when for example the entire premium is received in advance. For contracts with periodic premium payments, the attribution of liability condition depends on the comparison between the pattern of claim and expense payments and the pattern of premium receipts, and on the level of probability, above of all other variables.

After the group recognition, insurance acquisition cash inflows and outflows can be associated to the belonging group. This is necessary for the measurement of the contract because it allocates the cashflows to the appropriate group. The carrying amount to report in the balance sheet for each group is made up of the liability for remaining coverage and that for incurred claims. In order to apply these presentation requirements, the entity should be able to assess the right nature for the group of contracts, either to be considered assets or liabilities.

The statements of financial performance recognize an insurance service result, arising from the difference between the insurance revenue and the insurance service expenses, and an insurance finance income or expense.

2.2.1 Insurance Service Result

Insurance revenue and insurance service expensed that are presented in profit or loss do not consider any investment components, identified only when there is the recognition of revenue and incurred claim. The problem with this separation stands in the fact that currently those components are not always monitored separately when constructing assumptions, projecting cashflows and analyzing the performance for the period. The rationale behind this exclusion is that the investment components do not present consideration for providing services and therefore must not be reported together with the insurance revenue.

In the liability for remaining coverage at opening balance, the entity will use the following inputs for the determination of the insurance revenue and service expenses amounts:

1. The insurance service expenses incurred during the period at the amount expected at the start of the period;
2. Changes to risk adjustment for non-financial risk, not related to future service (the entity can choose to apply a disaggregated approach where it divides the risk adjustment component between the insurance service result and insurance finance income or expense);
3. The Contractual Service Margin allocated to the P&L for the period; and
4. The Amortization of insurance acquisition cashflows, for revenues and service expenses in the same amount;

By contrast, in the liability for incurred claims at opening balance, the insurance service expenses will be the result of:

1. The actual claims and expenses which are relative to the period,
2. The changes in non-financial risk assumptions used, and
3. The changes in risk-adjustment for non-financial risk, which even in this case can be disaggregated.

We can define the total insurance revenue for a group con contracts as the "*amount of policyholders' premiums paid adjusted for a financing effect – i.e. time value of money – and excluding investment components*"[59]. It represents the provision of coverage and other services arising from the contracts cohorts, represented at an

[59] See IFRS 17. B120

amount reflecting the extent to which the entity expects to be entitled in exchange for the mentioned services. This amount is made up of two components, which are associated with:

a. The provision of service; and
b. The insurance acquisition cashflows.

The amounts related to the provision of service, which is the value released by the decrease of the liability for remaining coverage, can be calculated using two approaches: a direct and an indirect method, represented in Table 11 (*The two approaches for insurance revenue recognition*). The former calculates the insurance revenue related to the provision of services as the sum of the changes in the liability for remaining coverage related to the considered service in the period. The changes encompass three different components:

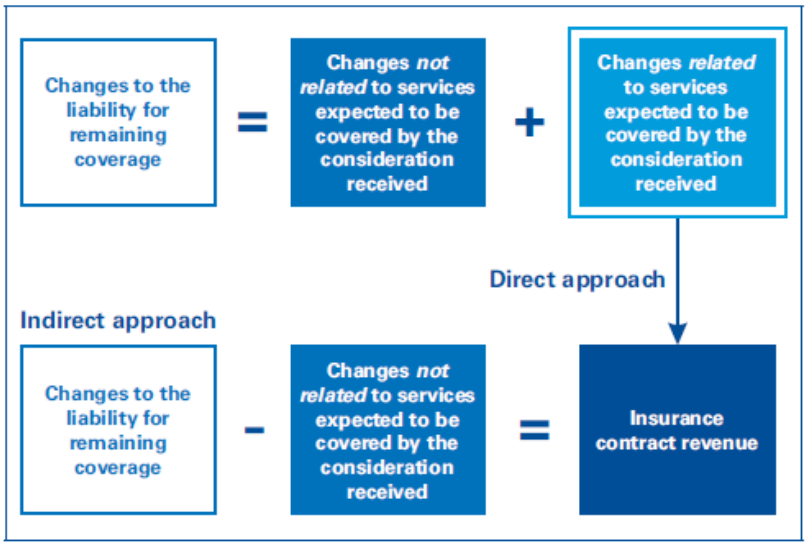
a. The insurance service expenses for the period;
b. The change in the risk adjustment for non-financial risk related to past and current services; and
c. The amount of the contractual service margin recognized in &L for the period.

The first exclude several items for the calculation of the insurance revenue as for example, among others, the repayments of investment components and the amounts assigned to the loss component of the liability for remaining coverage, which are even excluded by the change in the risk adjustment.

The second approach considers as the starting point the difference between the insurance revenues and the sum of all changes which are not related to services expected to be covered by consideration received. These changes include all changes not related to the service provided in the period as for example the cash inflows from premiums received, repayments of investment components, and the de-recognition of liabilities transferred to a third party. Together with those, we must account for changes in the loss component of the liability for remaining coverage, which, although relating to services, are not expected to be considered.

The amounts related to insurance acquisition cashflows are included, according to IFRS 17, in the determination of the contractual service margin on initial recognition, when there is a reduction in the CSM and the related cashflows ultimately affect P&L through the CSM release process, as a reduction in insurance revenues. The amount of revenue related to recovering insurance acquisition cashflows is computed by allocating the portion of the premium relating to recovering the cashflows to each reporting period in a systematic way based on the passage of time, with the same amount recognized as an insurance service expense.

Table 11 - The two approaches for insurance revenue recognition



Source: KPMG, 2017

Insurance service expenses are recognized in P&L as incurred, excluding all the amounts related to the repayments of investment components, if those expenses arise from groups of issued insurance contracts.

For the purpose of better understanding this reporting process, we have constructed a numerical example showing the mechanics behind the revenue recognition, which is based on the expected claims and expenses for the period.

A company issues a group of insurance contracts with the following characteristics:

1. Coverage period: 4 of years;
2. No participation features or investment components.;
3. Total group premiums received at inception: 1,500 Euros;
4. Insurance acquisition cash flows: 100 Euros.
5. Expected claims and expenses: 800 Euros, to be incurred evenly over the coverage period.
6. The risk adjustment for non-financial risk on initial recognition: 80 Euros, released evenly over the coverage period.
7. Discount rate: negligible (for simplicity).

Over the coverage period of four years, all events happen as expected and the company does not change any assumptions related to future periods.

The following tables represent:

- Table 12.1, the measurement of insurance contract liability;
- Table 12.2, the change in the liability for remaining coverage over each period;
- Table 12.3, the insurance service result through the direct approach.

Table 12.1 – Measurement of insurance contract liability

Liability measurement					
years	*0*	*1*	*2*	*3*	*4*
Estimates of PV of cash inflows	1500	0	0	0	0
Estimates of PV of cash outflows including acquisition cashflows	-900	-600	-400	-200	0
risk adjustment	-80	-60	-40	-20	0
Fulfilment cashflows	520	-660	-440	-220	0
CSM	-520	-390	-260	-130	0
Insurance contract liability	0	-1050	-700	-350	0

Table 12.2 – Change in liability for remaining coverage over each period

Change in liability for remaining coverage each period				
years	*1*	*2*	*3*	*4*
Opening balance	0	-1050	-700	-350
Premiums received	-1500	0	0	0
Acquisition cashflows	100	0	0	0
Expected claims	200	200	200	200
Risk adjustment recognized	20	20	20	20
CSM allocation	130	130	130	130
Closing balance	-1050	-700	-350	0

Table 12.3 – Insurance service result (direct approach)

Insurance service result (direct approach)				
years	*1*	*2*	*3*	*4*
Expected claims	200	200	200	200
Risk adjustment recognized	20	20	20	20
CSM allocation	130	130	130	130
Revenue for services provided	350	350	350	350
Revenue to cover acquisition cashflows	25	25	25	25
Insurance revenue	**375**	**375**	**375**	**375**
Service expenses	200	200	200	200
Insurance acquisition costs	25	25	25	25
Insurance service expenses	**225**	**225**	**225**	**225**
Insurance service result	150	150	150	150

Source of the tables: Personal computations on Excel

2.2.2 Insurance Finance Income or Expense

The insurance finance income or expense is defined as "*the change in the carrying amount of the group of insurance contracts arising from the effect of, and changes in the time value of money and financial risk*"[60]. Two policy sets are allowed for presentation of the insurance finance income or expense: either in P&L or between P&L and Other Comprehensive Income ("OCI"), as prescribed by the disaggregation policy choice. The chosen accounting policy needs to be applied consistently at the portfolio level for similar portfolios[61], in accordance with IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*.

If the disaggregation policy choice is applied, the recognition in P&L of insurance finance income or expenses is determined according to the features of the groups of contracts. They look at whether they are direct participating contracts for which the entity holds the underlying items and whether changes in the assumptions about financial risk have a substantial effect on the amounts paid to policyholders.

In the liability for remaining coverage at opening balance, the entity will use the following inputs for the determination of the insurance finance income or expense:

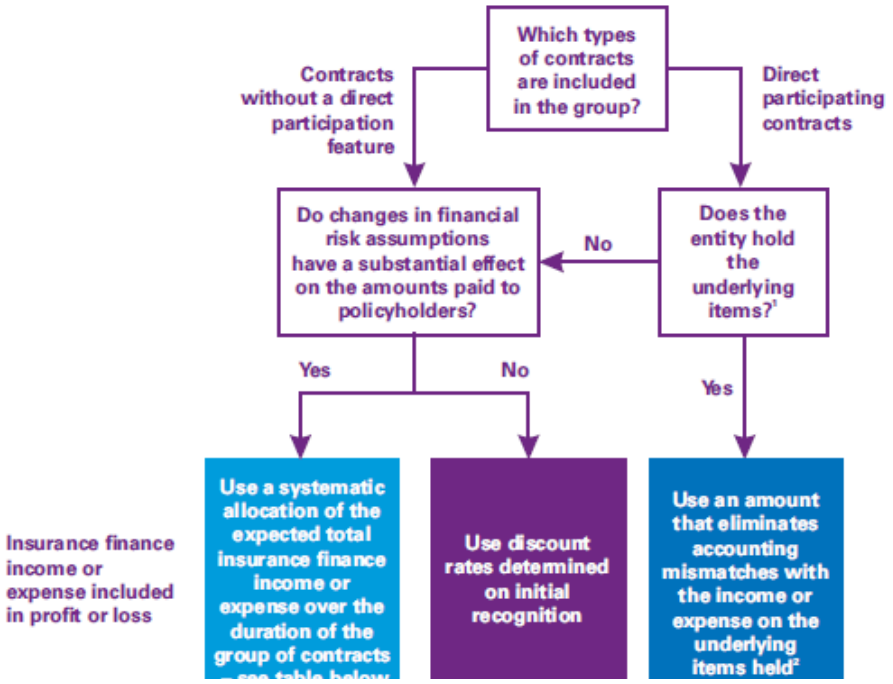
1. the effect of the time value of money and financial risk, assessed by the impact on fulfilment cashflows;
2. the effect of the time value of money, assessed by the impact on the CSM; and
3. the changes in fulfilment cashflows for non-financial risk assumptions related to future service.

The CSM adjustments are measured at the discount rate at initial recognition, and fulfilment cashflows adjustments are measured at current rates. Any resulting difference is included as insurance finance income or expense. For what concerns the liability for incurred claims, it contains the effect of the time value of money and financial risk.

The determination process of the amount of insurance finance income or expense and its presentation in P&L is shown in Table 13 (*Insurance finance income or expense process of recognition in P&L*).

[60] See IFRS 17.87
[61] Similarity among portfolios is assessed considering for each portfolio the assets hold and the accounting method used for them.

Table 13 – Insurance finance income or expense process of recognition in P&L



Source: KPMG, 2017

In Table 13, it is presented the systematic allocation of the expected total insurance finance income or expenses over the duration of the group of contracts. It is based on the characteristics of the contracts with the exception of all factors that do not have effect on the cashflows, as for example the expected returns on the assets in some cases. The allocation makes the total amounts accumulated in OCI over the duration of the cohort of contracts equal to zero.

The systematic allocation is applied through the fulfilment cashflows and the CSM, for which different methods apply with respect to the contract participation features (with or without direct participation).

For what concerns the fulfilment cashflows, the allocation is the same for all contracts and there exist two approaches. The first, referred to as *the effective yield approach*, is based on the assumption that the rate used is constant and allocates the remaining revised expected finance income/expense over the remaining duration of the group of contracts. The second, the *projected crediting rate approach*, provides an allocation based on the amounts credited in the period and expected to be credited in the future to the policyholder. The latter approach applies only to contracts using a crediting rate to the determination of amounts due to policyholders.

The CSM is treated differently depending on the participation feature of the contracts. On the one hand, the allocation prescribes the use of a discount rate to be determined on initial recognition. On the other, for direct participating contracts, the allocation method must be consistent with the one applied to the fulfilment

cashflows. This mismatch arising from the application of two discount rates for the CSM affects the change in the fulfilment cashflows and the adjustment to the CSM. This difference causes the creation of a gain or loss recognized as part of the item and is subject to the disaggregation policy choice.

Exchange differences on changes in group of contracts are recognized in P&L unless they are related to changes reported in OCI, that if so, are reported there. This is due to the fact that insurance contracts are considered as monetary items according to IAS 21.

Even for these amounts, a numerical example is presented to clarify the procedure practicalities not directly straightforward from the description above.

A company issues a group of insurance contracts with the following characteristics:

1. Coverage period: 4 of years;
2. No participation features or investment components.;
3. Total group premiums received at inception: 1,000 Euros;
4. Insurance acquisition cash flows: negligible (for simplicity).
5. Expected claims and expenses: 800 Euros, to be incurred evenly over the coverage period.
6. The risk adjustment for non-financial risk on initial recognition: 80 Euros, released evenly over the coverage period.
7. Discount rate: 5% (years 0 – initial recognition- and 1), 3% (years 2,3 and 4).

Over the coverage period of four years, all events happen as expected and the company does not change any assumptions related to future periods. Moreover, the company opts for the disaggregation of insurance finance income or expense and the inclusion in profit or loss of an amount determined by a systematic allocation of the expected total insurance finance income or expense over the duration of the group of contracts, using the discount rate determined on initial recognition.

The following tables represent:

- Table 13.1, the measurement of insurance contract liability;
- Table 13.2, the estimation of CSM to release in P&L;
- Table 13.3, the change in the liability for remaining coverage over each period

Table 13.1 – Measurement of insurance contract liability

Liability measurement					
years	*0*	*1*	*2*	*3*	*4*
Estimates of PV of cash inflows	1000	0	0	0	0
Estimates of PV of cash outflows	-658	-691	-754	-777	-800
Fulfilment cashflows	342	-691	-754	-777	-800
CSM	-342	-269	-188	98	0
Insurance contract liability	0	-960	-942	-679	-800

Table 13.2 – Estimation of CSM to release in P&L

Estimation of CSM to release in P&L				
years	*1*	*2*	*3*	*4*
Opening balance	342	269	188	-98
Interest accretion	17	13	9	-5
Release to P&L	-90	-71	-49	26
Closing balance	269	212	148	-77

Table 13.3 – Change in liability for remaining coverage over each period

Change in liability for remaining coverage each period				
years	*1*	*2*	*3*	*4*
Opening balance	0	-960	-942	-875
Premiums received	-1000	0	0	0
Insurance finance income/ (expense) in profit or loss	-50	-48	-46	-43
Insurance finance income/ (expense) in OCI	0	-28	14	15
Expected claims	0	0	0	800
CSM allocation	90	94	99	103
Closing balance	-960	-942	-875	0

Source: Personal computation on Excel

2.3 Implementation and Transition process

The novelties and disruptiveness of the long-awaited standard on insurance contracts have been affecting not only insurers but also the financial stability and the European public good for the whole market. The effects brought by the new Standard, among all increased transparency, comparability and a better insight into insurer's business models, will have a positive impact on the financial stability of the European Union area. The drawback of IFRS 17 is, of course, represented by the challenges that a market-consistent valuation for insurance liabilities will cause to the entities, which have to deal with the illiquidity of such liabilities together with the development of a specific tool or framework of tools able to identity and assess the right characteristics and assumptions to make.

The accounting consistency between most sectors brought by the adoption of both IFRS 17 and IFRS 9, characterized by a principle-based approach, will improve further consistency and transparency to European insurers' IFRS financial statements. We have to be careful in considering the role of insurance companies, above all in Europe, as they represent the major institutional investor in the market, and, therefore, any disruption on their processes and ultimately on their financial statements would have a domino effect on the entire system.

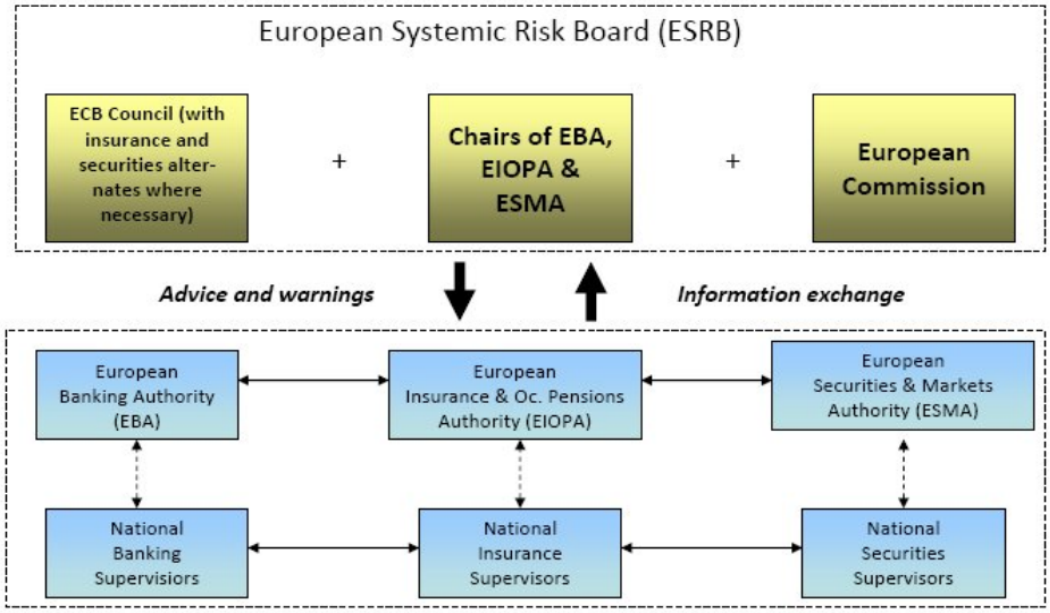
For this reason, many preemptive measures and recommendations are taking place throughout the entire system, above all among the insurance sector authorities and the same IASB.

2.3.1 Institutional support to IFRS 17 implementation

Implementing any new accounting standards can be challenging and implementing IFRS 17 will be a big job, which is the reason why the implementation date is 4.5 years after the standard was issued. In the EU, there exists the European System of Financial Supervision ("ESFS") which is a decentralized and multi-layered system of micro- and macro-prudential authorities established by the European institutions with the aim of ensuring consistent and coherent financial supervision in the EU.

Its governance is depicted in Table 15 (*The ESFS structure*). The top layer is represented by the European Systemic Risk Board ("ESRB"), which provides macro-prudential oversight of financial markets at the European level. Its task comprise the collection and analysis of relevant information, risk identification and prioritization, the issuance of warnings and recommendations and monitoring their follow-up. It also coordinates actions with other international financial organizations such as the International Monetary Fund (IMF) and the Financial Stability Board (FSB). It is made up of the European Central Bank Council, the European Commission and the Chairs of the three European Supervisory Authorities (ESAs).

Table 15 – The ESFS structure



Source: European System of Financial Supervision – ESMA

The components of the ESAs are:

a. the European Banking Authority (EBA);
b. the European Insurance and Occupational Pensions Authority (EIOPA); and
c. the European Securities & Markets Authority (ESMA).

The three supervisory authorities form part of the Joint Committee, which is in charge for the ensuring of cross-sectoral consistency and joint positions in the area of supervision of the financial intermediaries and entities. The supervision of individual institutions is still performed at national level by the national supervisory authorities.

EIOPA actively promotes high-quality international accounting standards which affect the core sectors of its mandate through the support to the European Financial Reporting Advisory Group ("EFRAG"). This is involved together with the European Commission and the Accounting Regulatory Committee in the endorsement process of IFRS 17, whose focus is on the analysis of the application effects of IFRS 17 (and IFRS 9) on financial stability and the public good.

In the path of this analysis and support, on October 19 2018, the ESAs wrote a letter to the EFRAG about the endorsement process of IFRS 17, where the three authorities have highlighted the crucial importance of this new IFRS as a new instrument for enhancing comparability and transparency of financial information,

considered the bases of long-term financial stability. Moreover, this would result in an increase of financial integration, which is at the heart of the project for the Capital Markets Union.

The letter discussed the process around the EFRAG Board letter to the IASB, in which it was requested the change of the key building blocks of the Standard, and the debate of the technical analysis of EFRAG's Technical Expert Group. Finally, the letter expresses the wish for a progress in the analysis and its finalization in a timely manner so as to permit the countermeasures from the IASB.

In fact, the IASB after the development and issuance of the Standard, has been dedicated to help companies along the way. Here are the three ways the Board is supporting implementation.

First, they have put together a *Transition Resource Group* to identify and respond to the implementation challenges companies face. This group is made up of people involved in implementing IFRS 17 from major insurance companies or firms and regulatory bodies from around the world. Anyone can submit a question to the *Transition Resource Group* (TRG) and everybody can watch the meeting.

The TRG for IFRS 17 has the purpose to enhance public discussion through the provision of a forum so as to give the possibility to shareholders of following the discussion of questions raised on implementation, and to inform the IASB Board about the potential determination of actions to address those questions. The actions could include the provision of supporting material or the referral directly to the Board or to the Interpretation Committee[62].

Second, the Board has developed a wide range of support material, this include presentations and webcasts explaining the details of the new standard. More materials will be developed up to 2022. The materials have been settled in the context of IFRS 17 as issued in May 2017. Some information provided in these materials might be subject to modification if the proposed amendments are finalized.

Third, the IASB is making sure that the market is prepared for IFRS 17 by educating investors and others about the challenges the new standard will bring.

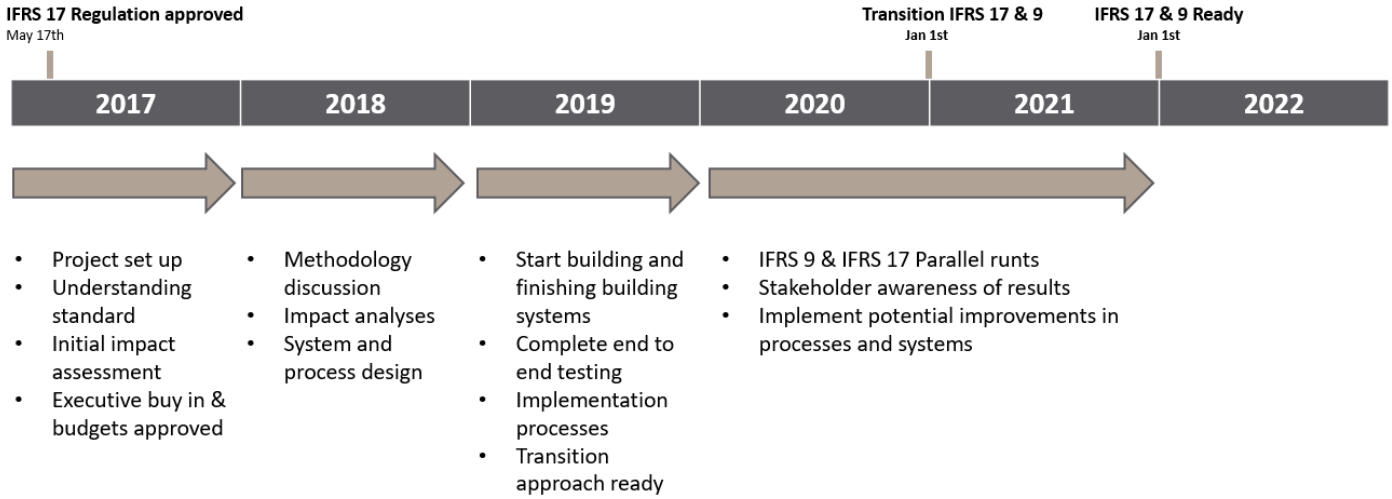
[62] The IFRS Interpretations Committee (the 'Committee'), formerly called the International Financial Reporting Interpretations Committee (IFRIC), has the following roles. First, to interpret the application of IFRSs and provide timely guidance on financial reporting issues not specifically addressed in IFRSs, in the context of enhancing both the convergence of national accounting standards and IFRSs high quality solutions. Second, to publish after clearance by the IASB draft Interpretations for public comment and consider comments made within a reasonable period before finalizing an Interpretation. Third, to report to the IASB and obtain the approval of nine of its members for final Interpretations if there are fewer than sixteen members, or by ten of its members if there are sixteen members. More on the topic at https://www.ifrs.org/groups/ifrs-interpretations-committee/

IASB continues to work on the refinement of IFRS 17 through Exposure Drafts in order to allow discussion and development of amendments to the Standard. The EFRAG endorsement adjusts according to the ED. The last ED (ED/2019/4 Amendments to IFRS 17) was issued by the IASB on 26 June 2019 and proposes targeted amendments to the Standard to answer to concerns and challenges raised by stakeholders as IFRS 17 is being implemented. On 15 July 2019, EFRAG has issued its draft comment letter on the ED with a comment period ending on 2 September 2019. It is concerned about the implementation challenges when applying the different transition process approaches and encourages the Board to not furtherly amend them and to confirm the text of the final standard in the context of the allowance of the use of estimates, including the approximations for missing information.

2.3.2 The implementation process and accounting decisions

The implementation process, firstly programmed in 2021, now postponed to January 2022, the chosen effective date, requires companies to apply IFRS 17 for external reporting. The transition date will be 1 January 2021, although early application is permitted in some circumstances and coincides with the application of IFRS 9, which on the contrary, could be applied in 2022 if the Delay approach is permitted. Table 16 (The Transition process for IFRS 17) displays all the dates of the process.

Table 16 – The Transition process for IFRS 17



Source: ifrs17explained.com

The decision-making process at transition is crucial for the definition of the future presentation of results for current and future business of the entities. For this reason, an analysis of the consequences of the various accounting decisions on future results is needed in order to get a clearer picture of the Standard impact.

The implementation of a new accounting standard must be done retrospectively as if the Standard has always been applied, according to IAS 8. The impact of the retrospective application of the Standard will be reflected in the Equity account. However, further changes will be needed for the accrual type balances of the CSM and the accumulated Other Comprehensive Income (OCI), developed based on historical data.

The former is the expression of the expected profit to be realized when the insurer provides service and is reported over the duration of the portfolio. It serves as a buffer for changes in estimated cashflows for future services and reflects the impact of historical changes in future fulfilment cashflows.

The measurement of insurance liabilities is made on current assumptions also on discount rates at each reporting date, or valuation date if differently needed. The effect of changes in discount rates can be reported either in P&L or OCI.

Another important modification to current accounting is the presence and definition of the level of risk adjustment and its recognition in OCI for certain circumstances. The risk adjustment level reflects "*the compensation that the entity requires for the uncertainty about the amount and timing of the cash flows*"[63].

Details on the requirement are not given so the specific decision is left to the entity, which will choose the level of the risk adjustment, affecting the CSM and the use of the OCI before transition. The level of risk adjustment is inversely correlated to the CSM, inducing a reduction in the capacity of the margin to absorb changes in the future fulfilment cashflows. However, the higher the level of risk adjustment, the higher the confidence for shareholders on the robustness of the stream of earnings.

The use of OCI to report the effect of discount rate changes is frequently used with the classification of financial instruments at Fair Value through OCI (FVOCI). This option is applicable only for instruments meeting a particular test[64] prescribed by IFRS 9. In this case, the matching of movements in the OCI for discount rate changes applicable to insurance liabilities would be possible. For insurance liabilities, it would be more difficult to realize the OCI and report the amount into the income statement as the OCI will be realized over the running off of the liabilities rather than at sale, as it works for financial instruments.

[63] See IFRS 17,37
[64] The Solely Payments of Principal and Interest test

In conclusion, the implementation and transition decisions will have an impact on companies either in processes or in reporting and for this reason it is important to assess the chosen approach in order to get an insight of the consequences and challenges entity will work through.

2.3.3 *The transition process approaches*

Appendix C of the Standard talks about the three different approaches for the transition, which are the following:

a. the full retrospective approach;
b. the modified retrospective approach; and
c. the fair value approach,

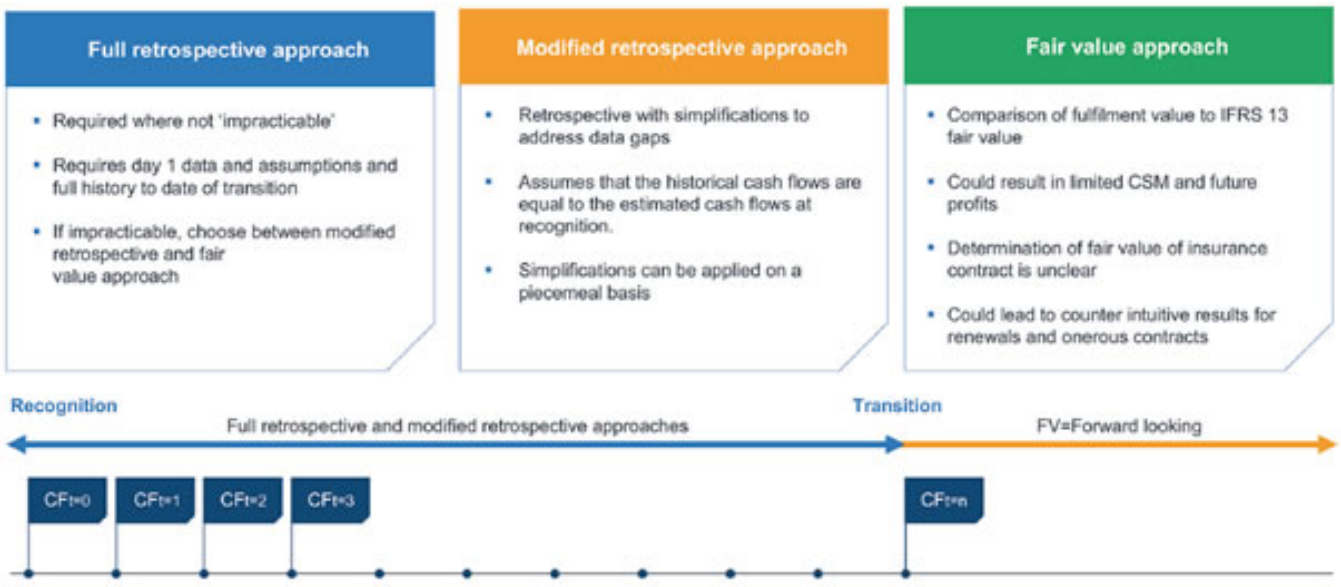
They are represented in Table 17 (The three approaches to IFRS 17 transition), with their summarizing features and the temporal cashflows involved in each of them.

The full retrospective approach is required to determine the financial position for the earliest prior period presented, according to IAS 8. It requires a particular presentation on the balance sheet at transition date for the following items:

1. for the Best Estimate of expected cashflows, it is used the expected present value calculated according to the discount rate and best estimate assumptions at transition date;
2. for the risk adjustment, the value would be based on entity specific assumptions as well;
3. for the CSM, the value would be assessed through the calculations on the Best Estimate of expected cashflows at initial recognition, and if any change in the discount rate occurs, the level would have to be reassessed;
4. for discount rates and their effects, there would be more recognitions after the transition date one and the effects would result in changes in the CSM[65], changes in the OCI or in P&L.

[65] This happens in the case in which the Variable Fee Approach is applied. More on this topic will be addressed in Chapter 3 of this paper.

Table 17 - The three approaches to IFRS17 transition



Source: Milliman, 2018

This approach requires the presence and use of the annual historical cohorts with available complete history and data, as for example any modification of the group of contracts analyzed and assumptions about expense, mortality, lapse and morbidity rates[66] used in calculations.

Due to its complicated nature, in some circumstances[67], the full retrospective approach is considered impractical and therefore two additional approaches are permitted. To use a different approach, the entity must demonstrate the impracticability of application of the full retrospective approach. When the application of this approach of determining the cumulative effect of applying the new IFRS 17 to all prior periods is not practical, it is accepted to choose a simplified approach to a group of contracts, choosing between a modified retrospective approach and a fair value approach to apply the new IFRS 17 standard. The choice of approach depends on which method better reflects the entity's results.

The modified retrospective approach has the purpose of achieving the closest outcome to the first described approach with reasonable and supportable information at transition, both in terms of costs and efforts. It allows the following modifications to the full retrospective approach.

[66] Lapse ratio is the number of policies that are that are not renewed compared to the number of policies that were active at the beginning of that same period. The lapse ratio represents the percentage of policies that were not renewed, and thus have lapsed in coverage. While the morbidity rate is the frequency or proportion with which a disease appears in a population.

[67] The circumstance in which the approach is not feasible include those where effects of retrospective application could not be determined and when the retrospective application requires assumptions about the management intent not easy to assess.

1. For the expected cashflows, the valuation is the combination of the realized cash flows occurred between the date of initial recognition and the transition date and the expected cashflows calculated by using current assumptions as per the transition date.
2. For the discount rate at initial recognition, it is usually used the actual yield curve for last three years and prior period yield curves based on calibration for last three years to observable index, where the appropriate average spread should be determined over the prior three years at transition. Otherwise, the yield curve at transition may be applied.
3. The risk adjustment is estimated at initial recognition by adjusting the adjustment determined at the transition date with the expected release between the initial recognition date and the transition date.
4. Finally, the CSM is estimated at the transition date, reflecting the occurred cashflows between initial recognition and transition date. In case of grouping of contracts issued more than one year apart, there is an option to apply the discount rate at the transition date instead of the discount rate per inception to determine the CSM accrual and adjustments.

The choice of using this approach is challenged by some conditions entities should consider, as for example for CSM determination where it would be necessary to use economic scenarios calibrated on historical economic parameters, not a straightforward task.

The fair value approach is the last alternative, which prescribes a different methodology for the calculation of the CSM. Indeed, at transition date, it is the result of the difference between the fair value, computed according to IFRS 13, of the insurance contract and the present value of the fulfilment cashflows, computed according to IFRS 17. The difference between the fair value and the present value of the cashflows can arise from different factors, among others:

a. The non-performance risk of the issuing entity is not reflected in the fulfilment cashflows;
b. Overhead expenses are not included in the fulfilment cashflows if not directly attributable to the contracts;
c. The effect of factors, if any, influencing the observable market prices not relevant to the cashflows are not considered in the discount rate used for the fulfilment cashflows;
d. The best estimate cashflows and risk adjustment consider diversification benefit and risk aversion degree, not accounted by the fair value, which is based on exit value principle. In this case, the purchasing entity will require a profit margin, decreasing the fair value; and
e. Different contract boundaries exist between the two methods, affecting the CSM.

The application of this approach for the transition has several controversial issues, however, it should be easiest in application. The CSM determined under the fair value approach is a good starting point for the transition project and can be considered as a benchmark for entities.

To conclude, the decisions regarding the transition approach and the implemented reporting method will affect differently but fundamentally every activity and business area of an entity, either in its financial operations or in its overall structure of systems and processes. This will surely affect the way in which companies will assess and perform control both internally and externally through, for example, external auditors or supervision by regulatory institutions.

2.4 Impacts on audit, risk management and regulation procedures

The new Standard is going to represent the most disruptive change in reporting standards over the last 20 years. This is due to the introduction of new measurement models for insurance liabilities, which involve the use of tough risk and discount calculations. Those require ongoing updating and revision of data in order to reflect the correct expectations and circumstances of the economic and financial markets and variables. Therefore, the operational impact of the attached processes and procedures will be significant and will encompass many business areas within the same entity and even the interconnection system across entities.

It will be required for organizations to provide a holistic and comprehensive data management approach, which entails data governance, extraction and transparency across the reporting process. Data used will be either historical or current or even forward-looking, giving rise to a structure made up of a huge amount of data to classify and order. Data granularity would be needed as well in order to support the measurement models: portfolios are subdivided according the particular characteristics, historical discount rates are needed for the calculation of the CSM, and storage and audit of historical cashflow projections should be possible covering technical, operational and financial assumptions. Above all, the reconciliation of data would be at the heart of the entire system between the external management and regulatory reporting.

For this reason, the areas, whose impacts are furtherly assessed, are chosen as follows:

a) The Audit (both internal and external) area which is involved in the review and revision of the data management capabilities and of the smoothness of process across the enterprise; together with the Risk Management area, which is responsible for the testing and processing of the increased amount of data in the valuation practices; and

b) The Regulators, which contribute and of course supervise the processes and the potential drawbacks of the implementation of the new Standard.

2.4.1 Audit and Risk Management

Considering these overwhelming alterations and modifications the Standard will bring, senior management and governance as a whole will demand a rigorous program for IFRS 17 implementation which will undergo testing and validation. Fortunately, over the last several years, there have been significant enrichments in risk management procedures that will enable insurance companies to appropriately and consistently address this request.

Thanks to the support from regulators and institutions and from the specific experiences, entities are able to establish comprehensive validation procedures, whose application is performed in an organized and effective combination with development testing and audit. This can significantly enhance the quality of IFRS 17 published results. Compilation, organization and assessment of data will be affected and therefore entities need to be able to sustain such a change, most importantly represented by the development of new disclosures and presentations.

The coordination between development testing, validation and audit is required for the establishment of activities and roles the different business area will take on. Development testing is a common component of effective program development, whose most widely recognized element is the use of alternative, checker calculation routines to test the accuracy of the calculations for the new program initiative, in this case the Standard. Validation is more comprehensive than development testing as it embraces all aspects of a model from input through calculations, to output presentation, and then use. Validation recognizes any upstream models that supply input that the risk management program should validate.

Auditing financial statements is perhaps the most widely recognized of the three review activities. It is focused on suitability and consistency of the model output both with local GAAP and with IFRS. An audit either internal or external has a general coverage and a broad mandate, which includes reviews of procedures and conceptual soundness.

External auditors are demanded a high degree of independence from the internal team, which is an effective enabler of feedback. The external team intervenes after the effective procedural development; therefore, there must be coordination between the two audit teams in promoting a constructive interpretation and translation

alignment. The rationales behind this cooperation and coordination are the improved effectiveness and cost efficiency.

The three review processes fit neatly into in a three lines of defense model, where the first line is up to the IT and actuarial area, , the second line is under the responsibility of the risk management function, and internal and the third line is completed by the interaction between internal and external audit teams. The three lines make up a validation testplan[68] corresponding to IFRS 17, for which an effective road map for coordinating the three review processes should be prepared.

A key element of the entire process and review is the assessment of conceptual soundness, predominant feature for IFRS 17. According to Alex Berlotti, a PwC Audit Partner, "*internal audit will have a huge part to play in ensuring appropriate internal controls are designed and implemented*" and "*can plan and deliver early and continuous assurance that the necessary steps have been taken with all relevant stakeholders*"[69].

IFRS 17 will change obtrusively financial reporting and for this reason, it is crucial for entities to consider the implementation of different methods and the management of the overall control areas, through the internal audit team assuring the effectiveness and appropriateness of methodologies and controls over the financial reporting processes.

Additional data requirement and modelling will require audit teams to perform activities, which assess the adequacy of controls over accuracy and completeness of financial and non-financial information and ensure the alignment of the operating model with the entity's strategy as a whole. In order to achieve it, a careful governance model is required, in accordance with the current normative and supervisory framework.

2.4.2 Regulation and Supervision

The IVASS, *Istituto per la Vigilanza sulle Assicurazioni*, is the Italian national Insurance Supervisor, which entitled to the promotion of a uniform level of transparency and accountability of supervisory authorities as well as to assurance of information disclosure according to Article 31(2) of Directive 2009/138/EC. Moreover, from the adoption of EU Regulation 2015/2451, the authority has taken part to a European common scheme

[68] The validation plan describes calculation testing requirements. Model development also typically specifies a recalculation testplan, but there can be considerable variation relating to coverage and specified detail of requirements. In any event, management should use the calculation test plan developed for validation in planning development testing. More on this topic at pwc.com
[69] Alex Bertolotti & Klaas van Wyk de Vries, *IFRS 17: The impact on internal audit*, pwc.blogs.com, 30 May 2019

about the prescription of the structure and format of disclosure to insurance companies. This task is performed through the following structures:

1. Laws, regulations, administrative rules and general guidance;
2. The Supervisory Review Process (SRP);
3. The aggregate of statistical data including market information and supervisory aspects.

In the exercise of its functions, IVASS structure is made up of three Offices, reporting directly to the governing bodies, and nine Directorates, subdivided into organisational units called Divisions, which carry out specific tasks.

Solvency II Directive (the "Directive") was transferred into Italian legislation by updating the Insurance Code, and the IVASS implements EIOPA guidelines through special Regulations or through the amendment of existing ones, for all the three pillars. Solvency II is considered as "*a risk-based system, since it focuses the attention of the supervisor, as well as undertakings and the market, on the quality and quantity of risk that each undertaking assumes through its commitments towards policyholders, and of investment of financial resources*"[70].

For this reason, the national Insurance Supervisor has been far more involved in the implementation and supervision of the Directive rather than it is and would be for IFRS 17. Indeed, as previously mentioned, at the moment there coexist two different types of financial statements: the statutory or consolidated financial and the supervisory financial statements.

However, the IVASS is concerned with the operational impact IFRS 17 would have on insurance companies through its main challenges, but it is prepared to contribute to the implementation process of new Standard, as it would be involved in the new control of the entities' processes and procedures, while performing its supervisory role.

In this context, I had the pleasure to meet and interview the previous Senior Deputy Governor of the Bank of Italy and the President of the IVASS, Salvatore Rossi. The interview covered many topics about the insurance sector in general among which the challenges of the upcoming economic, financial and even social scenarios and the role a supervising authority is going to adaptively take in those circumstances.

[70] IVASS, *Solvency II – The new prudential regulation of the insurance sector: a simplified guide*, ivass.it/pubblicazioni, 2016

The interview is reported in a Q&A[71] format so as to facilitate the reading and comprehension of the conversation. It is composed by five questions and relative answers by Salvatore Rossi.

Q: *Which are the new challenges for a regulator in a political and social environment so in turmoil as the current and prospected one, taking into consideration the increased weight of emerging markets? In this context, what is the role of technology and how is it affecting most of financial sectors?*

A: The turmoil we have been facing right now is far more concerned on technological disruptiveness rather than on social and political issues. This is because human interactions and therefore human sectors, either perceived at the individual or community level, have always evolved according to a standard-pacing schedule, while nowadays technology is moving at unknown rhythms, compelling all subjects within the financial markets to follow them in order to not be unsettled. The involved subjects stem from banks to insurance companies and giant investment management corporations. The technological sweep is positively correlated by the traditionalism of the entity: the more traditional the entity's operations are, the harder would be the effects. This problem is particularly relevant in countries, such as Germany, Italy or Japan, where the business model has not evolved yet. Fintech provides the most critical challenge to banks right now through the peer-to-peer lending[72] or through applications, where an algorithm is able to perform rapidly and consistently the creditworthiness of a company in a few minutes. The presence of algorithms overcomes the need for interaction at a supervisory level and therefore it puts in crisis the entire system of financial intermediation at its theoretical roots. For this reason, we can assess that Finance as a whole is subject to a technological shock. Social shock has evolved concomitantly with the 10-years ago financial crisis, which has created an aversion feeling towards the financial sector "black box" in all involved developed countries.
For what concerns emerging countries, the issue stands in being neophytes and unexperienced in all financial sectors, which have developed together with the normative and historical background of developed countries and to which they have to adapt their institutions and framework. Those have to compete and sustain not only changes coming from different backgrounds but also from technology.
The main challenge for supervisors is to keep up with the evolution. This is not an easy task as the regulator insists on rules and laws, which constitute a heavy apparatus difficult to change and adjust to chase technology. Therefore, the different speed between the regulatory action and the regulated market is the key problem and is the basis on which insist while pursuing solutions. The regulator cannot suppress market freedom, which is necessary to growth, whereas pursuing its mission of safeguarding consumers' interest and the public good.

[71] Q&A format is performed in order to fairly and fully report the exchange of the questions and answers of the interview.
[72] Peer-to-peer (P2P) lending enables individuals to obtain loans directly from other individuals, cutting out the financial institution as the middleman. Websites that facilitate peer-to-peer lending have greatly increased its adoption as an alternative method of financing.

Q: *In your opinion, which are the specific challenges the insurance companies and sector as a whole must face in a scenario characterized by markets with high volatility and negative rates?*

A: I will answer to this question separating the two conditions that characterize the markets nowadays, as the challenges brought by each of them are different and even the tactics insurance companies must fulfil in order to face them are different too.
Negative rates represent the most worrying issue for the insurance sector, which deals in the majority of cases with investments and matching of assets and liabilities in the long run where volatility is assumed to have low impact. Insurance companies takes on obligations towards the policyholders every time a contract is written: premiums are collected in advance and claims are paid when (and if) the insured event occurs. In order to pay for the claims, the company must invest the premiums, possibly gaining a margin on them through investments matching the liabilities durations. Therefore, long-term investments are the main choice for insurers and are represented by real estate investments, bonds, and in lesser amount even stocks.
If long-term rates are null or negative as they have been for over 10 years, the financial statements are heavily put to proof adversities, especially in Europe. This is the reason why European insurance companies have moved to contracts where the insurance component is not so significant. Insurance companies are born with the aim of spreading, and therefore mitigating, individual risks. A Unit Linked Insurance Plan, ULIP[73], is an example of contract where the risk is not transferred from the individual. In this case the nature of the insurance company is partly offset, associating insurance company's role to an asset manager. This kind of solution threats the theoretical pillars on which insurance has been constructed. The task becomes to find a different alternative in a context not ready to change yet[74].

For what concerns volatility, the only threat could come from the increased proportion of alternative investments in insurance companies' portfolios, thus augmenting the risk taken on by the insurer, as stocks are more volatile than usual long-term and "safer" investments, such as government bonds. Usually bonds do not provide high returns and are not very volatile, although currently there are countries whose spread has heavily increased as their creditworthiness is perceived as more deteriorated.

Q: How has IVASS approach changed over the last decades and which are its relations with other European institutions?

[73] A unit linked insurance plan (ULIP) is an investment product that provides for insurance payout benefits. The investment vehicle requires a premium payment which is invested in investment products for capital appreciation.
[74] More on the topic at ft.com

A: In the insurance sector, the European Union is present through the EIOPA, which coordinates insurance supervisions. Differently from the banking sector where the supervision has become European, supervision, overall control and responsibility over insurance companies has remained at the national level. However, coordination has become narrower, thanks to EIOPA guidelines. Those are not compulsory but are based on the comply-or-explain principle[75]. Hence, IVASS remains the binding supervisory authority with appointed powers, which differ from those of the Bank of Italy. In 2013, the IVASS has been invested by a wave of renovation that started with a new joint governance structure with the Bank of Italy, where the only common body is the deliberative organ, the Joint Directorate[76], setting guidelines and strategic targets and adoptsìing the acts with external importance relating to the performance of the institutional functions in matters of insurance supervision.
I hope that with my mandate, that lasted 6 years, apart from the statutory change, the entire apparatus has been involved in a renovation and modernization process. Here at IVASS, people technical competence, logical capabilities and enthusiasm surprised me positively.

Q: In your opinion, would it be desirable to have a global regulatory framework rather than a European on, or would it be better to continue along this Europocentric approach?

A: The experiment of a European banking union, so the idea of all European banks supervised by the same authority, the European Banking Authority[77], has been a technical but not a political success. I think that the European Union, the "Union", and its institutions remain conceptually fundamental foundations to the welfare of European citizens; however, the basis on which the Union must stand on is not represented by economic and financial institutions, instead the "legs of this body" should be political themes such as security. Those topics have always been sent backwards relative to Economics. The process of unification should start at the political level and then continue at the economic level.

Q: On the one hand, which were the main challenges for Solvency II implementation? On the other hand, which those linked to the development and put in practice of IFRS? Currently, one of the problems attached

[75] Comply or explain is a regulatory approach used in the United Kingdom, Germany, the Netherlands and other countries in the field of corporate governance and financial supervision. Rather than setting out binding laws, government regulators (in the UK, the Financial Reporting Council, in Germany, under the Aktiengesetz) set out a code, which listed companies may either comply with, or if they do not comply, explain publicly why they do not.
[76] The Joint Directorate is a collegial body made up of the Governor of the Bank of Italy, who holds the chair, the Senior Deputy Governor of the Bank of Italy - President of IVASS, the three Deputy Governors of the Bank of Italy and the two members of IVASS' Board of Directors. More on the topic at ivass.it
[77] The European Banking Authority (EBA) is a regulatory agency of the European Union headquartered in Paris. Its activities include conducting stress tests on European banks to increase transparency in the European financial system and identifying weaknesses in banks' capital structures. The EBA was established on 1 January 2011, upon which date it inherited all of the tasks and responsibilities of the Committee of European Banking Supervisors (CEBS).

to the coexistence of Solvency and IFRS frameworks is the need of preparing two financial statements (the accounting and the supervisory balance sheets). Which could be the solution to simplify such a system?

A: The most important issue related to the new supervisory and reporting rules is their complexity. Solvency II addresses a significant objective because it introduced the concept of risk in the sector where risk and uncertainty are more relevant. Solvency II has partially imitated Basel II framework with ten years delay. When it was put in practice, Basel II has already been revised and its pillars were already outdated in some sense. Next year would be the first where substantial review of the framework will be performed. The auspice is to decrease the level of intricacy of this system.

An example of this complexity is easily exemplified in an anecdote about the first implementation of Solvency II framework in Germany. Allianz, which is the principal insurance group in the country, has a real German nature, in which the dedication to compliance is fundamental. The group prepared all documentation about the internal risk assessment model, which enables the company to understand the risks so as to define the capital requirements. The German supervisory authority, the BAFIN, requested all documentation not in electronical format but in paper format. Therefore, Allianz prints so much paper that one articulated truck was filled up with paper.

How can a supervisory authority as the IVASS, with 350 employees, deal with such a magnitude of data? Regulators should validate internal model produced by insurance companies so in theory they should have an equal or even deeper understanding of its functioning but currently, this is physically impossible.

The accounting issue takes the same form: the requirement of preparing two different financial statements make insurance companies very upset and dissatisfied about the inefficiency of the entire system. The solution should be searched for in the coordination of the accounting and supervisory sectors. Nowadays, none of them is ready to relinquish its dedicated financial statement; nevertheless, the tendency would be to unify them under a unique framework, enhancing transparency and consistency of the reporting.

Chapter 3

A practical simulation of IFRS 17

3.1 Asset and liability management for life insurance companies

The concept and measurement of risk has always been discussed in Economics and Finance, with respect to either assets or liabilities. One of the most important features of the former is the interest rate risk, while for the latter, when dealing with life insurance liabilities, the concern is mostly associated to the quality of contracts in force and to the nature of policyholders in general.

Life insurance liabilities are exposed to interest rate risk in some cases, those associated with products which have a lot in common with financial instruments: in more traditional markets, as Europe, and for more traditional products, managers' focus is not on this kind of risk. This gives rise to a not standard asset liability management throughout the life insurance industry.

Two are the factors influencing the growth of life insurance industry: consumers' preferences and risk aversion. The former stands on the rationale that consumers save money as a provision for future needs either for the offspring or for herself in a more mature age, in order to guarantee a minimum standard of living. The former can only be guaranteed through an insurance product, while the latter can take the form of any savings product. On the other hand, risk aversion, in life insurance, depends on the personal perception of longevity or mortality and on the need to safely "save" money.

The two mentioned factors become the choice basis on which consumers select the product able to establish the provision for old age among more competing products. Indeed, most traditional life insurance products are in competition with bonds and other savings products. They are not homogeneous goods and therefore not complete substitutes, however partial substitution can occur depending on their relative prices, thus the interest rates paid on the products. This substitution is consequently interest rate sensitive as the related demands.

For this reason, it becomes crucial for insurance companies to develop an asset liability management that is able to capture those trends and moreover is at the basis of the solidity of the whole financial statement. There

exist various measures to address this problem. The starting point is always at the definition and subsequent modeling of assets and liabilities.

3.1.1 Life insurance liabilities modeling

Life insurance liabilities are determined by a contract the insurer writes with the policyholder. The contract specifies the premium payable to the company, the sum payable to the beneficiary in case of the insured's death and the conditions for the surrender of the policy before termination. It also specifies the calculation of the sum payable to the insured at the termination of the policy. It is obvious that the liability, that is the money the insurer owes the policyholder, varies with:

- the time to termination;
- the probability of the death of the insured; and
- the probability of the surrender of the policy.

The value of the liability is therefore the expected present value of the payments until termination of the contract.

The value of the liability is comparable to the value of a bond. There is an option tied to it, namely the American type put option written to the insured to surrender the policy any time at a predetermined value. A put option gives the holder the right to demand the buyer takes delivery of the underlying asset whenever the price falls below the specified strike price. This feature includes any day leading up to and the day of expiration. As with all options, the holder does not have an obligation to sell the share if they choose not to exercise their right. The strike price remains the same specified value throughout the contract.

American options are helpful since investors don't have to wait to exercise the option when the asset's price rises above the strike price. However, this comes with an upfront cost: American style options carry a premium that investors pay, and which must be factored into the overall profitability of the trade. An analogous mechanism is applied to insurance contracts. Accordingly, a bond with a put option resembles an insurance liability.

Even when those similarities have been considered, there remain differences in the cashflows. First, the cashflows of an insurance contract are stochastic[78], which is not the case with a straight bond. Moreover, the

[78] "Stochastic" means being or having a random variable. A stochastic model is a tool for estimating probability distributions of potential outcomes by allowing for random variation in one or more inputs over time. The random variation is usually based on fluctuations observed in historical data for a selected period using standard time-series techniques. Distributions of potential outcomes are derived from a large number of simulations (stochastic projections) which reflect the random variation in the input(s).

amount payable at maturity date is generally not determined since it depends on the bonuses allocated to the insured throughout the time the contract was in force, whereas the amount payable to a bondholder is the face value determined at issuing date.

As a matter of simplification, we will consider one of the two main methods for liability modeling. The traditional approach for liability modelling is based on cash flow projection of each policy as follows:

$$CF_t = Prem_t - Surr_t - Death_t - Mat_t - Comm_t - Exp_t + Intr_t, \quad (1)$$

Where:

- CF_t stands for expected cashflows at the beginning of the period *t*;
- $Prem_t$ stands for expected premium;
- $Surr_t$ stands for expected value of surrenders;
- $Death_t$ stands for expected death outgo in time *t*;
- Mat_t stands for expected value of maturities;
- $Comm_t$ stands for expected value of commissions;
- Exp_t stands for expected value of expenses at the end of the period *t; and*
- $Intr_t$ stands for expected value from returns of investments at time *t.*

An alternative method for liability modeling would be the one based on cluster analysis, which enables insurance companies to calculate the liability value in a more time efficient manner. The main principle consists in the reduction of the size of the original portfolio because modelling smaller amounts of modelpoints (contracts) takes less time. Cluster analysis creates groups of modelpoints with certain similarity pattern into clusters from which a limited number of modelpoints can be chosen to create a smaller representative portfolio. Such a portfolio should represent original portfolio with high precision.

In order to group modelpoints into clusters, it is necessary to define a set of clustering variables used as a measure of similarity between the modelpoints. One can use the attributes already available in the dataset such as the characteristics of the insured person or the properties of the policy. However, these variables might have an ambiguous impact on the cash flow development and they may not lead to accurate results. An alternative approach is to use metrics of economic profit such as present value of future cash flow (PVFC), present value of profit (PVPL), present value of premium (PVP) or individual values of cash flow projection. On the one hand, these variables cannot be directly obtained from the dataset and they need to be computed first. On the other hand, such variables can better characterize the development of the liabilities, which is why they are used in this paper. As the model is more concerned with the development of the variables than with their nominal values, all clustering variables need to be adjusted to their relative values.

3.1.2 Asset Liability Matching

Matching is the process of constructing an investment portfolio in such a way assets and therefore inflows could replicate the timing and amounts of future expected liabilities outflows. If the insurance company is able to construct this portfolio, it would be certain that the invested assets are going to be adequate to meet their obligations. The key features of payments to analyze are:

I. The timing, either short or long term;
II. The nature, so the parameters affecting the payments as uncertainty and inflation; and
III. The currency in which they are expressed which influence discount rates as well[79].

For our analysis, we would only consider the first two features. Moreover, the concept of matching is closely related to life insurance and pensions and works well in the case in which amounts and timing of payment is known in advance. The attached benefits of this practice are mainly the protection of the insurer's solvency position, which affects positively also the policyholders; the reduction of the level of capital required to support the existing and new business; and the support to liabilities in situations where limited backing is available, as it is the case for pension trustees. The main goals are the maximization of economic profit on insurance business, the maintenance of the insurer solvency so as to fulfil policyholders' obligations in most circumstances.

Before analyzing more in detail the two standard methods used in Asset Liability Management, we have to address the assets' features and characteristics that have to match expected insurance cashoutflows. The basic asset model in an insurance company is related to low-risk assets as bonds, either government or corporate, and some stocks. An important driver for the model is the asset-specific risk profile as it influences the value of solvency capital requirement.

For our model, we would use the traditional bond valuation techniques involving the discounting of future cashflows. The total value of asset portfolio at time t is given by the sum of present values of all bonds in time t, where the value of a bond is defined as "*the present value of future cashflows*"[80], calculated using the following formula:

$$P = \sum_{t=1}^{T} \frac{CF_t}{(1+r^t)} + \frac{F}{(1+r^T)}$$

Where:

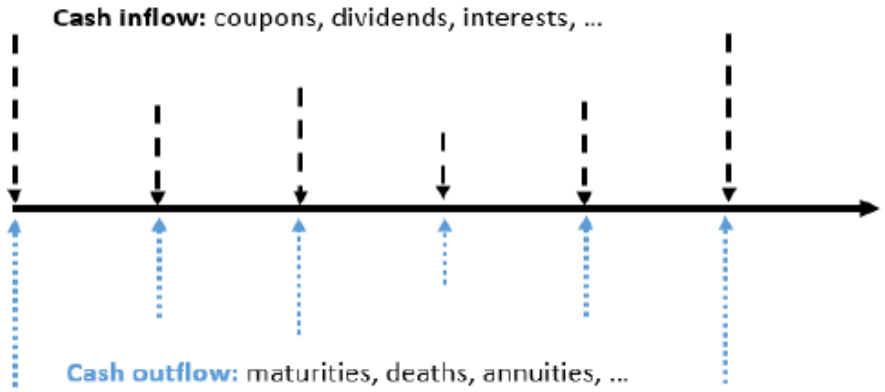
[79] Consistency principle Damodaran
[80] Cipra, Financial and Insurance Formulas, 2010

- r is the spot rate with a tenor in time t;
- CF_t is a coupon at time t; and
- F is the face value at maturity (t = T).

In general, the calculation of assets return depends on several factors such as the type of the asset or accounting scheme. The assets income is given by the sum of cash flows (coupons and face values) from all assets in the portfolio. The total return is then given by the total income divided by the current market value of the assets portfolio.

At this point, we have to choose the optimizing investment strategy between a cashflow matching method and a duration matching method. The former can be defined as a process of hedging in which an insurance company matches cashoutflows with cashinflows, represented by the asset cashflows and liabilities cashflows respectively. The insurance company needs to find a source to finance the liability outgoes in the case in which the insured event occurs and claims are to be paid. Figure 3 (*Principle of cashflow matching in life insurance*) represents the principles and pattern of this approach.

Figure 3 – Principles of cashflow matching in life insurance



Source: University of Economics, Prague, 2018

The advantage of cash flow matching principle is its simplicity because the insurer projects its expected liability development and choose an investments strategy to cover each liability cashflow. However, the cons of this approach stands in the fact that any change in the yield curves is not reflected in the strategy, which may become not optimal and its income may not cover cashflow from liabilities.

An alternative method is represented by the duration matching approach, consisting of matching the sensitivity of market value, expressed as duration, in bond terminology; to changes in yield curves, for its assets and its liabilities.

The assets duration is a sensitivity of market value to the change in the yield curve, represented in the following formula (Tsai, 2009):

$$MD = -\frac{MV\ (YC + \Delta i) - MV\ (YC - \Delta i)}{MV\ (YC)} \cdot \frac{1 + \Delta i}{2\Delta i}$$

Where:

- $MV\ (YC + \Delta i)$ is the market value of assets calculated based on yield curve increased by Δi;
- $MV\ (YC - \Delta i)$ is the market value of assets calculated based on yield curve decreased by Δi; and
- Δi is equal to 0.0001.

The liability duration is a sensitivity of liability value, expressed as thepresent value of future cashflows, to the change in the yield curve, calculated according to the following formula:

$$MD = -\frac{PVFCF(YC + \Delta i) - PVFCF(YC - \Delta i)}{PVFCF(YC)} \cdot \frac{1 + \Delta i}{2\Delta i}$$

Where:

- $PVFCF(YC + \Delta i)$ is liability value calculated based on yield curve increased by Δi;
- $PVFCF(YC - \Delta i)$ is liability value calculated based on yield curve decreased by Δi;
- Δi is equal to 0.0001.

3.2 The Model Building Blocks

IFRS 17 requirements about insurance contracts accounting treatment are based on the explicit reporting of the multiple components of the one carrying amount, the contract. The components are known as "building blocks" and are the following:

I. The fulfilment cashflows
    a. Expected future cashflows, and
    b. A discount factor;
II. The Risk-adjustment; and
III. The Contractual Service Margin.

3.2.1 The fulfilment cashflows

The fulfilment cashflows are computed starting from the undiscounted probability-weighted future cashflows, which must have some main characteristics: they must be current, explicit and unbiased estimates of future cashflows within the boundary of each contract in the group.

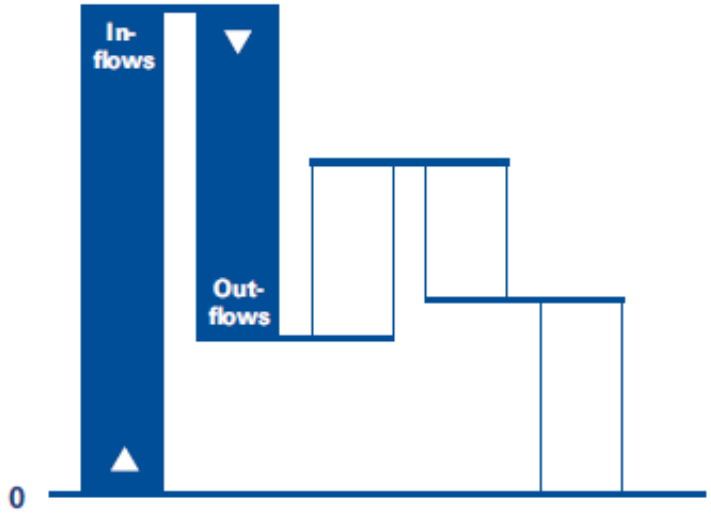
According to paragraph 33 of the Standard, the requirements of the future cashflows based on estimates that shall:

a. *Incorporate, in an unbiased way, all reasonable and supportable information available without undue cost or effort about the amount, timing and uncertainty of those future cash flows*[81]. To perform this, an entity shall estimate the expected value (i.e. the probability-weighted mean) of the full range of possible outcomes*;*
b. *Reflect the perspective of the entity, provided that the estimates of any relevant market variables are consistent with observable market prices for those variables*[82]*;*
c. Be current, in the sense that the estimates shall reflect conditions existing at the measurement date, including assumptions at that date about the future; and
d. Be explicit as the entity shall estimate the adjustment for non-financial risk separately from the other estimates. The entity also shall estimate the cash flows separately from the adjustment for the time value of money and financial risk; unless the most appropriate measurement technique combines these estimates.

The combination of the undiscounted probability-weighted cashflows and the discount rate curve composes the Best Estimate Liability, "BEL", and it includes all cash in and outflows attached to the insurance contract, as depicted in Figure 4 (The future cashflows).

[81] See IFRS 17, paragraph 33.
[82] Ibidem

Figure 4 – The future cashflows



Source: KPMG, 2017

We have decided to summarize the cashflows to consider, which are the cashflows within the contract boundary, so directly related to the fulfilment of the contract, as follows:

1. Premiums and any other costs specifically chargeable to the policyholder, which include premium adjustments or instalment premiums;
2. Claims and benefits related to payments to, or on behalf of, a policyholder, whether or not are yet been paid or reported;
3. Expenses directly attributable to the insurance acquisition cashflows[83], including the systematic and consistent allocation of fixed and variable overheads directly attributable to fulfilling insurance contracts with similar characteristics; and
4. Premium taxes and levies.

The insurance company estimates the probabilities and amounts of future payments under existing contracts on the basis of relevant market and non-market variables. The former can be observed in, or derived directly from, markets and include interest rates and equity prices of publicly traded securities. The latter generally give rise to non-financial risk and include historical data on costs (either frequency and severity of claims or mortality) and views on future trends in the data, including inflation forecasts.

[83] Insurance acquisition cashflows arise from selling, underwriting and starting a group of insurance contracts. These cash flows need to be directly attributable to a portfolio of insurance contracts to which the group belongs. They can arise internally or externally, and include not only the incremental costs of originating insurance contracts, but also other direct costs and a proportion of the indirect costs that are incurred in originating insurance contracts; and include cash flows related to both successful and unsuccessful acquisition efforts. More on the topic at IFRS 17, BC182–BC183

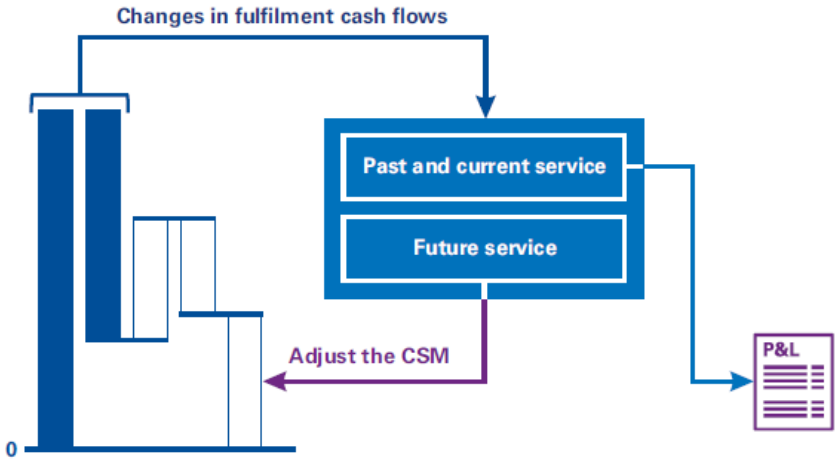
Additionally, inflation rates are likely to be correlated with interest rates. Therefore, when such a correlation exists, the estimated probabilities derived by the entity for future inflation rate scenarios should be as consistent as possible with probabilities implied by market interest rates. Inflation assumptions are especially relevant to life insurance products or long-term care products with inflation protection.

An entity uses estimates of future cash flows for measuring groups of insurance contracts both on initial recognition and subsequently, as follows:

- in the measurement of the fulfilment cash flows: future cash flows of a group of insurance contracts are estimated both on initial recognition, when the CSM is determined, and in subsequent periods; and
- in the subsequent measurement of the CSM of a group, which is adjusted for changes in estimates of future cash flows that relate to future service. Other changes in the estimates of future cash flows are recognized in the statement(s) of financial performance.

A summarizing picture of the process is depicted in Figure 5 (Changes and adjustments of fulfilment cashflows).

Figure 5 - Changes and adjustments of fulfilment cashflows



Source: KPMG, 2017

Once the future cashflows have been calculated, they must be discounted in order to reflect the time value of money. The discounting factor will adjust the estimates of expected future cashflows to reflect the time value of money and the financial risks not already calculated within the cashflows estimation. According to the Standard, the discount rate to apply must have some fundamental characteristics.

Time value of money and the characteristics of the cashflows and the contracts must be reflected in the discount rate. Cashflows are divided so as to group components according to the variability of terms and

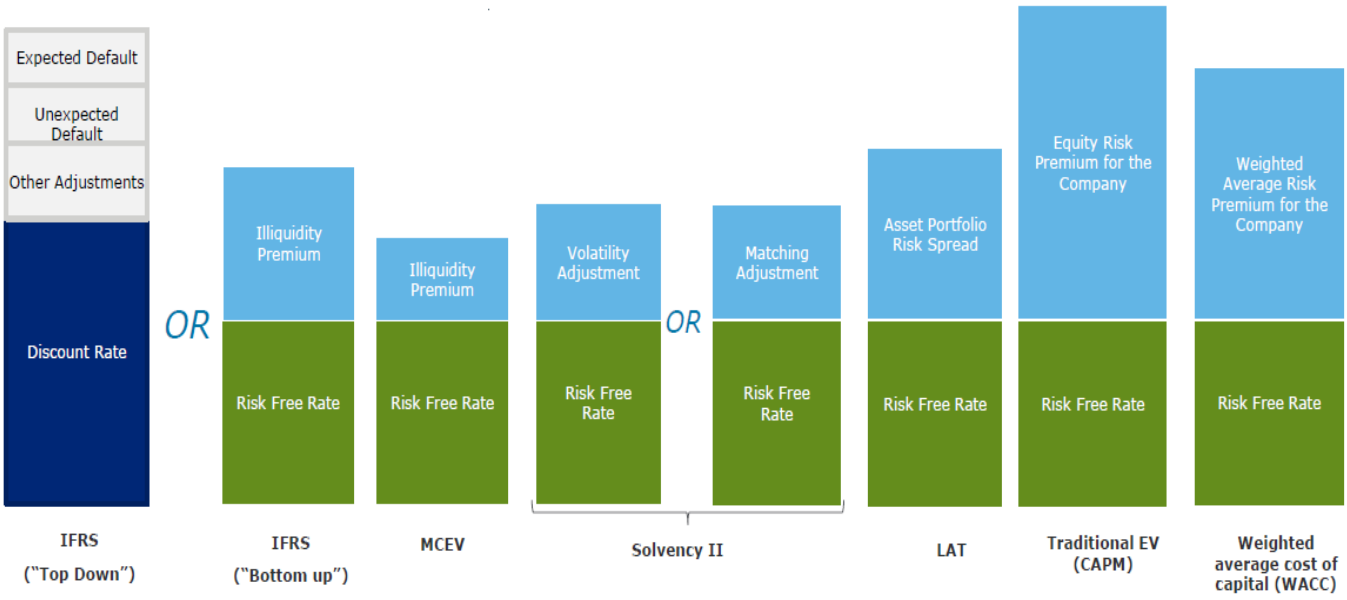
cashflows and are discounted applying the appropriate rate. In our model, we will discount the cashflows not varying with the returns on underlying items at the risk-free rate, and variable cashflows according to a rate reflecting the variability. Also currency is a criterion for the choice of the appropriate discount rate.

Two estimation approaches are specified by the Standard: the "top-down" or the "bottom-up" approach, which for insurance contracts with no significant variable cashflows should result in the same discount rate, although in practice it rarely happens. The bottom-up approach starts with the determination of the discount rate based on a liquid risk-free yield curve, adjusted to eliminate differences between the liquidity characteristics of the financial instruments underlying the prescribed curve and those of the insurance contract itself.

An estimation method similar to the "bottom-up" approach is applied according to Solvency II. The discount rate in this context is calculated from the same starting point (i.e. the risk-free rate) to which a volatility or a matching adjustment is applied. The comparison between IFRS and Solvency II rates can produce different results, as if other methods are applied. This potential difference is illustrated by table 18 (Discount rates according to different reporting bases).

In our model, the chosen reference rate is the risk-free rate derived from the risk-free rate estimated by the EIOPA at 05 September 2019. For the insurance contracts, whose liquidity is different, an illiquidity premium is applied to the yield curve, which requires the exercise of significant judgement, of 50 bps in our analysis.

Table 18 – Discount rates according to different reporting bases

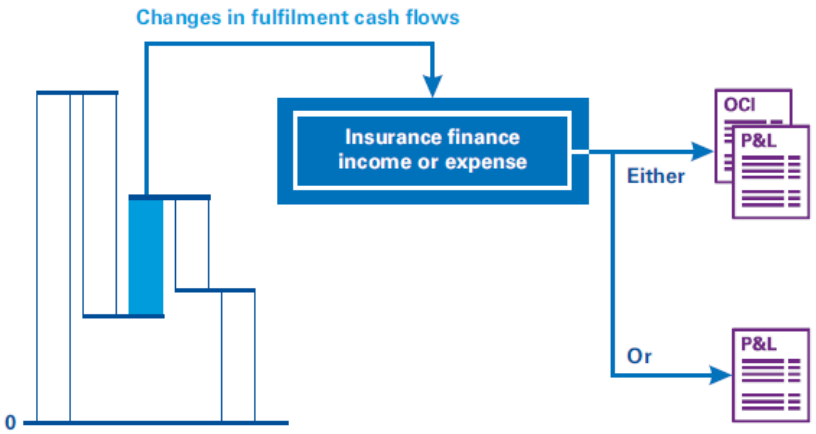


Source: Deloitte, 2018

Current discount rates are applied to the expected future cashflows. The adjusted cashflows represent the fulfilment cashflows. Moreover, on initial recognition, the established discount rates are applied to other components: the CSM interest accretion for contracts without direct participation features, and the adjustments to the CSM for changes in the fulfilment cashflows for the same type of contracts.

The effect of a change in the time value of money together with that attached to a change in financial risk must be reported as insurance finance income or expense within the statement of financial performance as described in Figure 6 (Reporting effects of changes in discount rates).

Figure 6 – Reporting effects of changes in discount rates



Source: KPMG, 2017

3.2.2 Risk adjustment

The risk adjustment is an adjustment thought in order to reflect the compensation the insurance company requires for the uncertainty bearing. Indeed, there exist some uncertainty about the amount and timing of cashflows and it is attached to non-financial risk. This kind of adjustment is prescribed to reflect the non-financial risk.

The compensation is determined according to the following principle: the entity would require making it indifferent *between fulfilling a liability that has a range of possible outcomes arising from nonfinancial risk;*

and fulfilling a liability that will generate fixed cash flows with the same expected present value as the insurance contract[84].

The non-financial risks included are commonly the insurance, the lapse and the expense risks. General operational risks, even if related to the insurance contract, are not considered. The objective of this metric is to reflect the entity's discernment of the economic burden of the non-financial risk that it bears. Consequently, the company specifies a level of aggregation for determining the risk adjustment for non-financial risk that is consistent with its perception of its non-financial risk burden.

Moreover, the risk-adjustment represents the degree of risk aversion degree of the company, not possible to be evaluated as a fulfilment value instead it would be estimated according to an exit value valuation, as for example the fair value. The IASB defined it as "*the amount an insurer would expect to pay at the reporting date to transfer its remaining contractual rights and obligations immediately to another entity*"[85].

The Standard does not mandate a specific technique for the determination of the risk adjustment. The three main methods currently used are:

a. Cost of capital approach, which is the one agreed to calculate the Solvency II risk margin[86] with some adjustments (e.g. The IFRS 17 risk adjustment specifically excludes general operational risk);
b. The Value at Risk (VaR) approach, together with other quantile style approaches (e.g. the Conditional Tail Expectation, "CTE") used for the Standard Formula Solvency Capital Requirement calculation under Solvency II and frequently used for internal economic capital calculations; and
c. An explicit assumption approach, either factor based or judgement based on experience studies, entity-specific, involving explicit margins on all assumptions, that is where the amount of the margin over the best estimate is explicitly calculated.

The last approach, simplified for the purpose of highlighting the main trends and disclosures of the Standard without addressing the complex variety of details around the valuation method is the most flexible of the methods. It enables the use of specified adjustment to a mortality, morbidity or other assumption table, as for the example the use of a mortality assumption adjusted by x% to reflect risk, x being positive for life insurance e negative for annuities.

[84] See IFRS 17. B86 and following
[85] IASB, Discussion Paper, 2007, Part 1 Paragraph 93, page 59
[86] Under Solvency II, the risk margin covers the non-hedgeable risks, commonly interpreted as all non-financial risks. The confidence level for the required capital is set at the 99.5th percentile. The cost of capital is set at 6%, and the risk free rate is set by EIOPA. The risk margin follows this formula: $Coc * \sum_{t=1}^{T} RC\ (t-1) * \frac{1}{(1+rf(t))^t}$, where RC(t) is the required capital for the risks in scope at time t and rf is the risk-free rate for maturity t.

In the model, we would use a minimum loss ratio until an exposure period is considered sufficiently mature, together with an expense risk estimated at 0,75% of the liabilities[87] combined with a cost of capital approach.

The risk adjustment factor must be applied according to current values; therefore, it must be assessed on initial recognition and in subsequent periods either in the measurement of the fulfilment cashflows or in the one of the CSM of a group.

3.2.3 The CSM

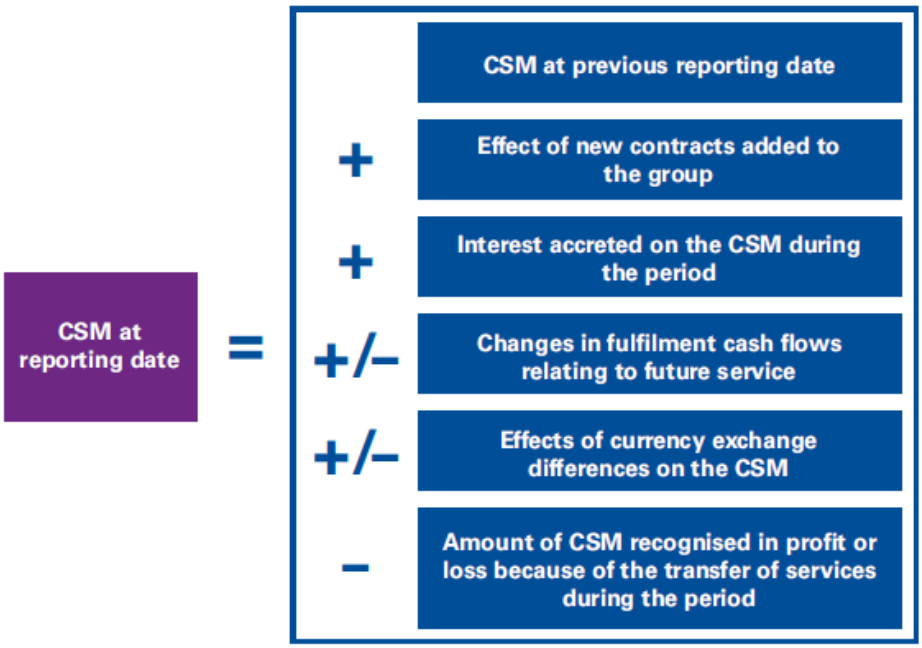
The CSM is the last of the IFRS 17 building blocks and it is defined as the unearned profit that the company will recognize at the provision of the service in the future under the insurance contracts in the group. On initial recognition of a profitable group of contracts, the margin is equal with opposite sign of the amount of net cash inflows arising from the fulfilment cashflows, the de recognition of any asset/liability recognized for insurance acquisition cashflows; and any cashflows related to the specific group of contracts.

At each reporting date, the CSM is adjusted following the changes and updates of fulfilment cashflows according to the process represented in figure 7 (CSM calculation at reporting date).

On the one hand, the interest accreted on the carrying amount of the CSM is calculated according to the discount rate applied on initial recognition to reflect the time value of money. On the other hand, the changes in the fulfilment cashflows related to future service adjust the CSM rather than being recognized in the reporting period statement of financial position, as it occurs for past and present service which go directly to the P&L.

[87] IAA, *Measurement of Liabilities for Insurance Contracts: Current Estimates and Risk Margins*, 2009

Figure 7 – CSM calculation at reporting date



Source: KPMG, 2017

At each reporting date, the amount of CSM related to future service is calculated according to this process. First, the coverage units[88] in the group are identified; second, the CSM is allocated equally to coverage units provided in the current period and expected to be provided as well in the future. Then, the amount allocated to coverage units provided in the past and in the current reporting period are recognized in P&L.

3.3. The basic model

In this section, we would like to show the measurement and presentation effects of the application of IFRS 17, based on the data from an Italian insurance company, whose financial statements are publicly available.

We have developed it according to some assumptions, which will be summarized in a table before each of the model is effectively implemented, presented and discussed. We selected the level of aggregation of the portfolio of contracts, starting from the insurance line the contracts belong to, divided the contracts according to the issuance year and a test of onerousness is applied, in order to identify at least the three groups of contracts, as mandated by the Standard. We will focus only on one of the groups of contracts that is the one of non-onerous contracts.

[88] IFRS 17.B119 : The number of coverage units in a group is the quantity of coverage provided by the contracts in the group, determined by considering, for each contract, the quantity of benefits provided and its expected coverage duration.

The new accounting entries related to the insurance obligations are estimated according to the Building Block Approach, BBA, giving rise to the main components of the liability, represented by the Liability for Remaining Coverage and the Liability for Incurred Claims. The results are exemplified in the new version of the P&L. A sensitivity analysis of the financial results is performed according to two different scenarios.

3.3.1 Model assumptions and analysis of results

The basic scenario for the insurance company is based on the following assumptions:

Gross Premiums Reported vs Current Premiums	• probability-weighted according to the Lapse rate
Loss ratio	• 55% flat
Expense ratio (net commission)	• 15% flat
Other acquisition costs	• 10%
Discount curve	• RFR EIOPA (No VA) 05 September 2019 + • Illiquidity Premium 50 bps
Risk Adjustment	• based on assumptions of EIOPA papers
Asset return rate	• 2%

The use of such assumptions has generated the following cashflows for the various projection periods:

Cash flows			
€000	0	1	2
Received premiums	17.173 €	10.190 €	- €
Relevant premiums	9.723 €	9.245 €	2.496 €
Incurred claims	- 5.348 €	- 5.085 €	- 1.373 €
Paid claims	- 2.941 €	- 2.797 €	- 755 €
Acquisition expenses	- 1.152 €	- 1.096 €	- 296 €
Operating expenses	- 2.576 €	- 1.528 €	- €
Other acquisition costs	- 1.202 €		

Therefore, the resulting net flow at initial recognition is positive and assesses the non-onerousness of the contracts.

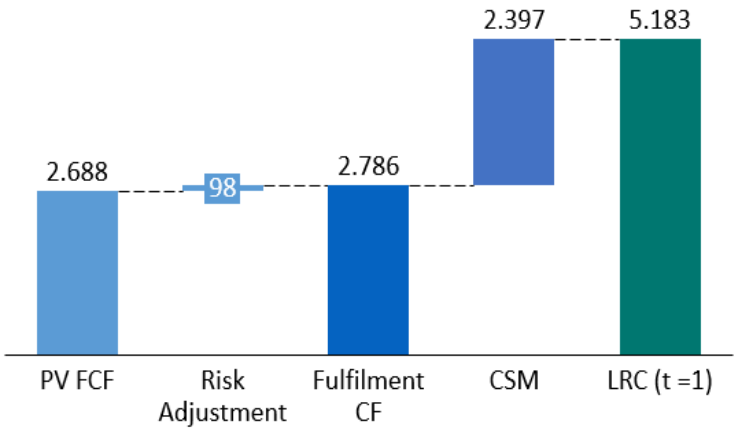
Initial measurement t= 0 (€000)		
Present Value Outflow		23.131 €
Present Value Inflow		27.163 €
Present Value Net	**-**	**4.032 €**
Risk adjustment		336 €
Fulfilment Cashflow	**-**	**3.696 €**
CSM (Recognition)		**3.696 €**

At the next reporting date, so in our case at t=1, we have a situation where the underlying assumptions did not change: neither the technical (e.g. the discount curve) or the actuarial assumptions.

The P&L according to IFRS 4 would have the following expansion: the relevant premiums are calculated as the difference between the received premiums and the Mathematical reserve, gross of acquisition expenses and income. Total operating expenses include the variation of the deferred acquisition costs.

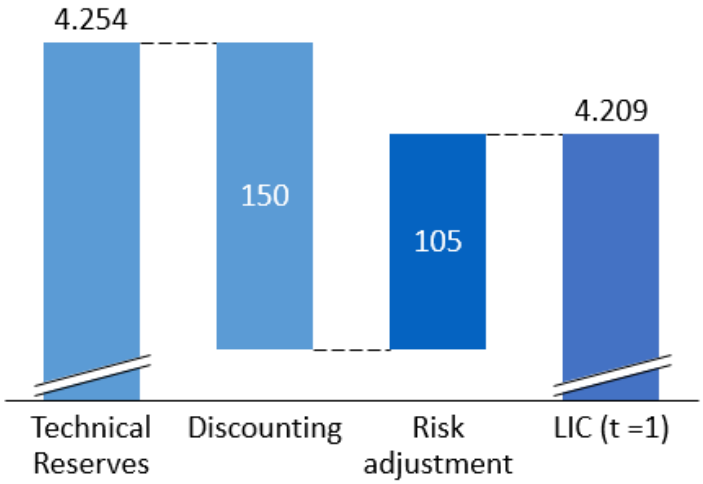
IFRS 4 t = 1		
Relevant premiums		9.723 €
Incurred claims	-	5.348 €
Total operating expenses	-	3.827 €
Technical result		548 €
Investment proceeds		268 €
Profit (loss)		**816 €**

If we analyze the elements composing the Liability for Remaining Coverage (LRC) at the end of the first reporting period (t=1) , according to IFRS 17, we start with the fulfilment cashflows, made up of the present value of future cashflows and the risk adjustment.



The risk adjustment is calculated applying the same provision percentage defined on initial recognition (equal to 3,66% of the present value of the future cashflows (PV FCF).

Subsequently, the elements which constitute the Liability for Incurred Claims (LIC) are reported. The measurement begins with the valuation of the technical provision, which in this case coincides with the undiscounted Best Estimate valuation.



The risk adjustment is calculated according to the same percentage used to evaluate the risk adjustment of the LRC. The evolution of the CSM from t=0 and t=1 is the result of the accretion, estimated capitalizing the CSM in t=0 with the locked-in rate for a year, the null unlocking (as the underlying assumptions about the LRC did not change from one year to the other) and the release of the CSM according to the chosen Coverage Unit, therefore on the basis of the relevant premiums: (CSM at t=0 + Accretion + Unlock) x 44,50%.

In the table below (Table 19 – Base Scenario P&L) are reported all components of the P&L according to IFRS 17 for the first reporting period (t = 1).

P&L Base Scenario		
€000		**1**
Expected claims		6.422,66 €
Expected expenses		1.152,21 €
Release of Risk Adjustment		237,68 €
Recovery of acquisition cashflows		1.885,56 €
Release of CSM		1.179,98 €
Insurance contract revenue		**10.878,10 €**
Incurred claims (paid & reserved)	-	6.422,66 €
Incurred claims (risk adjustment on reserved)	-	101,16 €
Expenses incurred	-	1.095,58 €
Amortisation of acquisition cashflows	-	1.885,56 €
Losses on onerous contract		- €
Insurance service expense	**-**	**9.504,97 €**
Insurance service result		**1.373,13 €**
Investment income		267,90 €
Accretion of CSM	-	7,01 €
Unwind of liabilities	-	19,10 €
Change in discount rate on future cashflows		- €
Insurance Finance Income or Expense	**-**	**26,11 €**
Finance Result		**241,79 €**
Profit or Loss		1.614,91 €
Total comprehensive income		**1.614,91 €**

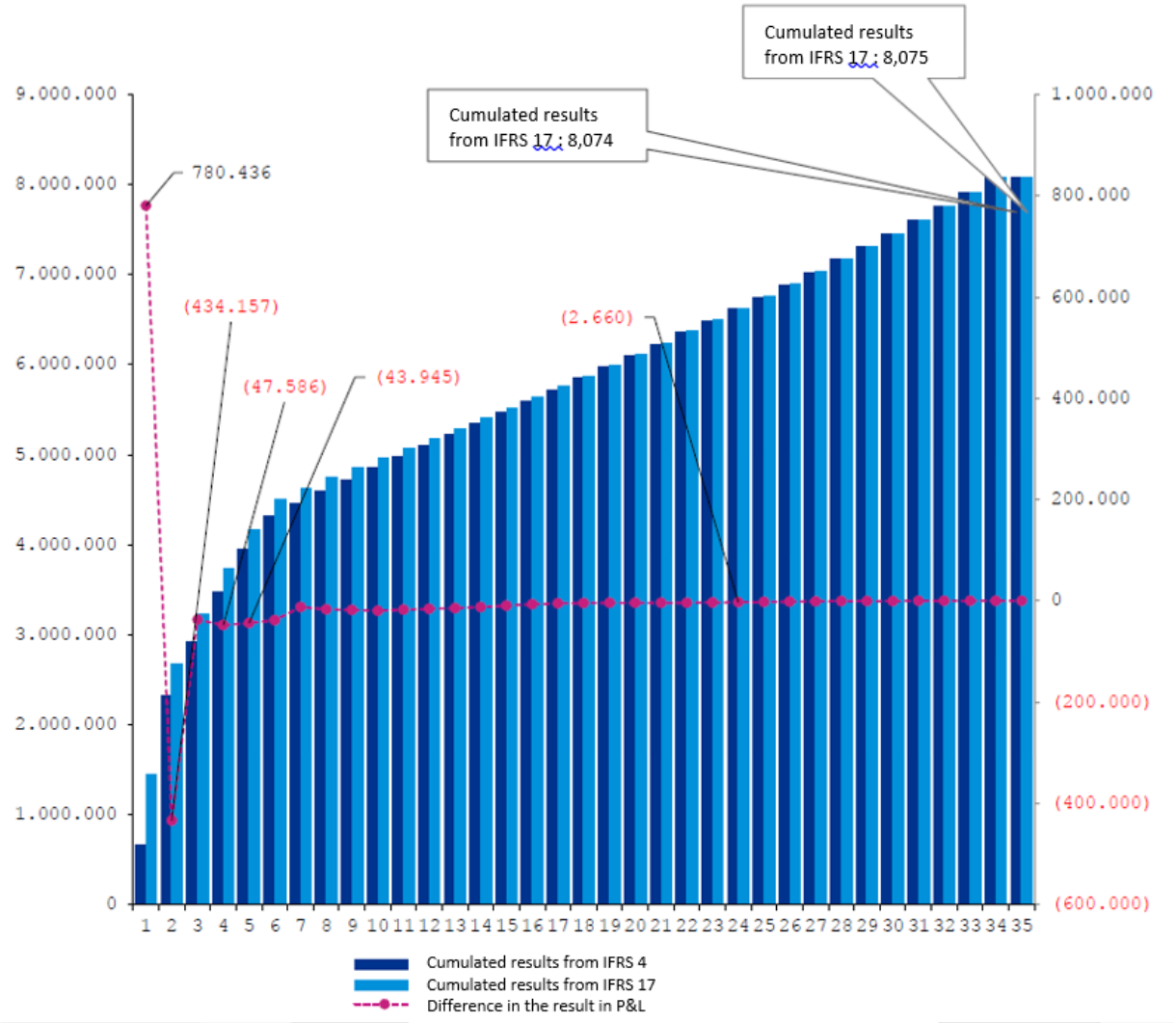
The insurance contract revenue is calculated as the sum of:

- The expected claims, which are the claims expected in year 1 according to the hypotheses on initial recognition(they include paid and reserved claims);
- The expected expenses, which are the operating expenses expected in year 1 according to the hypotheses on initial recognition as well;
- The release of risk adjustment, calculated as the difference between the risk adjustment proceeded in t=0 and the risk adjustment proceeded in t=1, assuming the validity of the same underlying assumptions;
- The recovery of acquisition cashflows represent the portion of the premium for the coverage of the relative acquisition costs and other amortized costs at t =1.

It is important to underline the nature of the amortization of acquisition cashflows because they represent the amortization quota of the acquisition costs and other acquisition costs relative to the current reporting period, which coincides with opposite sign with the recovery of acquisition cashflows, as they are relative to the Insurance Service Expense.

If we apply the same assumptions over a long period, as for example 35 years, and we compare the results from IFRS 4 and IFRS 17, we would see a progressive decrease in the difference between the two results. Indeed, IFRS 4 provide a smaller profit in the first years; however, the gap between the two shrinks until it becomes null as the only difference stands in the timing for recognition, which influences the final result at the beginning of the simulation period. The effects which cause the difference are related to the differently reported acquisition costs, the presence of risk adjustment, the interest accretion, and the unwinding of the liability. Results are shown in Table 20 (Bridge IFRS 4 vs IFRS 17 – Base Scenario).

Table 20 - Bridge IFRS 4 vs IFRS 17: Base Scenario



3.4 Scenarios

A sensitivity analysis has been performed on two essential assumptions. The first scenario prescribes an increase in the loss ratio from 55% to 70%, while the second scenario combines the analysis from the first scenario with a variation in the technical perspective hypothesis for the measurement of the LRC.

Sensitivity Analysis is a tool used in financial modeling to analyze how the different values of a set of independent variables affect a specific dependent variable under certain specific conditions. In general, Sensitivity Analysis is used in a wide range of fields, ranging from biology and geography to economics and engineering. Additionally, it enables to study process whose function is made up of several inputs impacting

it in an opaque way, or for processes with well-defined inputs it enables the creation of scenarios with only one changing variable, *ceteris paribus*.

For both scenarios, the comparable IFRS 4 result is the same as the technical variables chosen for the analysis are not contemplated in IFRS 4 method. The rationale behind this choice stands in the assessment of the importance of these inputs that were missing but could be disruptive in results. Therefore, the loss ratio is the only real affecting variable both scenarios.

IFRS 4 Mathematical reserves are positively affected by the loss ratio as they increase accordingly. The P&L takes the form depicted in the table below. In this case, we have applied the same investment proceeds as the one we have calculated in the base scenario because they are not affected by the changing variables.

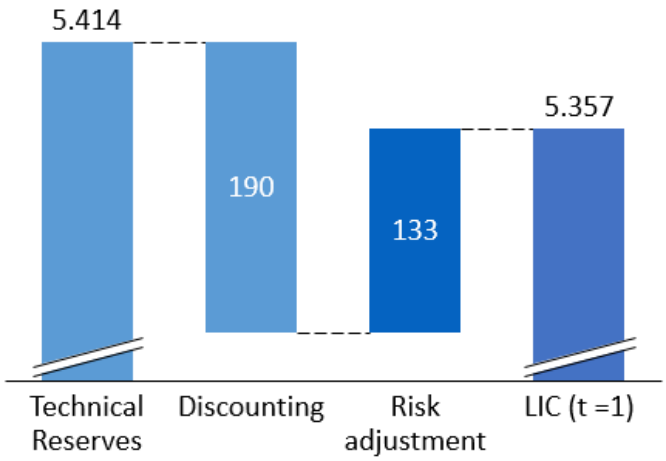
IFRS 4 t = 1		
Relevant premiums		7.943 €
Incurred claims	-	560 €
Total operating expenses	-	6.253 €
Technical result		1.130 €
Investment proceeds		268 €
Profit (loss)		**1.398 €**

3.4.1 Scenario 1: Increased Loss Ratio at 70%

The assumptions for the Scenario 1 are the same as the Base Scenario with the exception of the 15% increase loss ratio. They are summarized in the table below.

Gross Premiums Reported vs Current Premiums	• probability-weighted according to the Lapse rate
Loss ratio	• 70% flat
Expense ratio (net commission)	• 15% flat
Other acquisition costs	• 10%
Discount curve	• RFR EIOPA (No VA) 05 September 2019 + • Illiquidity Premium 50 bps
Risk Adjustment	• based on assumptions of EIOPA papers
Asset return rate	• 2%

As the perspective technical assumptions are the same as the Base Scenario, there are no variations in the Liability for Remaining Coverage and subsequently in the unlocking of the CMS. The only variations occurs at the Liability for Incurred Claims level.

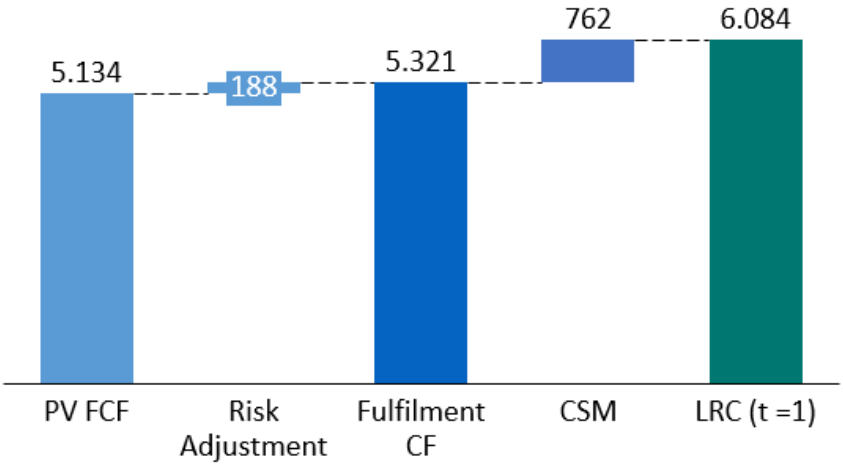


The P&L results are presented below, where the only changing accounts are those related to the Incurred claims either paid and reserved or on the risk adjustment on reserved, highlighted below. Accordingly, the insurance service expense changes affecting the insurance service result which is significantly lower than in the previous scenario: indeed a decrease of more than a 100%. This means that the calculation and assessment of the loss ratio is critical for the boldness of the insurance company.

P&L Scenario 1		
€000		**1**
Expected claims		6.422,66 €
Expected expenses		1.152,21 €
Release of Risk Adjustment		237,68 €
Recovery of acquisition cashflows		1.885,56 €
Release of CSM		1.179,98 €
Insurance contract revenue		**10.878,10 €**
Incurred claims (paid & reserved)	-	7.532,03 €
Incurred claims (risk adjustment on reserved)	-	118,64 €
Expenses incurred	-	1.095,58 €
Amortisation of acquisition cashflows	-	1.885,56 €
Losses on onerous contract		- €
Insurance service expense	**-**	**10.631,82 €**
Insurance service result		**246,28 €**
Investment income		267,90 €
Accretion of CSM	-	7,01 €
Unwind of liabilities	-	19,10 €
Change in discount rate on future cashflows		- €
Insurance Finance Income or Expense	**-**	**26,11 €**
Finance Result		**241,79 €**
Profit or Loss		488,07 €
Total comprehensive income		**488,07 €**

3.4.2 Scenario 2: Increased loss ratio and technical assumption change

The second scenario combines the features for the first scenario, with a loss ratio increased by 15% (i.e. from 55% to 70%) and additional technical features used for the measurement of the CSM. Indeed this scenario leaves the LIC unchanged, while affecting the release of CSM that influence the Insurance Contract Revenue.



The amount of the fulfilment cashflows increases 90% if for example the perspective frequency rate affecting claims increases by 70%. As a consequence, the CSM changes therefore changing the release of CSM account in P&L. The final result of the P&L is depicted in the table before, with the highlighted amounts as the changing amounts in the model, due to shocks to the original inputs.

P&L Scenario 2		
€000		**1**
Expected claims		6.422,66 €
Expected expenses		1.152,21 €
Release of Risk Adjustment		237,68 €
Recovery of acquisition cashflows		1.885,56 €
Release of CSM		1.293,87 €
Insurance contract revenue		**10.991,98 €**
Incurred claims (paid & reserved)	-	7.532,03 €
Incurred claims (risk adjustment on reserved)	-	118,64 €
Expenses incurred	-	1.095,58 €
Amortisation of acquisition cashflows	-	1.885,56 €
Losses on onerous contract		- €
Insurance service expense	**-**	**10.631,82 €**
Insurance service result		**360,17 €**
Investment income		267,90 €
Accretion of CSM	-	7,01 €
Unwind of liabilities	-	19,10 €
Change in discount rate on future cashflows		- €
Insurance Finance Income or Expense	**-**	**26,11 €**
Finance Result		**241,79 €**
Profit or Loss		601,95 €
Total comprehensive income		**601,95 €**

Chapter 4

Conclusions

The simplified model we have developed in the previous chapter had the objective of identifying and partly quantifying the effects of the Standard on the financial statement of an insurance company. Most of our attention is dedicated to the statement of comprehensive income side of the financial statement, because it represents the effective result of the year and partially include the other effects occurring in the balance sheet. Moreover, the IFRS 17 information process requires a heavier use of actuarial techniques, which will surely enable a greater transparency and consistency of reporting but this comes with a cost in implementing.

From our analysis, it emerges a difference in the profit or loss at the end of the year between IFRS 4 and IFRS 17 for the three scenarios, summarized in table 21 (Comparison of results: IFRS 4 versus IFRS 17).

Table 21 - Comparison of results: IFRS 4 versus IFRS 17

P&L Comparison			
€000	**Base Scenario**	**Scenario 1**	**Scenario 2**
IFRS 4	815,90 €	1.397,63 €	1.397,63 €
IFRS 17	1.614,91 €	488,07 €	601,95 €

As we can see from the results, many results arise, raising a lot of question on the standing points of the two Standards. For what concerns the Base Scenario, on the one hand, the profit is higher under IFRS 17 as there is a different timing for premiums recognition. The effects that cause the difference are related to the differently reported acquisition costs, the presence of risk adjustment, the interest accretion, and the unwinding of the liability.

On the other hand, the two stressing scenarios, which insist on technical and actuarial assumptions of the model, are not prudentially considered in the prior standard. Indeed, IFRS 4 does not require the complex actuarial techniques used in IFRS 17 to determine the probability-weighted cashflows from insurance contracts, the characteristics-reflecting discount rates to apply, and the risk adjustment, which was not contemplated in the previous standard.

Under IFRS 17, scenario 1 considers an increase of the loss ratio that determines an increase in the insurance service expense, which negatively influences the final result of the P&L. Scenario 2 considers an increase in a technical assumption which increases the release of the CSM in the reporting period, which has a positive

effect on the insurance revenue. Therefore, the second scenario-changing variable partially offsets the negative impact of the increase in the loss ratio.

If we want to consider the effects of IFRS 17 on the statement of comprehensive income, we will consider the three main effects involving the presentation of premiums and insurance finance expenses, the recognition of the CSM and risk adjustment, and the total amounts recognized in P&L.

Insurance revenue is determined and reported according to a method consistent with the recognition of revenue from contracts with customers, as prescribed by IFRS 15. Therefore, the insurance revenue reflects the expected amount to be received by the company for the provided services in the period, as for example the provision of insurance coverage. This approach will enhance comparability between companies operating in different industries, especially those operating in the financial services sector.

As our focus is mainly of life insurance, we will address the effects of the Standard for long-term insurance contracts. The choice was influenced by the fact that the difference between the accounting treatment under IFRS 4 and IFRS 17 are completely different. Revenues presented in each reporting period over the duration of the contract are considerably divergent from the premiums reported according to IFRS 4, above all for contracts for which the premium is paid by the policyholder only at inception. The types of contracts most heavily influenced by the transition are: contracts with a deposit component, annuities and other single premium contracts, and contracts where the payment pattern of premiums is different from the coverage pattern.

IFRS 17 excludes the deposit component from the insurance revenue and from incurred claims and other expenses, due to the fact that repaying the deposit components is not an obligation to provide services. This will enable a greater degree of comparability with other financial intermediaries as banks, which do not recognize deposits received as revenue applying IFRS Standards.

The amount recognized as insurance revenue over the coverage period is usually higher than the premium received, this is due to the fact that the latter are received before the provision of the related services. Insurance revenue accounts for an adjustment for the time value of money in order to reproduce the effect of the early receipt on the pricing of premiums.

Changes in discount rates and other financial variables used in the measurement of insurance contracts have effects on the valuation and presentation: the effects could be presented directly in P&L or in other comprehensive income. Besides, discount rates are one of the most crucial variables that is considered by the

Standard. IFRS 4 did not mandate to update discount rates and, under some jurisdictions, they are not used at all.

Interest accretion on insurance contracts, which represents the insurance finance expense under IFRS 17, is presented together with the return on the related investments. This is why we have highlighted the importance of matching between assets and liabilities for an insurance company, as accreted interest and assets returns are reported together. Indeed, the Board expects that the requirement of joint presentation of insurance finance expenses and investment returns on related assets will enable a clearer representation and interrelation of the effects of investment strategies and market interest rates. In contrast, IFRS 4 does not present the effect of discounting amounts, if any, separately from other movements in insurance assets and liabilities.

In case all cashflows of a group of contracts occur at initial recognition, the insurance service result for each subsequent reporting period will consist of the recognition of the CSM earned for provided services and of the variation in the risk adjustment in the statement of comprehensive income.

The CSM is recognized over the coverage period based on the coverage units that reflect the expected duration and size of contracts within a group. If size decreases, the CSM will reduce over time as well. This affects the interest accretion on the CSM as they reduce in tandem.

The risk adjustment is the company-specific assessment of risk which will be measured and updated at the end of each reporting period. Differences in estimates related to future service will adjust (be added to or deducted from) the CSM and be presented and directly recognized in P&L.

For what concerns the balance sheet side, the major effects brought by the implementation of IFRS 17 will influence the measurement and presentation of insurance contracts, and the reported equity at first application.

IFRS 4 typically allowed different insurance accounting practices between short-term and long-term insurance contracts. For long-term insurance contracts, there is a high degree of inconsistency between the current accounting practices. The features that will mostly influence the effect of IFRS 17 application include: the assumptions used to measure insurance contract assets and liabilities (current versus historical), the presence and extent of risk margins applied to the estimated future cashflows, the measurement method of financial options and guarantees, and finally, the deferral, if any, of the acquisition costs.

IFRS 17 requires current estimation assumptions for the measurement of insurance contracts and are expected to influence the carrying amount of assets and liabilities of insurance contracts. If the discount rates currently used are historical, two possible outcomes can occur: historical discount rates may be higher or lower than the current rates, affecting the insurance contract liabilities and equity. If historical rates are lower than current

ones, the insurance contract liabilities will decrease and equity will increase, and conversely if historical rates are lower.

Currently, IFRS 4 permits the inclusion of an implicit or explicit allowance for risk in the measurement of insurance contracts. As it is not clearly prescribed, this gives rise to a difficulty in determining the basis on which the margins are recognized and consequently in assessing the effect of IFRS 17 requirements. The Standard improves transparency and availability of financial information and related assumptions in the construction of this metric and in its effects on the profitability of the release from that risk.

For what concerns acquisition costs, IFRS 17 requires their inclusion in the estimated cash outflows used for measuring insurance contracts. Previously, some companies used to defer and amortize acquisition costs, therefore, the effects of IFRS 17 implementation will vary depending on the costs included and the amortization method, which currently diverge even among companies, as there is limited consistency by companies in the approach for this recognition.

The most significant impact in the presentation of insurance assets and liabilities is the clear distinction between contracts in an asset position and those in a liability position. Heretofore, most companies net insurance contract assets and liabilities and present them in a single line, lacking in transparency of disclosure for the different groups of contracts.

This separation will have an impact on the company's reported equity, whose magnitude will depend on several factors, stemming from the timing and subsequent updating of measurement assumptions to the economic condition of the company at the time of first application of IFRS 17. For long term insurance contracts, differences in existing insurance reporting practices could influence the effect of IFRS 17 on reported equity at first application. These include the inclusion and recognition of gains at inception and the extent of aggregation between profitable and onerous contracts, as any other factor causing an acceleration or delay in the recognition of profit or losses.

A comparison between the Building Block Approach and Solvency II needs to be described when we are dealing with the balance sheet side of the company's financial statements. The structure of the two methods is similar as they share the use of best estimate techniques in measuring insurance contract liabilities and a risk margin measure. However, the accounting requirement is far less prescriptive than the regulatory one. Moreover, discount rates are determined differently: for example, for annuity business, the rates can be measured as the sum of the risk-free rate and an illiquidity premium, which at first glance appears similar to Solvency II sum of the risk-free rate and the Matching Adjustment. Nevertheless, IFRS 17 states that the

illiquidity premium should reflect the liquidity characteristics of the insurance contracts, while the Matching Adjustment reflects the characteristics of the backing assets.

The most desirable approach for firms' processes and systems building would be in the harmonization of accounting and regulatory balance sheets, as they share common ground in assessing the main inefficiencies of the current reporting system. For this reason, both have developed similar but different methods for solving them. Accounting requirements better reflect the economics behind insurers' business, although the focus for regulators is in the soundness of the entire system and safeguard of all stakeholders, not only the companies.

The harmonizing decision of balance sheets is related to asset liability management considerations. If there exist two different balance sheets, a question on the reasonableness of the reported numbers arises. Which is the one to consider? Of course, the persistence of different balance sheets within the same company is in contrast with the primary goal of IFRS, so the improving of comparability of company's financial statements with national and international peers. How could comparability and transparency be enhanced across industries and jurisdictions, if they are not clear in the same company's financial statements?

IFRS 17 would be a challenge for companies, institutions and in general, for all stakeholders. The changes and enhancements it already brought to discussion are impressive. However, there is still need for a comprehensive and unique international solution to measure insurance contracts across sectors and nations, in order to disrupt the existing frictions between the different existing methods and to finally get to a consistent and transparent result for companies working in an environment where uncertainty and risk are crucial: the insurance companies.

In conclusion, as Seneca once wrote "*multum egerunt qui ante nos fuerunt, sed non peregerunt*"[89], a lot has already been done but any development process never ends, further enhancements and solutions are yet to come.

[89] Seneca, *Epistulae ad Lucilium*, 7, 64

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Summary

With the start of the globalization process across the financial industry, countries have been moving towards International Financial Reporting Standards (IFRS) for accounting and financial reporting in order to offer a more comparable picture of their financial statements and companies as a whole. Indeed, the objective of financial statements is to provide information about the financial position and performance of an entity that is useful to a wide range of users in making economic decisions.

Financial institutions, such as banks and insurance companies, face a a high degree of compliance. Actually, they face a variety of risks that must be assessed, controlled and managed in the most efficient way to prevent financial distress and crises. For this reason, these financial organizations have become subject to two different sets of regulatory accords with the aim of improving regulation, supervision and risk management within the financial sector: Basel I, II and III for banks, and Solvency I and II for insurance companies.

The insurance sector, generally perceived as subject to distinct and fragmented accounting practices, should benefit most from a coherent accounting framework that ensures comparable information amongst different insurers within the Europe and globally. It is so because global comparability of financial information fosters international activities and an efficient allocation of capital and resources in general.

In Europe, the insurance industry has recently been involved in a massive disruption of locally established standards and rules towards a more transparent and harmonized way of disclosing financial information due to the implementation of Solvency II and the prescription of IFRS 17 application from 2022. Both reform sets encourage comparability and transparency from a regulatory and accounting perspective for insurers, but there are important differences, starting from the objectives behind their application.

While Solvency II has been adopted by Europe and therefore Italy from January 2016, IFRS 17, published on May 2017, is going to be effective for annual reporting periods after January 1, 2022, with earlier application along with IFRS 9 and IFRS 15 implementation for some companies. Both schemes entail similar inspirational principles with the crucial aim of creating a new, risk-oriented and harmonized framework, from either a normative or an accounting point of view.

Both schemes entail a shift in paradigm and a complex set of concurrent changes in financial statements and process organization of the companies, which have required a long journey of preparation for institutions and regulatory bodies.

Twenty years ago, the process of renovating insurance regulation has been started either from a European perspective through the "Project Solvency" or from the wider "Project Insurance" sponsored by the International Accounting Standards Committee (IASC). The two supporting boosts highlight the need for a more coherent and internationally-viable insurance sector where there is a convergence of objectives between accounting practices and regulation.

Both projects have been planned on the same building blocks: the idea is to construct an accounting and regulatory framework more modern, complete, risk-oriented and harmonized within the European Union. The characteristics of this planned framework have the goal to allow the insurance sector to "keep up with the times (and other markets)" in order to make it more transparent and understandable.

The most important supranational bodies which have been promoting the ambitious harmonizing process are the European Union (EU) and the International Accounting Standards Board (IASB).

An International Accounting Standard achieves legislative force at the European level when, subsequently the issuance by the IASB, it is examined and considered in its ability to preserve the guardianship of the public interest in Europe by the authorities working together with the European Commission which are the *European Financial Reporting Advisory Group* (EFRAG) and the *Accounting Regulatory Committee* (ARC). Therefore, the European Commission ratifies the decision, following the positive but not binding opinion of the European Parliament, and the Standard becomes lawful with the publication on the Official Journal of the European Union after twenty-one days.

Regulation (EC) No 2236/2004 on the adoption of IFRS 4 "*Insurance Contracts*" has been the first normative addressing the insurance sector. *IFRS 4 – Insurance Contracts*" on 31 March 2004, which has been applied since 2005 represents the result of Phase 1 of the Insurance Project, finalized in a relatively short period in order to allow the application of the standard in time for the EU adoption of IFRS. The standard opens a transition period which has ended with the introduction of the new IFRS 17 and the subsequent completion of Phase II of the *Insurance Project*.

With Phase I, the IASB intended to offer a short-term solution to the accounting treatment of insurance contracts, that would have been perfectionated with the more complete IFRS 17. Indeed, the standard allows the derogation from the general principles contained in IAS 8 – *Accounting Policies, Changes in Accounting Estimates and Errors* and the continual application of the existing accounting principles, before the transition towards IAS/IFRS. This needed to be a transitory situation as it would favor the diffusion and coexistent of

dissimilar accounting standards, undermining the comparability of financial statements across countries. Nevertheless, this was not the case since it took more than ten years to develop and publish the new standard, and almost twenty years for its implementation.

The topics addressed in the first phase concerned essentially: a first definition of an insurance contract; the presentation in financial statements and integrated information; the elimination of some of the existing practices, incompatible with the IAS/IFRS dispositions (e.g. the regulation of catastrophic and equalization reserves); and the different treatment of financial assets and insurance liabilities (financial assets valued according to IAS 39, while insurance liabilities according to national accounting standards).

The mismatching between the measurement methods for assets and liabilities is severe as liabilities and the assets covering them are valued under different techniques, thus, impeding a real comparison of risks in the valuation of assets and liabilities and of the Cash Flow Statements. Furthermore, it induces a significant increase in the artificial volatility of economic results and in the capital structure.

IFRS 17 – *Insurance Contracts* is considered to be the first truly international IFRS Standard which sets out the requirements that a company should apply in reporting information about insurance contracts issued and reinsurance contracts held. It is planned to replace the interim Standard IFRS 4, which makes it difficult for investors, analysts and all financial statement users to: detect which of the groups of contracts are onerous and which are profitable; and evaluate trend information about insurance contracts as a whole.

In its place, the new Standard provides current and revised information about the most important features of contracts such as the obligations, the risks and performance. Indeed, financial risks and economic mismatches are revealed as well as the source of earnings, enhancing disclosure and making accounting more intuitive and understandable.

The Standard determines the principles to recognize, measure, present and disclose insurance contracts within the scope of the standard. The primary goal of IFRS 17 is to guarantee that an entity represents those contracts according to relevant and faithful information, which gives a basis for users of financial statements to clearly evaluate the effect that insurance contracts have on the entity's financial position, financial performance and cash flows.

When underwriting an insurance contract, a set of rights and obligations is created in order to work together generating a package of cash flows. For measurement purposes, the insurance contract is represented only by

the cash flows remaining after non-insurance components are separated. Indeed, before the insurer works on the measurement of the contract liability and decides on the valuation method to use, it needs to assess the contract terms and whether they are covered by IFRS 17.

Due to the fact that an insurance contract may combine different features, it needs to be unbundled. *Unbundling* is the term used to identify the separation of insurance component from other non-insurance components within a contract. This is made so as to allow the different components to be treated according the most relevant and appropriate accounting standards.

The different features composing some kinds of insurance contracts that do not transfer insurance risk are known as "non-insurance components", and examples include derivatives, deposits and asset management services. IFRS 17 prescribes the entity to separate the non-insurance component as a separate contract if its features applied to the separate contract would be in the scope of other financial reporting standards, in case applying them to the separate content. In order to separate the non-insurance component, it must be not highly correlated with the insurance component, so they can be valued separately without losing their nature, and the separated component must be readily available for purchase in the same market or jurisdiction.

The separation criteria have the peculiar purpose of enhancing and improving transparency for two main reasons. First, the non-insurance component accounted separately will be more comparable to similar contracts, either investment or services contracts. Second, the separation may make it easier to understand the risks undertaken by entities in different businesses which become, as a consequence, more comparable.

Contracts with homogeneous risk characteristics are aggregated into groups or portfolios, defined as groups of "*insurance contracts subject to similar risks and managed together*". The grouping is performed with the aim of limiting the offsetting of profitable contracts against non-profitable ones. This is done having concern about how insurers manage and evaluate their financial performance. Indeed, the requirements about the level of aggregation of contracts contained in IFRS 17 affect the reporting in financial statements through different allocation and identification methods of the primary measurement inputs.

When compared to Solvency II criteria for the level of aggregation, IFRS 17 allows an entity to estimate the fulfilment cash flows at whatever level of aggregation, which is most appropriate from a practical perspective. The only requirement for the insurer is to be able to allocate such estimates to groups of insurance contracts so that the resulting *fulfilment cash flows* of the group comply with IFRS 17. In fact, the level of aggregation

is the basis for the calculation and evaluation of the building blocks of IFRS 17 (fulfilment cash flows and contractual service margin, that will be discussed later in this paper).

The aims of such separation are: the determination of the fulfilment cashflows, so the identification of the expected cashflows of a group of contracts to be allocated to individual contracts; and the allocation of insurance revenues and profits to the appropriate group and period, through the disaggregation of the portfolio first into groups and further into annual cohorts within the same group, in order to measure and release the contractual service margin.

At initial recognition, the entity identifies portfolios of insurance contracts for the determination of the level of aggregation. The insurer must include within a portfolio contracts with homogeneous risks and managed together, usually assembling contracts in the same product line. Each portfolio is divided into a minimum of the three groups: a group of contracts onerous at initial recognition, a group of contracts with no significant possibility of becoming onerous in subsequent periods, and all remaining contracts in the cohort.

The assessment about the onerousness of contracts can be made at a higher level, considering a set of contracts if the set is within the same group, otherwise the determination of the group belonging must be made on an individual basis. The entity may have some reasons to price contracts without generating a profit margin, as for example in case of the launch of a new product line for regulatory or competitive purposes it may underprice the premium so as to not be sanctioned or gain market share.

According to IFRS 17 general measurement model, two key components are identified for the valuation of the liability components within a group of insurance contracts: the *fulfilment cashflows* and the *CSM*. On initial recognition, the liability or asset recognized for a group of insurance contracts is the result of the sum of:

a. The fulfilment cashflows: risk-adjusted, explicit, unbiased and probability-weighted estimate of the future cashflows arising from the fulfilment of the contracts, adjusted at their present value through discounting;
b. The CSM: the amount representing the unearned profit the entity is going to recognize in profit or loss at the service provision.

The former consists of three components: the future cashflows arising from the fulfilment of the contract; the discounting factor, adjusting the cashflows in order to reflect the time value of money and financial risks; and the risk adjustment for non-financial risk, which mirrors compensation required by the entity for bearing the uncertainty caused by non-financial factors and their attached risks about the amount and timing of cashflows.

The level of aggregation of contracts determines different valuation outcomes for contracts' fulfilment cashflows and CSM, depending on the onerousness of the contract or group of contracts.

The fulfilment cashflows are computed starting from the undiscounted probability-weighted future cashflows, which must have some main characteristics: they must be current, explicit and unbiased estimates of future cashflows within the boundary of each contract in the group. The combination of the undiscounted probability-weighted cashflows and the discount rate curve composes the Best Estimate Liability, "BEL", and it includes all cash in and outflows attached to the insurance contract. The insurance company estimates the probabilities and amounts of future payments under existing contracts on the basis of relevant market and non-market variables.

Once the future cashflows have been calculated, they must be discounted in order to reflect the time value of money. The discounting factor will adjust the estimates of expected future cashflows to reflect the time value of money and the financial risks not already calculated within the cashflows estimation. Two estimation approaches are specified by the Standard: the "top-down" or the "bottom-up" approach, which for insurance contracts with no significant variable cashflows should result in the same discount rate, although in practice it rarely happens. The bottom-up approach starts with the determination of the discount rate based on a liquid risk-free yield curve, adjusted to eliminate differences between the liquidity characteristics of the financial instruments underlying the prescribed curve and those of the insurance contract itself.

The risk adjustment is an adjustment thought in order to reflect the compensation the insurance company requires for the uncertainty bearing. Indeed, there exist some uncertainty about the amount and timing of cashflows and it is attached to non-financial risk. This kind of adjustment is prescribed to reflect the non-financial risk. There is no specified method for its measurement, so standard methods as Value at Risk (VaR) or Cost of Capital approaches apply.

The CSM is the last of the IFRS 17 building blocks and it is defined as the unearned profit that the company will recognize at the provision of the service in the future under the insurance contracts in the group. On initial recognition of a profitable group of contracts, the margin is equal with opposite sign of the amount of net cash inflows arising from the fulfilment cashflows, the de recognition of any asset/liability recognized for insurance acquisition cashflows; and any cashflows related to the specific group of contracts. At each reporting date, the CSM is adjusted following the changes and updates of fulfilment cashflows.

From the reporting point of view, IFRS 17 tracks the following process. When an insurance company prices a policy with its customers, the company usually records in its balance sheet an *insurance contract liability*

which reflects its obligation to provide insurance coverage to customers and, if claim occurs, its obligation to pay the claim to the customers.

To measure this obligation the company considers the sum of the present value and the risk-adjustment component is referred to as the *fulfilment cash flows*. If expected cash in for premiums are higher than expected cash out for claims and other expenses, there is an expected profit from the insurance contract, which is known as the contractual service margin.

This profit is not recognized as a gain in P&L when the contracts are written because the company has not provided any coverage yet. Instead, the profit is presented as part of the insurance contract liability in the balance sheet. When the company starts to provide coverage, it starts to recognize the *Contractual Service Margin* (from now on just *CSM*) in P&L as the difference between revenues for coverage provided in the period and the expected claims and other insurance service expenses relative to the same period. As time passes, the effect of discounting is unwound, and the risk-adjustment is released in P&L.

At each reporting date, the *fulfilment cash flows* are updated using revised cash flows, current discount rates and reviewed adjustment for risk. Changes in cash flows and the risk-adjustment that relate to the coverage to be provided in the future adjust the *CSM* and therefore affect the P&L in the future to the recognition of the adjusted *CSM*. Changes related to the coverage provided in the period and in the past are immediately recognized in P&L. Changes in discount rates are recognized when they occur and are presented either in P&L or in Other Comprehensive Income: this is a presentation choice of the company.

In terms of presentation, the unwound of discount rates and the effects of changes in discount rates are presented in a line called "*Insurance Finance Expenses*". Revenues for coverage provided in the period and revenues for release of risk-adjustment in the period are presented in the line "*Insurance Revenues*". The expected claims and other insurance services expenses together with the changes in cash flows and risk-adjustment that relate to coverage provided in the period and in the past are presented in a line called "*Insurance Service Expenses*". This line also considers the effect of the release of risk-adjustment within the liability for incurred claims which reduces "*Incurred Claims*" in P&L.

The difference between *Insurance revenues* and *Insurance service expenses* represents the *Insurance service result* for the company. Insurance revenue and insurance service expensed that are presented in profit or loss do not consider any investment components, identified only when there is the recognition of revenue and incurred claim. The problem with this separation stands in the fact that currently those components are not

always monitored separately when constructing assumptions, projecting cashflows and analyzing the performance for the period. The rationale behind this exclusion is that the investment components do not present consideration for providing services and therefore must not be reported together with the insurance revenue.

In the liability for remaining coverage at opening balance, the entity will use the following inputs for the determination of the insurance revenue and service expenses amounts:

1. The insurance service expenses incurred during the period at the amount expected at the start of the period;
2. Changes to risk adjustment for non-financial risk, not related to future service (the entity can choose to apply a disaggregated approach where it divides the risk adjustment component between the insurance service result and insurance finance income or expense);
3. The Contractual Service Margin allocated to the P&L for the period; and
4. The Amortization of insurance acquisition cashflows, for revenues and service expenses in the same amount;

By contrast, in the liability for incurred claims at opening balance, the insurance service expenses will be the result of:

1. The actual claims and expenses which are relative to the period,
2. The changes in non-financial risk assumptions used, and
3. The changes in risk-adjustment for non-financial risk, which even in this case can be disaggregated.

We have developed a simplified model according to some technical and financial assumptions. We selected the level of aggregation of the portfolio of contracts, starting from the insurance line the contracts belong to, divided the contracts according to the issuance year and a test of onerousness is applied, in order to identify at least the three groups of contracts, as mandated by the Standard. Our focus is only on one of the groups of contracts that is the one of non-onerous contracts.

The new accounting entries related to the insurance obligations are estimated according to the Building Block Approach, BBA, giving rise to the main components of the liability, represented by the Liability for Remaining Coverage and the Liability for Incurred Claims. The results are exemplified in the new version of the P&L. A sensitivity analysis of the financial results is performed according to two different scenarios.

Base Scenario P&L

P&L Base Scenario		
€000		**1**
Expected claims		6.422,66 €
Expected expenses		1.152,21 €
Release of Risk Adjustment		237,68 €
Recovery of acquisition cashflows		1.885,56 €
Release of CSM		1.179,98 €
Insurance contract revenue		**10.878,10 €**
Incurred claims (paid & reserved)	-	6.422,66 €
Incurred claims (risk adjustment on reserved)	-	101,16 €
Expenses incurred	-	1.095,58 €
Amortisation of acquisition cashflows	-	1.885,56 €
Losses on onerous contract		- €
Insurance service expense	**-**	**9.504,97 €**
Insurance service result		**1.373,13 €**
Investment income		267,90 €
Accretion of CSM	-	7,01 €
Unwind of liabilities	-	19,10 €
Change in discount rate on future cashflows		- €
Insurance Finance Income or Expense	**-**	**26,11 €**
Finance Result		**241,79 €**
Profit or Loss		1.614,91 €
Total comprehensive income		**1.614,91 €**

A sensitivity analysis has been performed on two essential assumptions. The first scenario prescribes an increase in the loss ratio from 55% to 70%, while the second scenario combines the analysis from the first scenario with a variation in the technical perspective hypothesis for the measurement of the LRC.

From our analysis, it emerges a difference in the profit or loss at the end of the year between IFRS 4 and IFRS 17 for the three scenarios, summarized in Table 2 (Comparison of results: IFRS 4 versus IFRS 17).

Table 2 - Comparison of results: IFRS 4 versus IFRS 17

P&L Comparison			
€000	**Base Scenario**	**Scenario 1**	**Scenario 2**
IFRS 4	815,90 €	1.397,63 €	1.397,63 €
IFRS 17	1.614,91 €	488,07 €	601,95 €

As we can see from the results, many results arise, raising a lot of question on the standing points of the two Standards. For what concerns the Base Scenario, on the one hand, the profit is higher under IFRS 17 as there is a different timing for premiums recognition. The effects that cause the difference are related to the differently reported acquisition costs, the presence of risk adjustment, the interest accretion, and the unwinding of the liability.

On the other hand, the two stressing scenarios, which insist on technical and actuarial assumptions of the model, are not prudentially considered in the interim standard. Indeed, IFRS 4 does not require the complex actuarial techniques used in IFRS 17 to determine the probability-weighted cashflows from insurance contracts, the characteristics-reflecting discount rates to apply, and the risk adjustment, which was not contemplated in the previous standard.

The most significant impact in the presentation of insurance assets and liabilities is the clear distinction between contracts in an asset position and those in a liability position. Heretofore, most companies net insurance contract assets and liabilities and present them in a single line, lacking in transparency of disclosure for the different groups of contracts.

This separation will have an impact on the company's reported equity, whose magnitude will depend on several factors, stemming from the timing and subsequent updating of measurement assumptions to the economic condition of the company at the time of first application of IFRS 17. For long-term insurance contracts, differences in existing insurance reporting practices could influence the effect of IFRS 17 on reported equity at first application.

A comparison between the Building Block Approach and Solvency II needs to be described when we are dealing with the balance sheet side of the company's financial statements. The structure of the two methods is similar as they share the use of best estimate techniques in measuring insurance contract liabilities and a risk margin measure. However, the accounting requirement is far less prescriptive than the regulatory one. Moreover, discount rates are determined differently.

The most desirable approach for firms' processes and systems building would be in the harmonization of accounting and regulatory balance sheets, as they share common ground in assessing the main inefficiencies of the current reporting system. For this reason, both have developed similar but different methods for solving them. IFRS 17 would be a challenge for companies, institutions and in general, for all stakeholders. The changes and enhancements it already brought to discussion are impressive. However, there is still need for a comprehensive and unique international solution to measure insurance contracts across sectors and nations, in order to disrupt the existing frictions between the different existing methods and to finally get to a consistent and transparent result for companies working in an environment where uncertainty and risk are crucial: the insurance companies.