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A NEW PLAYING FIELD FOR ACTUARIES

DATA

AAE ACTUARIAL ASSOCIATION OF EUROPE

BY **JENNIFER BAKER**

INTERNATIONAL DEVELOPMENTS IN REGULATION

INTERROGATING THE SOLVENCY II REFORMS

CARLOS MONTALVO

Former Executive Director of EIOPA and current Global Insurance regulatory leader at PwC, Carlos Montalvo, discussed the crucial improvements in the upcoming Solvency II reforms, emphasizing simplification, adaptation to technological changes, and maintaining a risk-based framework. He highlighted the importance of the long-term guarantee package and volatility adjustment, noting their imperfections but necessity.

Which improvements have been most crucial in the upcoming Solvency II reforms?

'Conceptually, simplification, as the model is way too complex. Now this is easier said than done, and I'm not sure that we are achieving what we want in terms of simplifying the framework. The second element that I think is relevant and important is that in addition to simplification, there is an element of adaptation. The directive was adopted in 2009 and many things have changed since then in the way we do insurance on a day-to-day basis – technology, data, AI, etc. If we are not adapting the framework >

> ***And let's be honest, EIOPA came with evidence that there are deeper markets at 30 years than at 10 or 20***

to today's reality and challenges, the regime will be outdated and we are going to end up in trouble. The third point that I think is still relevant with some caveats, is that we remain under a risk-based framework. In other words, there is an underlying basis that justifies changes but retains consistency and soundness. So I think those three elements are key.

There are other issues that could be seen as more controversial in terms of facilitating a certain type of agenda. I think regulation should acknowledge reality and today we are also talking about productivity, competitiveness and so on. It is only fair to reflect those and not to work in silos. When we started this process 25 years ago, we always had in mind that the main objective was to enhance the protection of policyholders, and as a secondary objective the financial stability of the system… but – quoting Bob Dylan – the times they are a-changin'. Today's challenge is to add these new objectives but not at the cost of eroding the old ones.'

Important aspects of the Solvency II reforms include the Ultimate Forward Rate (UFR) and Volatility Adjustment (VA). Will the new proposals solve the issues and make the framework more market-consistent? Or should the UFR and VA be abandoned altogether?

'My take on a long-term guarantee package is that perfection is the enemy of good. They are by no means perfect, technically. And this is an actuarial magazine, there are a lot of question marks over how they have been designed. However, without those measures, we had created a massive problem with regard to live business. So they are not 100% bulletproof from a technical standpoint, but they have been a key part of the model, one without which Solvency II had failed. The new methodology for UFR is still more generous than what reality tells us. We talk about deep, liquid and transparent markets. And let's be honest, EIOPA came with evidence that there are deeper markets at 30 years than at 10 or 20. So there is not only, let's say, a technical dimension, there is also another dimension that acknowledges the business reality.'

With the VA, it's very much the same approach. Is the review heading in the right direction?

'Well, it may not be perfect, but it can be good. At the same time, I am strongly convinced that the MA is a much better instrument than the VA in terms of a proper ALM, in terms of discipline, in terms of risk management, and so on. And it comes with a list of conditions that need to be met. If properly enhanced, it should also allow life insurers, for example, to come back and offer attractive guarantees at the right price. The combination of limited changes to MA with the impact of those to VA will make MA even less attractive. So I think it's also been a lost opportunity to further enhance and push towards the use of MA for new products throughout the European market with the reform, products that should play a key role, for example, to enhance long-term savings of citizens for their pensions.'

Solvency II allows for internal capital models which can differ significantly amongst insurers. As a result, most large European insurers use very different complex models for their capital. Is this diversity and complexity desired? Or should the industry move towards simpler and more harmonized internal capital models, like the banking industry? >

> ***And if models are bespoke by definition, there should be differences among the different players***

‘I would start by saying in my view, internal models make sense. We have a core principle on Solvency II, which is proportionality – but proportionality must be a two-way street. Make it easier for the smaller companies, but expect that a large company or global player, should not be using a standard formula, but should elaborate an internal model. So, models make sense. And if models are bespoke by definition, there should be differences among the different players.

Two elements which I think are important: comparability and soundness. On the first one, comparability, it should cover both other model users, but also standard formula. This idea was embedded in the proposal to require model users to disclose standard formula calculations, to facilitate a comparison. In the end, what has come is a little bit of a compromise, saying, well, it’s not a full standard formula calculation that you are requested to disclose, but an approximation. I wouldn’t shy away from explaining the differences. Because those have to do with the effective risk underlying your own company, and your own profile. So if you are able to educate the market around that, that would be business as usual. The other element is soundness, and I think that EIOPA has to play a bigger role in terms of ensuring that the same risk ends up leading to similar or the same type of capital charges, and different risks lead to different ones. I’m not talking about EIOPA as a single supervisor, or being in charge of supervision of internal models, but in ensuring a high level of consistency in terms of outcomes, including identifying outliers.’

Let’s zoom out a bit and look at international developments in investments by insurers and private credits. Which global developments do you see as most important or promising from an investment perspective for insurance companies?

‘The starting point is to understand where we come from as an insurance sector that was heavily invested in sovereigns and corporates. But if we remain too prudent on the asset side, it is going to be very difficult to offer appropriate and attractive products to policyholders. In other words, too much prudence can become non-prudent. So there has to be a different type of assets’ blend – and that’s one of the beauties of Solvency II. The so-called prudent person principle means you should be allowed to decide where you want to invest in, under the double assumption that, on the one hand you understand the risks and, on the other, that more risk should lead to more capital. Fine, you decide that it makes sense for you, for your product offering, for your policy holders, for your shareholders, and you go for it.

Now, what is important is to understand whether this is the right product for your company and whether it is rightly priced – from the point of view of liquidity risk as well as credit risk. But also whether it is delivering a return for you. What doesn’t make sense is to pretend that insurers, as institutional investors, can end up investing in assets where the cost of opportunity is suboptimal. In other words, where the return they’re getting for the risk they are taking doesn’t make sense.’ >

The bad news is that we come from a hard market, and in the future, we will also be confronted with that

Let's look at international developments in (re)insurance. Which global developments do you see as most important or promising for the reinsurance market? What are the impacts of climate change for the future of the reinsurance markets?

'When it comes to reinsurance, the good news is that we have a soft market now in the sense of capacity and offering. It seems that reinsurers are there, and they are taking most of the risk that is there in the market. And that is good news. The bad news is that we come from a hard market, and in the future, we will also be confronted with that. So we need to make sure, particularly for those traditional risks that are more exposed, is that we are already anticipating a return to hard markets.

The second thing we are seeing is a non-traditional type of reinsurance, which is a way in which capital is coming to the market again. Don't forget one thing: We need to evolve. We need to be proactive, but we also need to avoid being complacent if we have a soft market. If we do nothing, we are going to end up confronted with a problem.'

Bermuda, which represents approximately 35% of the world's reinsurance capacity, has been declared an equivalent jurisdiction in the Solvency II regulatory framework. However, it turns out that there remains considerable supervisory resistance despite this equivalence. EIOPA has launched a public consultation regarding the use of reinsurance provided by third-country reinsurers. Is the European supervision too strict or too lenient on third-country reinsurers?

'Well, taking the Bermuda example, they were granted equivalence back in 2015/2016, but interestingly enough, they have embarked on a number of reforms of the model to retain that equivalence. And I would say that they have succeeded, particularly because they reviewed the model under the acknowledgement that, indeed, some differences had led to arbitrage, and that was not ideal so they had to change that. Also because among other things, they have decided to make host regulators part of the solution, so that, e.g., prior to granting approval of a reinsurance transaction, they consult the host supervisor. And if the regulator poses an obstacle, they will basically decline the transaction. In other words, they considered that for their market to remain competitive -and Equivalence was a key factor for this-, they had to raise the bar, rather than lowering it. In my view, they got it right!

But let's be honest, we all tend to be local because we think that if things go wrong, localism is going to protect us better than globalisation and internationalisation. Is that something which is 100% true or bulletproof? I think it's not about black and white. Globalisation must be part of the solution, because it brings capital and diversification, and both are most needed. But I have been a regulator for nearly 20 years, one that felt more comfortable when the assets were at reach compared to assets being far away, so I can also understand how my former colleagues feel about it. That is reality, you may call it human bias, and it has nothing to do with regulation. The good news is that biases can also be addressed.' <

FIDA AND DATA EXCHANGE **A NEW PLAYING FIELD** (ALSO) **FOR ACTUARIES**

BY **MELANIE SCHLÜNDER** AND **TILMANN SCHMIDT**

The EU's initiative on access to financial data aims to strengthen the European data economy – this has implications for the insurance industry, but also for actuaries as traditional data users and handlers.[1]

FiDA proved to be controversial in 2025. At the beginning of 2025, the initiative was briefly considered a victim of the desired reduction of bureaucracy at EU level, but the jubilation of its opponents was followed by the announcement by the EU Commission that it intended to stick to it. Shortly later trilogue negotiations began between the EU legislative bodies, the Commission, the Council and the Parliament to reach a compromise between proponents and opponents. Although the Danish EU Presidency saw FiDA and the Retail Investment Strategy as central pillars of its programme in the summer, there were renewed >

[1] This text is based on the German-language article 'FiDA und Datenaustausch – ein neues Spielfeld (auch) für Aktuare' that appeared in issue 2/2025 of the DAV Journal and has been slightly adapted to reflect developments since then.

discussions about the data regulation initiative in October. However, despite some further pushback from parts if the industry as well as possible implications for the EU US relations, FiDA remained on the Commission's work programme announced in October 2025 as the initiative itself is embedded in the EU's overarching data strategy, aiming on the one hand to strengthen the competitiveness of the European economic area and, on the other hand, to safeguard the achievements already secured for EU citizens, such as high standards of data protection, data security and data ethics.

FROM OPEN BANKING TO OPEN DATA – OPEN INSURANCE AS A MILESTONE

The trend toward digitalisation is driving rapid changes in both society and the economy. Data-driven business models create new value for customers and facilitate cross-industry collaboration. The European Union also recognised this development with the publication of its Data Strategy in 2020, setting the objective of fostering the data-driven economy and establishing economic policy frameworks to ensure that the proportion of data stored, processed and used for value creation within the European economic area at least corresponds to the EU's overall economic weight. In this context, the financial services sector is assigned a key role. The creation of a European financial data space to promote data-driven innovation is one of the four priorities identified in September 2020 for the digital transformation of the financial sector.[2]

With the entry into force of the second Payment Services Directive (PSD2), the EU has already established the foundation for data-driven business models in the area of payment accounts. PSD2 enables third-party providers, such as FinTechs, to participate in the payments industry, as banks are required to set up interfaces (APIs) through which these providers can access customers' payment accounts. This so-called 'Open Banking' can be regarded as an initial step toward the broader digital transformation of the entire financial services sector. Subsequently, EIOPA carried out a first form of consultation for the insurance sector on 'Open Insurance,' which addressed, among other things, questions of definitions, lessons learned from Open Banking, potential use cases, regulatory considerations, as well as opportunities and risks.

In June 2023, the European Commission published its proposal for the FiDA regulation, aiming to establish a unified 'Open Finance' framework within the EU – with the goal of implementation within 24 months of its final adoption. In doing so, it also reflected on some of the hurdles experienced during the implementation of PSD2, which only gradually enabled a broader establishment of Open Banking in continental Europe. At the same time, however, Open Banking was successful in other jurisdictions, including Singapore and the United Kingdom, where strong involvement of market participants was ensured right from the outset.[3] Accordingly, the FiDA initiative provides for fewer 'top-down' requirements in the sense of regulatory micromanagement; rather, in line with Europe's liberal economic order, it sets guiding principles for a market-based development, with due regard to consumer protection and data privacy. Subsequent to the Commission's draft, the European Parliament and the Council introduced their own proposals, which modified the original text. Following the above-mentioned turbulence, trilogue negotiations commenced in April 2025. Although these were still ongoing at the time of writing, broad approval could already be observed for significant parts, particularly in relation to the Council's proposal for a phased introduction – perceived as a form of compromise to establish a framework for Open Insurance in Europe (see Figure 1). >

[2] Cf. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a Digital Finance Strategy for the EU of 29 September 2020 (COM(2020) 591 final).

[3] PwC and Valytics: 'Open Insurance – was bringt FiDA?' (2024), p.8ff.

FIGURE 1: Interrelated proposals for FiDA regulation from the individual EU legislative institutions as of start of Trilogue negotiations. The proposal resulting from the negotiations is expected to be most closely aligned with the proposal of the Council of the European Union

European Commission

- **'Big Bang' approach for scheme and products**
- Mandatory **scheme membership** for data owners after **18 months**
- Full **FiDA compliance** after **24 months**

European Parliament

- **'Big Bang' approach for products**
- Mandatory **scheme membership** for data holders after **30 months**
- Phased development of the schemes (**development phase** after 12 months, implementation phase after 26 months, **operationalisation phase** after 30 months)
- Full **FiDA compliance** after **32 months**

Council of the European Union

- **Phasing-in** instead of a 'Big Bang' approach
- **Staggered scheme development** and **full compliance** by **product group**
- First milestone **18 months after entry into force,** full FiDA compliance for all product groups **48 months after entry into force:**

Scheme membership **18**
Full compliance **24**

Product group 1
Motor insurance, consumerloans, accounts, savings accounts

Scheme membership **30 months**
Full compliance **36 months**

Product group 2
Mortgage financing, investments, crypto, PEPP

Scheme membership **42 months**
Full compliance **48 months**

Product group 3
All other non-life insurance products*, insurance based investment products, private pension products**, credit products, data creditworthiness and credit rating checks for companies

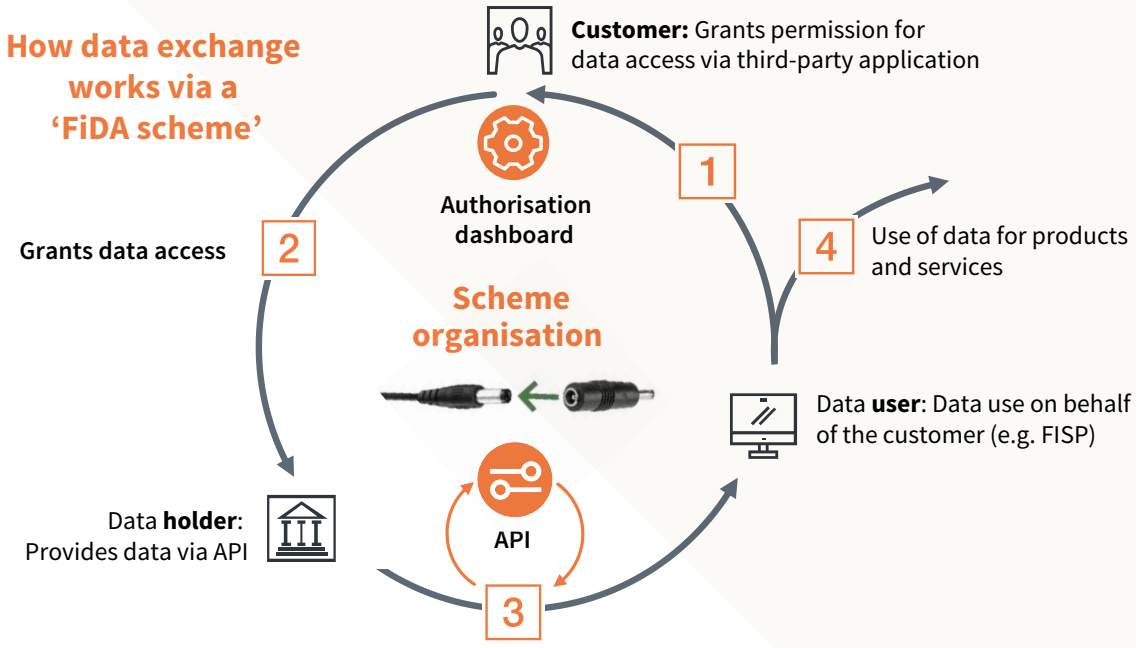
* Includes data from needs and requirements analysis
** IBIPs incl. data from adequacy and suitability assessment

The scope of FiDA is broadly defined and covers both financial product-related data as well as relevant personal data. In addition to data transmitted directly by customers, data arising from the interaction between customers and companies are also included. However, certain insurance products that are based on particularly sensitive personal data are explicitly excluded from the regulation due to high data protection considerations: this applies to products in the life and health insurance sectors, except for so-called insurance-based investment products, including annuities.[4]

FiDA defines different roles, each associated with specific rights and obligations. A distinction is made between so-called data holders and data users. Data holders include financial institutions such as insurers, while data users also include so-called Financial Information Service Providers (FISPs), which once authorised by supervisory authorities, may operate as certified entities offering services to customers on the basis of shared data. For the organisation of data exchange, FiDA provides for so-called Financial Data Sharing Schemes (for a general outline see Figure 2).

Within the regulation, however, only the overarching framework is to be stipulated, while binding interface standards are expected to evolve and establish themselves through market mechanisms. Initial market initiatives have already positioned themselves and their standards in the emerging discussions on scheme design. In addition, further aspects fall within the remit of the schemes, such as rules on liability and the creation of equal access conditions for all participants. Customers will thus be able to use dashboards provided to them to gain an overview of which entities they have granted access rights to their data – and to adjust these permissions as required. The participating companies set binding rules jointly, forming the basis for data exchange. >

FIGURE 2: How data exchange works, illustrated using a possible scheme design in the so-called 3-corner model



[4] The exact scope is likewise subject to the trilogue discussions, with significant progress having been made over the summer of 2025. According to the latest proposals, occupational pension schemes are excluded.

The scheme itself, however, neither receives data nor is it obliged to provide its own technological solutions. It merely provides the framework within which members define their own binding rules.

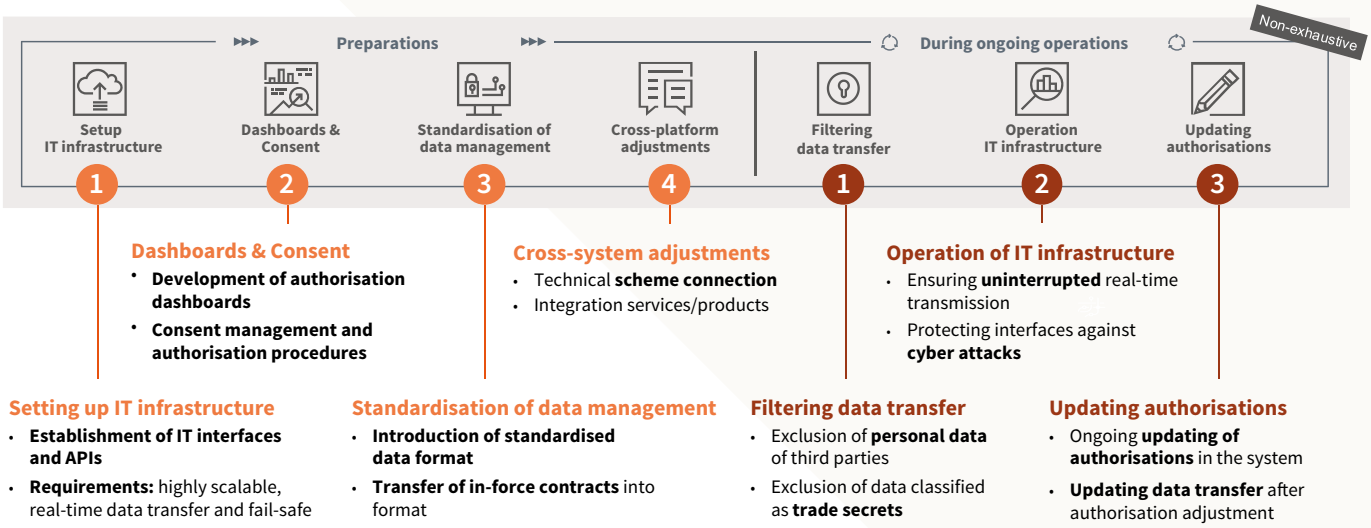
The European Commission has set out the general direction with its proposal for a FiDA regulation, while the ongoing trilogue negotiations are now fine-tuning the parameters and guardrails. Should the discussed approach of a phased introduction prevail in the negotiations, insurers will have varying implementation timelines depending on their business models and the affected lines of business. Based on this, the timeframe will determine how long insurers have to prepare their IT system landscapes for standardised data formats, open interfaces and enhanced data transparency.

ACTUARIES AS MASTERS OF THE NEW DATA LANDSCAPE

Actuarial work has always been based on data in order to measure and assess the risks to be insured. Even before the term 'Big Data' became established, analytical methods were continuously refined to take into account more information and increasingly complex interrelationships.[5] The traditional tasks of the actuarial profession initially focused in life insurance, and subsequently in non-life insurance, on product and tariff development as well as underwriting and risk assessment. Later, support in investment decisions was added, and – particularly in the context of Solvency II – enterprise risk management became a core area. For this 'evolution' of the actuary through these successive stages, or for integrated risk management as an actuarial function, Paul Embrechts coined the term 'Actuary of the fourth kind.' More recently, a fifth stage has been added: that of the data-driven and model-oriented, critical and socially responsible decision-maker in a constantly changing world characterised by uncertainty.[6]

With FiDA, data will increasingly have to be extracted from source systems in a structured manner, aggregated, and converted into the data format agreed within the scheme for exchange. This will entail potential technical adjustments. These include one-off activities during the preparation phase, as well as the need to adapt ongoing operations to the requirements (see Figure 3 for an indication). >

FIGURE 3: Overview of necessary technical adjustments in preparation for FiDA



[5] DAV Results Report 'Big Data in der Lebensversicherung' of 19 September 2019, p.5.

[6] Paul Embrechts and Mario V. Wüthrich: 'Recent Challenges in Actuarial Science', Annual Review of Statistics and Its Application, Vol. 9 (2022), p.120.

An analysis of the existing IT landscape therefore forms the basis for identifying adjustment needs at an early stage. Although companies may shy away from system changes, particularly with legacy systems, due to potential costs, migration can be designed intelligently by focusing on strategic considerations and on the functionalities required in the target systems.[7] In this context, it is essential to incorporate strategic reflections around FiDA and the use of a more flexibly accessible pool of data.

CORPORATE COMPASS BETWEEN MISSION AND VISION

The implementation of FiDA confronts insurers with the question of their strategic positioning derived from a target vision. This involves defining the company's vision of Open Insurance, assessing how FiDA will impact its organisation and offerings, and determining the direction of potential future developments.

At first glance, FiDA represents a regulatory requirement. Accordingly, companies may choose to align with the minimum requirements. In this approach, they extract from the FiDA regulation and the evolving rules of the scheme to which they connect for data provision the minimum obligations to be fulfilled and implement these internally, ideally at the lowest possible cost. This essentially reflects a (pure) role as a data holder, in line with the proposed regulation.

Beyond this, however, a growing utilisation of internal and external data is possible. By modernising legacy systems and structuring internal data, processes can be optimised, and additional differentiating features for product development and improvement, underwriting and risk management can be leveraged. Even if, due to the sensitivity of data, a large part of the portfolio of insurance groups were to remain outside the scope of FiDA, significant potential may still exist. By creating a crossline, homogeneous data pool, use cases can emerge in which technology and automation generate added value not only for internal processes and workflows, but also for consumers through better alignment with customer needs. This becomes even more effective when external data are incorporated via the FiDA interface. Leveraging the broader data space can particularly enhance advisory processes, as for policy replacements and switching processes the information on previous risk coverage is transparently available, provided the customer grants consent. At the same time, insurers can more effectively identify their target customers by filtering the shared data specifically for the information most relevant to them.

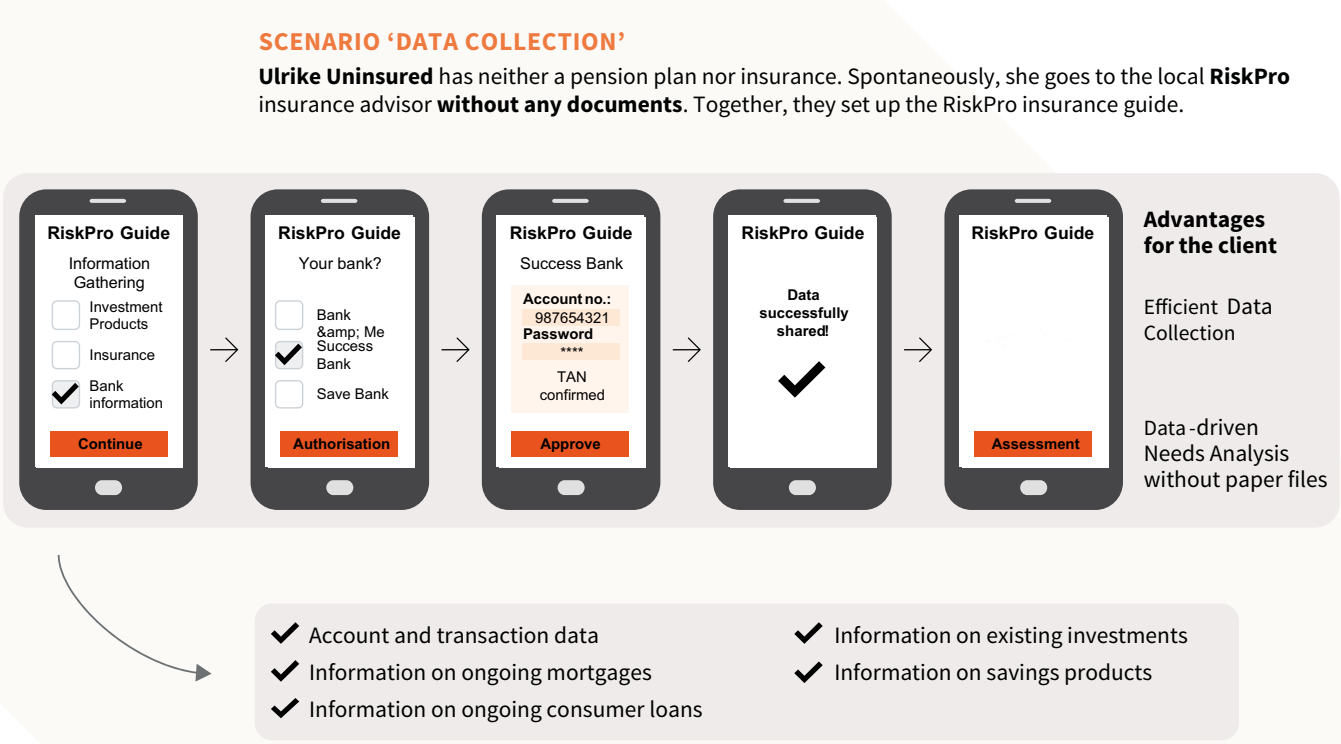
FiDA provides the opportunity to fundamentally reassess market strategies and to view it as a key component both for optimising the traditional business model and for deepening engagement in an Open Insurance model with increasingly digital components. As a result, its application extends beyond the insurer's traditional role as a risk carrier. Through data exchange, an insurer can interact more effectively with upstream and downstream processes. This relates not only to the potential settlement of claims but also to influencing risk prevention.

USE CASES IN FOCUS AND REFLECTED ACCURATELY IN SYSTEMS

To implement their chosen vision, insurers must create the necessary technical prerequisites. The mission encompasses modernising the IT landscape so that data can be delivered to the interface in the relevant format. At the same time, depending on the vision, external financial data should be capable of being integrated alongside internal data. Leveraging external financial data therefore requires insurers to build new data capabilities, infrastructure, and process integration. As such, insurers must expand their IT roadmaps to incorporate FiDA in addition to current regulatory initiatives such as the Solvency II Review, the Retail Investment Strategy, and IT- and data-specific frameworks such as DORA, the EU AI Act, and the EU Data Act. >

[7] Gudrun Bode and Christian Jastroch: 'Wer hat Angst vor Migrationen? Ist es wirklich so teuer?' In DAV Journal, 01/2025 (March 2025, p.334ff).

FIGURE 4: Digital data capture is a prime example for an FiDA use case: eliminating paper files speeds up the onboarding process for potential customers, who then receive customized offers



Insurers should involve actuaries early in their considerations as key internal stakeholders. Many FiDA use cases currently lean towards the role of data users, with a strong emphasis on sales and data utilisation to enhance the customer journey, switching offers, and other customer-focused solutions. At the same time, the broader data base and its systematic analysis have a significant impact on actuarial functions particularly in but not limited to product development and product management. Existing concepts can be further developed – or entirely new ones designed. Furthermore, a more precise data base enables improved risk assessments for underwriting and enterprise risk management. Whether insurers pursue only a defensive compliance strategy to meet the minimum FiDA requirements or aim for a broader strategy, implementing a modernised infrastructure will increase the complexity of the IT landscape. Frequently, actuarial applications are also affected. Actuarial expertise should therefore be considered in the testing and approval of new IT applications. Should the strategic ambition go beyond minimum compliance, the use cases must be clearly defined and incorporated into the IT specification – regardless of whether they fall within actuarial responsibilities or not.

Artificial Intelligence may also play a role. While FiDA does not explicitly address the application of AI, the availability of structured data will inevitably lead to the emergence of relevant use cases. Insurers should therefore explore opportunities in this direction: on the one hand, by identifying potential AI-driven applications; on the other, by ensuring appropriate security measures in light of possible cyberattacks through integrated systems and data protection requirements.[8] In this sense, FiDA should also be seen as a channel to trigger investments in future projects with respect to AI applications or cybersecurity.

Although FiDA is a regulatory initiative in the first place, it has cross-functional implications within >

[8] Tilmann Schmidt: 'Open Insurance, FiDA und Künstliche Intelligenz – ein paar Gedanken'

insurers, much like DORA. An analysis of the business areas to be included can therefore follow a similar approach to that regulation, but may also extend beyond this to other areas such as the business development department. Actuaries, due to their expertise in managing complexity, are natural counterparts in this context: systematically handling data and applying it to a wide range of use cases has always been at the core of their professional work. <

GLOSSARY OF KEY FIDA TERMS

Application Programming Interface (API): An IT interface that enables independent applications to communicate and exchange data.

Data: All products except health insurance and biometric data; digital; personal and non-personal; collected in the course of normal business.

Data Holders: Financial institutions, including primary insurers, intermediaries, payment institutions, and banks.

Data Users: Financial institutions or Financial Information Service Providers (FISPs) that access customer data for their services.

Financial Information Service Providers (FISP): Certified data users (e.g. FinTechs) offering financial services based on authorised access to data from holders.

Customer: Retail and commercial clients (with current trilogue proposals focusing on retail and SMEs).

Schemes: Organisations responsible for developing and administering standardised frameworks and rules for efficient and secure data exchange.

Trilogue: Inter-institutional negotiations at EU level between representatives of the European Parliament, the Council of the European Union, and the European Commission.

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TILMANN SCHMIDT is a Senior Manager at PwC Germany in Munich. He studied Business Mathematics at Ulm University. His professional work focuses on actuarial valuation for accounting, asset-liability and capital management, and governance of data, assumptions, models, and underlying IT infrastructure. He also analyses the impact of digitalisation and structured data availability on the value chain of insurers and pension institutions. He is serving in several DAV working groups. Since early 2024, he leads the working group on medical advances and their impact on life and health insurance.

ENGAGING WITH EUROPE'S POLICYMAKERS

THE VALUE OF CONSULTATION

BY **STEPHANOS HADJISTYLLIS**

One of the AAE's strategic priorities is to maintain a strong presence in European policymaking. Strategic Objective 1 – 'Enhance relations with European institutions' – commits the AAE to establishing and maintaining relationships with key European institutions so that the AAE can effectively provide them with high-quality professional advice to improve the soundness of decisions from an actuarial perspective.

This includes playing a prominent role in shaping new European legislation and in reviewing and refining existing legislation that affects actuarial work in both traditional and emerging areas. It also means reinforcing relationships with the European Commission, EIOPA, and other European stakeholders.

Public consultations are a key mechanism for achieving these aims. They provide a transparent forum for expert input and allow the AAE to help ensure that policy and regulation are grounded in sound actuarial principles. Each consultation response reflects the profession's expertise and commitment to the public interest.

Our ability to respond effectively relies on the support of our Member Associations and volunteers who contribute time, knowledge, and insight. The AAE thanks all those involved in recent consultation work for their continued dedication and professionalism.

RECENT CONSULTATION RESPONSES

Over the past quarter, the AAE has responded to several European Commission and EIOPA consultations of direct relevance to our profession:

- European Commission: Solvency II Technical Review
- Joint ESAs Guidelines on integrating ESG risks in stress tests
- European Commission: Supplementary Pensions
- European Commission: High-risk AI Systems
- EIOPA: Insurance Recovery and Resolution Directive (IRRD) – (i) Pre-emptive Recovery Plans and (ii) Content of Resolution Plans

Together, these represent our most recent contributions to European consultations. >

SOLVENCY II: PRESERVING PRINCIPLES-BASED SUPERVISION

Solvency II has served Europe well as a robust, risk-based framework that has supported policyholder protection and financial stability through varying market conditions. The European Commission's 2025 review of the Delegated Regulation is the next step following agreement on the revised Directive earlier in the year.

The AAE welcomed the objective of keeping the framework effective and forward-looking. The review seeks to ensure that Solvency II continues to support long-term investment and that proportionality is applied more consistently. At the same time, we emphasised that these aims should be delivered while preserving the principles that underpin Solvency II: sound governance, professional judgement, and evidence-based calibration.

In our response, we supported the overall direction but cautioned that any capital relief from technical changes must not compromise resilience. Policyholder protection and financial stability should remain the guiding priorities. We also noted that proportionality should lead to genuine simplification rather than parallel new obligations, and that further work is needed to ensure interest-rate and volatility-adjustment elements remain appropriate for today's more volatile markets.

Above all, we encouraged policymakers to preserve Solvency II's principles-based nature, which very often relies on the professional judgement of actuaries and risk managers rather than overly prescriptive formulae. Implemented in this spirit, the revised Delegated Regulation can modernise the framework while keeping it robust and proportionate – supporting long-term investment in the economy.

AAE CONSULTATIONS

SUPPLEMENTARY PENSIONS: TOWARDS ADEQUACY AND INCLUSIVENESS

The European Commission's consultation on supplementary pensions covered the design of pension tracking systems and dashboards, the potential role of auto-enrolment, and the future of the Pan-European Personal Pension Product (PEPP). The combined aim is to make retirement saving more transparent, accessible, and effective across the EU.

The AAE underscored the importance of transparency and comparability in helping citizens plan for retirement. Well-designed tracking systems can give individuals a clear picture of accrued and projected benefits across all pillars, while dashboards with forward-looking indicators can help policymakers monitor adequacy, sustainability and fairness. >

On auto-enrolment, we supported its use to widen coverage – provided it complements rather than replaces statutory pensions – and stressed the importance of effective governance and fair incentives. Regarding the PEPP, we reaffirmed that a simple, portable personal pension remains useful in principle, but its success depends on addressing practical barriers such as value for money, divergent tax treatment, and administrative complexity.

Across these areas, actuaries contribute by applying long-term financial analysis and behavioural insight to help ensure reforms balance adequacy, sustainability and fairness. Strengthening supplementary pensions will support retirement incomes over the long term and help maintain confidence in Europe's pension landscape.

WORKING TOGETHER FOR BETTER POLICY

These consultations illustrate the breadth of topics where actuarial expertise informs European policymaking – from capital requirements and risk modelling to pensions adequacy, sustainability and AI governance. The AAE's strength lies in the collective knowledge of its members, drawn from 38 actuarial associations across 37 countries.

We are grateful to all volunteers and associations who contributed to drafting, reviewing and refining these responses. Your work ensures that the profession's voice is technically sound and relevant to policymaking.

Looking ahead, the AAE will continue to engage with the European Commission, EIOPA and other stakeholders. As new initiatives emerge—in sustainability, pensions, insurance and artificial intelligence – the profession stands ready to provide independent, evidence-based input.

By participating in the consultation process, the AAE helps ensure that regulation remains proportionate, forward-looking and centred on the long-term interests of citizens and policyholders. That is how the actuarial profession fulfils its public-interest mandate – and how it supports effective regulation. <

STEPHANOS HADJISTYLLIS is a Senior Actuary at the AAE and a Member of EIOPA's Occupational Pensions Stakeholder Group.
The **full text of the AAE responses to the consultations** referenced above is available on the AAE website.

THE EUROPEAN ACTUARIAL ACADEMY

CELEBRATES 20 YEARS OF ADVANCING ACTUARIAL KNOWLEDGE

BY **HENNING WERGEN**

In 2025, the European Actuarial Academy (EAA) proudly celebrates its 20th anniversary – two decades dedicated to advancing actuarial knowledge, professional growth, and cross-border collaboration.

Founded in 2005 by the Actuarial Associations of Austria, Germany, Switzerland, and the Netherlands, the EAA has since become a trusted centre for continuing education and collaboration, dedicated to strengthening the actuarial profession in Europe.

Since its foundation, the EAA has supported the professional development of actuaries across Europe by working closely with actuarial associations, supranational umbrella organisations and subject matter experts to deliver high-quality training programmes that respond to the evolving needs of the profession.

From early training initiatives in Central and Eastern Europe to globally recognised programmes like the CERA qualification and the *EAA Certificate in Actuarial Data Science*, EAA's mission has always been clear: to be **The European Knowledge Centre for Actuaries** – a place where actuaries grow, exchange ideas, and stay ahead of developments.

THE EAA ANNIVERSARY CONFERENCE ON 4 DECEMBER 2025

As part of its 20th anniversary celebrations, the EAA invites all actuaries and interested professionals from Europe and beyond to participate in the **EAA Anniversary Conference, a full-day online event offered completely free of charge.**

This event represents the spirit of the EAA – bringing together diverse voices from the actuarial community, including umbrella organisations, lecturers, and partners. In the run-up to the conference, we have given some of these voices a platform: in a series of twelve short videos on LinkedIn, representatives from our network share their reflections and congratulations. Find the videos here.

The conference will be both a moment to look back on the EAA's journey and a chance to explore the topics that will shape the actuarial profession in the years to come. The future of actuarial work >

will be defined by data, digitalisation, and interdisciplinary thinking – and the EAA remains committed to equipping actuaries with the skills to lead in this new era.

A PROGRAMME BUILT BY THE COMMUNITY

The event programme has been designed collaboratively, with national partner associations invited to suggest topics of high relevance to their members. The result is a diverse programme that covers many of the key issues currently shaping the actuarial field.

Participants can look forward to insightful presentations delivered by experienced lecturers from the EAA's trusted network:

- **Positioning for Resilience: How Insurers Can Lead Through Climate Risk Uncertainty**
  Dr Michael Leitschkis, Kynesis & Abdal Chaudhry, Kynesis
- **Advanced Applications of Generative AI in Actuarial Science: Case Studies Beyond ChatGPT**
  Dr Simon Hatzesberger, Deloitte & Iris Nonneman, Achmea
- **The Uncertainty of Human Life Expectancy and Its Impact on the Insurance Industry**
  Prof Dr Jochen Russ, Gesellschaft für Finanz- und Aktuarwissenschaften mbH
- **AI- and IoT-driven Home Insurance**
  Xavier Maréchal, Reacfin
- **Decumulation Life insurance Products After Retirement**
  Pierre Devolder, Reacfin & Natacha Brouhns, Reacfin
- **Risk Management and Actuaries: Still a Way to Go**
  Karel Goossens
- **Value for Money: EIOPA's Methodology and Its Consequences**
  Andreas Wöhr, Triple A
- **How Robust Is Your Pricing Process?**
  Jan Küthe, Akur8
- **AI's Transformative Power: NLP for Next-Generation Actuarial Risk Assessment**
  Manuel Caccone, AI Task Force, Italian Society of Actuaries

JOIN THE CELEBRATION

The EAA Anniversary Conference is open to all interested professionals – from students and early-career actuaries to senior specialists. Don't miss the chance to be part of this special occasion. The **EAA Anniversary Conference** is entirely free to attend.

Register now to secure your place, and celebrate 20 years of advancing actuarial knowledge with colleagues from across Europe and beyond. Join us on 4 December 2025 to collaborate and continue building the profession's future. <

HENNING WERGEN is Managing Director of the European Actuarial Academy.

CORPORATE BOND CREDIT TRANSITION RISK

BY **JAMES SHARPE** AND **ANDREW SMITH**

One of the most material risks for life insurance companies is associated with corporate bond transition and default risk. Life insurers hold material amounts of corporate bonds and the risks of default or credit rating downgrade pose a risk to the balance sheet.

Credit risk can manifest on both sides of an insurers' balance sheet – asset side (through credit risky assets) and liability side (where insurers take credit for the spread over risk free on credit risky assets when discounting their liabilities). In capital management, the way capital requirements measure credit risk is typically anchored in credit ratings and hence transition risk is of high importance in capital modelling.

The primary tool for modelling defaults and downgrades is the transition matrix. Transition matrices are used to capture probabilities of transitioning between credit ratings and to default (an absorbing state). They are produced from the number of corporate bonds that moved between credit ratings or defaulted over a given time period. (see table 1)

The transition matrix itself is the data item that is being modelled. A historical time series of transition matrices can be obtained to gain an understanding of the risk. Each matrix is itself 7*7 data points; the complexity of this data source makes transition and default risk one of the most complex risks to model.

In a stress position there needs to be some model for stressing a transition matrix to capture more extreme events than the long term average matrix. Ideally a model would be able to provide a full risks distribution of transition matrices at any percentile required.

A 2023 paper by the UK IFoA Extreme Events working party investigated four credit transition risk models. [1] >

[1] 'Calibration of Transition Risk for Corporate Bonds'

TABLE 1: S&P AVERAGE TRANSITIONS FROM 1981-2018 (SOURCE S&P GLOBAL DEFAULT STUDY 2019)

FROM/TO	AAA	AA	A	BBB	BB	B	CCC/C	D
AAA	89.82%	9.42%	0.55%	0.05%	0.08%	0.03%	0.05%	0.00%
AA	0.52%	90.63%	8.17%	0.51%	0.05%	0.06%	0.02%	0.02%
A	0.03%	1.77%	92.30%	5.40%	0.30%	0.13%	0.02%	0.06%
BBB	0.01%	0.10%	3.64%	91.63%	3.86%	0.49%	0.12%	0.18%
BB	0.01%	0.03%	0.12%	5.35%	85.80%	7.36%	0.61%	0.72%
B	0.00%	0.02%	0.09%	0.19%	5.63%	85.09%	5.05%	3.93%
CCC	0.00%	0.00%	0.13%	0.24%	0.70%	15.63%	51.49%	31.82%
D	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%

MODEL USES

Some of the main uses transition risk models are:

Solvency II

On the asset side, to model corporate bonds in stress, there needs to be an allowance for stressed transitions and defaults.

On the liability side, in the UK and Spain, the matching adjustment is commonly used; elsewhere in Europe the dynamic volatility adjustment in stress is used. In either case, movements in bond spreads affect both assets and liabilities. However, while the liability spread is based on a reference portfolio of defined credit quality, the asset spread is a function of the chosen asset portfolio. Downgrades in the assets held then affect the asset spread but not the liability spread, resulting an in asset-liability mismatch.

For internal models in stress, a probability distribution of transition matrices is required for the fundamental spread. This is to capture the stress position at a 1-in-200 position but also in any given biting scenario - as well as the full risk distribution of fundamental spreads.

IFRS 17

For default and downgrade models using an historical calibration a transition matrix can be used. IFRS 17 default models require an allowance for both expected and unexpected defaults. The expected default allowance can be found by just powering up a base transition matrix, but the unexpected default allowance would be expected to be taken from a matrix stressed to a particular percentile. >

MODELS OF CREDIT AND TRANSITION RISK

The Vasicek model

One of the most commonly used models for default and transition risk is the Vasicek model, also known as the credit-metrics approach. Vasicek's model is based on a structural approach where the assets of bond issuers are log-normally distributed. Any two assets are correlated with a single correlation factor ρ (rho) using a Gaussian copula. Generally, Vasicek's model produces good years (positive optimism) with many upgrades compared to downgrades, and bad years where the reverse applies. This model is used widely through the insurance and banking industry.

Two factor model

The Two factor model takes two features from the transition matrix and models them statistically using probability distributions and a copula.

Inertia – the sum of the probabilities across the leading diagonal (i.e. the sum of the combined probabilities of not changing rating).

Optimism – the weighted ratio of upgrades to downgrades, where the weighting can be chosen by the modeller – for example according to the market value of assets in the portfolio by rating.

Each historical transition matrix has a value for these factors, and so probability distributions can be fit to historical data and combined using a copula. This can be used to calibrate a model for transition matrices at any percentile. A 7x7 transition matrix is not mathematically determined by its optimism and inertia alone, so some from of components analysis is required to construct full matrices from simulate optimism and inertia values.

Vasicek's model models optimism but not inertia, contrary to empirical analysis which reveals that inertia has historically been the more significant factor. Allowing for inertia allows insurers to capture some diversification between upgrades and downgrades in low-inertia years when both forms of transition occur simultaneously.

Bootstrapping

The bootstrapping model refers to the approach of repeatedly sampling from the original data set with replacement.

This is a very simple non-parametric model and the main benefit of being true to the underlying data without many expert judgements and assumptions (aside the choice of data). A downside of this model is it cannot produce scenarios worse than the worst event seen in history; this means it is unlikely to be useful for Economic Capital models where the extreme percentiles are a crucial feature of the model. Nevertheless this model is included for comparison purposes as it is very close in nature to the underlying data.

K-means model

The K-means model involves grouping historical transition matrices (using the K means grouping algorithm) into a smaller number (e.g. eight) of representative transition matrices. These transition matrices are each allocated a percentile, and other percentiles are found by interpolating between the matrices.

The aim of this approach is to overcome issues with bootstrapping – so that more extreme percentiles than the worst transition matrix can be given; as well as having a smooth interpolation between percentiles. >

TABLE 2: WIDER COMPARISON BETWEEN MODELS

COMPARISON	BOOTSTRAPPING	K-MEANS MODEL	VASICEK	TWO-FACTOR
Principal component	Near identical replication of underlying data movements	Very close replication of underlying data movements	Poor replication of underlying data movements	Good replication of underlying data movements
1932 Backtest	Would pass a backtest if backtest level is in the historical data; but cannot produce stress worse than anything in the data	Pass by construction	Requires significant additional expert judgement strengthening to pass	Limited expert judgement strengthening to pass
Objectivity	Objective – no expert judgement	Heavy expert judgement in distribution construction	Expert judgement to strengthen to pass backtest	Expert judgement in choice of distributions and copula
Simplicity	Simple	Complex	Complex	Complex
Breadth of uses	Less appropriate for extreme percentiles as cannot produce values beyond most extreme point in the data	Highly flexible and can be set to the required use with appropriate judgements	Is used widely; but does not capture historical movements in the data well	Flexible model for a range of uses; additional parameters to Vasicek allows better replication of historical data movements

SUMMARY

The Vasicek model is the most commonly used credit transition and default model used by insurers and banks. However, it comes with some significant issues in replicating the underlying data it is calibrated to. There are other parametric and non-parametric that are well worth investigating. <

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JAMES SHARPE is an actuary and statistician with 25 years' experience working with and advising insurance companies across the UK and Europe. James chairs the Extreme Events Working Party with the Institute and Faculty of Actuaries.

SOLVENCY II 2020 REVIEW: A SEEMINGLY ENDLESS STORY APPROACHING ITS END

BY **SIEGBERT BALDAUF**

The amended Solvency II Directive entered into force on 28 January 2025, simultaneously with the Insurance Recovery and Resolution Directive (IRRD). It was a decision of the Commission to consider recovery and resolution in a separate Directive which shall be fully consistent with Solvency II. After transposition to national law, both will become applicable from 30 January 2027. To become fully operational further specification in Delegated Regulation, Regulatory or Implementing Technical Standards or in Guidelines is required.

SOLVENCY II: EXTENSION OF SCOPE AND SUPERVISION

The outcome of the Solvency II Review will implicate changes in the regulatory regime. The IRRD requires the establishment of resolution authorities in each member state which shall closely cooperate with the supervisor. Drawing up of pre-emptive recovery plans, communication with resolution authority will become a new responsibility for the risk management of certain companies.

Furthermore, macroeconomic and financial market developments shall be incorporated into undertakings' own risk and solvency assessment (ORSA). Supervisory authorities are required to communicate the results of these macroprudential assessments to **bodies or authorities with a macroprudential mandate** in order to determine the potential impact of undertakings' activities on macroeconomic and financial market conditions.

ABOUT THE AMENDMENTS

When assessing the outcome of the review, it is important to compare it with the initial objectives. The Commission had listed the following aims of the review:

(1) provide incentives for insurers to contribute to long-term sustainable financing of economy and remove obstacles for long-term investments;

(2) improve risk-sensitivity;

(3) mitigate excessive short-term volatility in insurers' solvency positions;

(4) improve proportionality;

(5) better address the potential build-up of systemic risk in the insurance sector;

(6) improve preparedness for extreme scenarios that may make recovery or the resolution of a failing insurer or reinsurer necessary. >

INCENTIVES TO CONTRIBUTE TO LONG-TERM SUSTAINABLE FINANCING OF ECONOMY AND REMOVE OBSTACLES FOR LONG-TERM INVESTMENTS

The amendment of the framework is significantly influenced by political objectives. Commission emphasises the role of insurers as investors with assets of more than 10 trillion Euro under management. To better support the Savings and Investments Union and the European Green Deal, obstacles for long-term investment should be eliminated. Less conservative calibrations can also help to release capital.

Protecting policyholders and beneficiaries, as well as the preservation of financial stability[1] shall nevertheless remain the principal objectives of Solvency II.

Approval of certain investments as 'long-term equity' will become easier. Upon approval by the supervisor, the reduced capital charge of 22% can be applied for such investments. Nevertheless, a thorough risk management is indispensable to ensure that the required holding period of 5 years will not be impaired.

The amended calculation of the risk margin will lead to a significant relief of capital. The reduction of the cost of capital-rate from 6% to 4.75% will already reduce the risk margin by about 21%. Politics expect a channelling of the freed capital towards productive investments in the real economy. The modification of the calculation formula by introduction of a new element (lambda – approach) will in addition decrease the amount of the risk margin especially for long-term business. This amendment will also reduce the sensitivity to changes of the interest rate.

Improve Proportionality: Higher thresholds for exemptions from Solvency II requirements based on size, along with the introduction of a new category for small and non-complex undertakings (SNCUs), are intended to increase proportionality. A list of proportionality measures unconditionally available for SNCUs can lower considerably the administrative burden. Upon prior approval by the supervisor, non-SNCUs can benefit as well from some of these measures. The criteria to be considered are defined specific for each of the eligible measures in a new chapter on proportionality measures of the delegated regulation.

Macroprudential tools introduced in the Directive require to assess activities that have the potential to turn into sources of systemic risk in undertakings' ORSA. Liquidity risk is assessed as a risk of particular importance. Supervisors are granted far reaching intervention powers in the articles 144b and 144c of the Directive. Further macroprudential analyses shall be considered and analysed in the ORSA upon request of the supervisor.

Improvement of the risk-sensitivity shall be achieved by a new methodology for the extrapolation of the risk-free interest rate term (RFR) structure and for the calculation of the volatility adjustment (VA). An improved risk-sensitivity goes along with a higher volatility in the solvency positions of undertakings. Striking a balance between these conflicting effects is of special importance for the valuation of long-tern business. Although guidance to limit this volatility is included in the Directive for both measures, the capability to mitigate excessive short-term volatility depends on the specification in the delegated regulation. The now proposed changes have the potential to provoke artificial volatility in insurers' solvency position.

Sustainability: While Article 45a of the Directive requires already the analysis of material climate change risk in the ORSA, the management of sustainability risk management is not yet concretised. Commission has recently decided >

[1] Communication from the Commission to the European Parliament and the Council COM(2021) 580 final Brussels, 22.9.2021

to postpone the finalisation of the Regulatory Technical Standard referring to this until October 2027. Preliminary requirements for a disclosure in the SFCR are already laid down in the new article 297a of the Delegated Regulation.

Interest rate risk: The recalibration of the interest rate down risk now remedies a shortcoming of the current framework which does not require the application of a stress parameter for negative interest rates. The introduction of a maturity dependent floor below which negative interest rates cannot fall helps to mitigate excessive effects. The defined stress shall now be applied only to the liquid part of the RFR. This stressed part shall be extrapolated consistently with the extrapolation of the relevant RFR.

ASSESSMENT OF THE OUTCOME

Regarding the above-mentioned objectives the outcome of the review shows a heterogeneous picture. Proportionality is significantly improved. The IRRD can facilitate the treatment of failing insurers. The consideration of macroeconomic risk in the ORSA can help to recognize the building-up of systemic risk.

The regulation concerning long-term investments shows a mixed picture. The political objectives targeting insurers role as investors are reflected by a detailed treatment of long-term equity. The regulation concerning extrapolation and the VA with improved risk-sensitivity will reduce the capability to mitigate excessive short-term volatility in insurer's solvency position.

Political compromises during the review process have increased complexity. More rules and higher reporting requirements followed especially from the consideration of sustainability issues.

It remains important, to preserve the principles- and evidence-based character of Solvency II. Professional judgement is indispensable to live up to such a regulation. This is especially true for users of the standard formula. Even if reduction of conservatism in the calibration of risk parameters can be substantiated by market observations, it is necessary to analyse to which extent this is appropriate for the individual undertaking. A possible relief of capital can reduce resilience of an undertaking. Policyholder protection, the ability to meet at any time the obligations resulting from insurance contracts must not be impaired. An effective risk management is essential in this regard. **<**

SIEGBERT BALDAUF CERA is an independent actuary, and works as Chair of the Solvency II Working Group for AAE.

GROWTH IN PRIVATE CREDIT OFFERS OPPORTUNITIES BUT REQUIRES VIGILANCE

BY **RALPH VERHOEKS** AND **ANNICK VAN OOL**

Lending via private credit is on the rise. Private credit involves loans that are not traded on public markets and are provided by non-banks, usually through investment funds. Dutch insurers and pension funds are also investing more in private credit, often through investments in private credit funds. In this article, we focus on the drivers of growth in private credit and what opportunities and risks this development entails for the financial system.

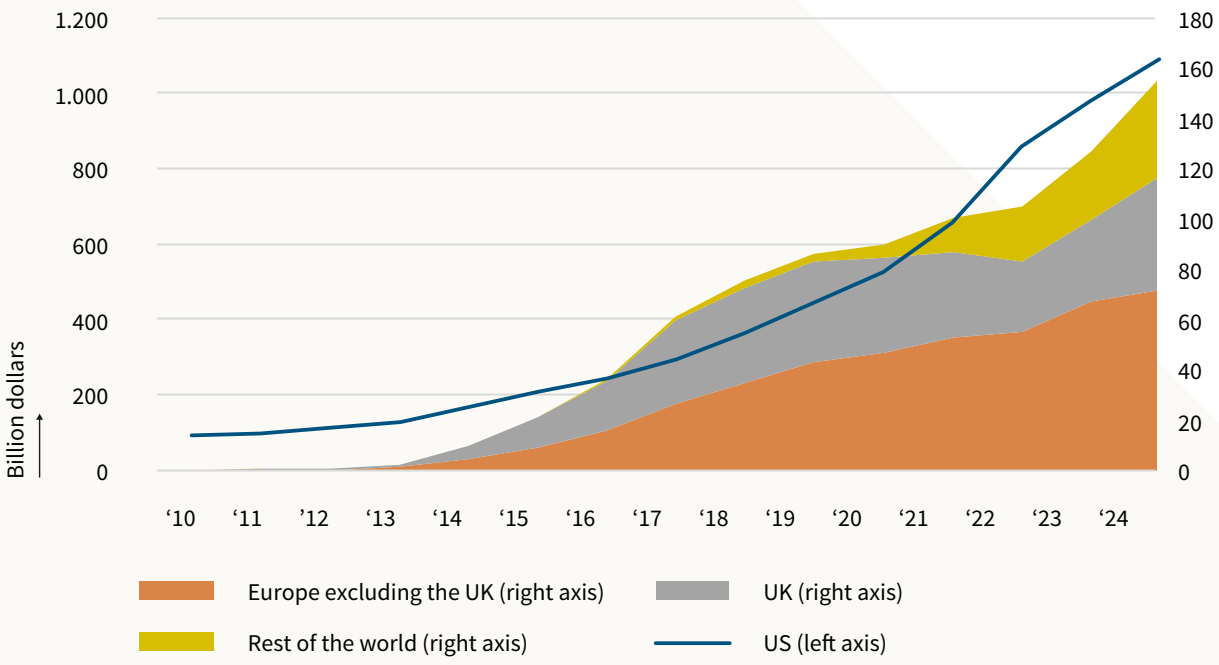
PRIVATE CREDIT WORLDWIDE

In recent decades, the global market for private credit has grown strongly, from about $0.2 trillion in 2000 to more than $2.5 trillion today. The United States is clearly at the forefront of this development, accounting for roughly half of the total private credit market and an annual growth rate of 20% (see Figure 1). In both the US and Europe, the market for private credit is now comparable in size to the market for leveraged loans and high-yield bonds. Research by the BIS shows that an increasingly diverse range of companies and sectors are also making use of this form of financing. Despite the rapid growth, private credit is still a relatively small part of lending to companies. In the US, it accounts for around 7% of lending, in Europe around 2%.

WHY IS PRIVATE CREDIT GROWING?

The growth of private credit is partly due to the tightening of capital requirements for banks following the lessons learned from the financial crisis. For risky loans and investments, banks need to hold more capital. As a result, banks are more selective in their lending and less willing to lend to companies with a riskier profile, especially for longer maturities. Private credit has partly filled the gap that has arisen after this retreat of banks. In addition, the possibility of more customization plays a role in the growth of private credit. Whereas private credit was traditionally mainly used by small and medium-sized companies, it is increasingly being adopted by larger companies to better meet their specific financing needs. The period of prolonged low interest rates has also contributed to the growth >

FIGURE 1: PRIVATE CREDIT LOANS HAVE GROWN RAPIDLY IN MANY COUNTRIES



Source: BIS o.b.v. PitchBook Data Inc

of private credit. The *low for long* period prompted institutional investors to search for yield. As a result, alternative investments – including private credit – in particular have grown. Even with higher interest rates, growth continues. For investors, portfolio diversification - due to the (expected) low correlation with public markets - and higher returns are a reason to increase their allocation.

INSTITUTIONAL INVESTORS DOMINATE THE PRIVATE CREDIT MARKET

In the Netherlands, the number of private credit investment funds is limited. The total assets of private credit funds at Dutch asset managers equals approximately 8 billion euros at the end of 2024. However, Dutch financial institutions also invest in foreign investment funds.

Worldwide, institutional investors are the most important investors in private credit funds. Dutch pension funds and insurers are also increasingly investing in private assets, including private credit and private equity funds. For example, the average allocation of Dutch insurers to private assets increased from around 5% in 2016 to 14% of the total investment portfolio at the beginning of 2025 and for pension funds from 7% to 14%. This allocation consists mainly of private credit for insurers, while Dutch pension funds invest mainly in private equity and infrastructure.[1] Among insurers, we see that this trend is being accelerated by the involvement of private equity parties, which are expanding their participations in life insurers and investing part of the premiums collected in (their own) private asset funds. The IMF has shown that insurers that have been taken over by a private equity party invest significantly more in illiquid assets worldwide.

IS PRIVATE CREDIT A RISK TO FINANCIAL STABILITY?

A greater role for non-bank parties in lending leads to more diversity and competition in credit markets. This increases the resilience of >

[1] Unfortunately, due to the lack of a standardised framework for the classification of private assets, it is not possible to determine the exact exposure to private credit based on supervisory data.

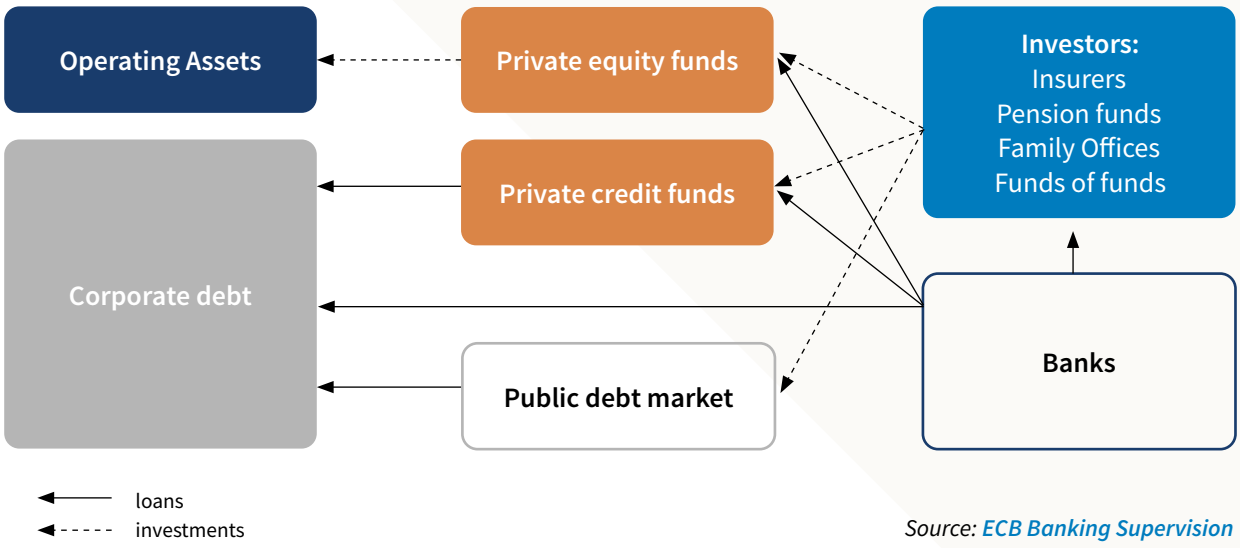
the financial system, because the dependency on banks decreases. In addition, a greater role for private markets can contribute to economic growth. Private credit offers the possibility of targeted financing to more innovative and risky companies that have difficulty accessing traditional credit channels. It is precisely these companies that are important for future growth potential. The fast implementation and tailor-made conditions also provide advantages. From this perspective, the growth of private credit is a welcome development, which is also stimulated by European initiatives under the Savings and Investment Union (SIU) strategy. Within this strategy, the EC aims to promote an integrated and well-functioning capital market within the EU, in which cross-border financing is simplified, investments are better channeled to growth companies, and dependence on bank financing is reduced.

However, the increase in private credit also leads to risks. First of all, companies that use private credit tend to be more sensitive to the economic cycle, which can lead to large unexpected losses for investors in the event of a recession. This is because these companies are characterized by their relatively small size, higher debt burden and limited financing options, for example due to low profitability or a lack of good collateral.

Second, valuations of private credit investments are surrounded by uncertainty. Loans are not traded on public markets, so the valuation depends on third parties. Due to the high degree of customization, there are also few comparable transactions and people are dependent on *mark-to-model* approaches. Fund managers also have an incentive to postpone revaluation and losses, as their remuneration and new investments often depend on recent performance. In a downside scenario, this could lead to a sudden, correlated increase in defaults.

Third, interconnectedness of financial institutions via private credit can lead to contagion risks. For example, different forms of leverage contribute to this interconnectedness. Although leverage within private credit funds is usually limited, there can be multiple forms and concentration of leverage in the total chain involved in private credit, from borrowing companies to investors and leverage providers such as banks (see Figure 2). >

FIGURE 2: THERE ARE MULTIPLE FORMS OF LEVERAGE IN THE TOTAL CHAIN OF PRIVATE CREDIT



Source: ECB Banking Supervision

For example, banks provide credit lines to private credit funds. They can also provide loans or lines of credit to companies that also borrow via private credit. In addition, interconnectedness increases when private equity parties acquire life insurers and subsequently increase the investment allocation to (their own) private asset funds. These different forms of interconnectedness can lead to contagion in stress scenarios and increase the risk of negative shocks propagating through the financial system.

Finally, increasing competition with investment banks may put pressure on underwriting criteria. As private credit serves increasingly larger companies, competition with banks in the syndicated loans market has increased sharply. This creates an incentive to weaken acceptance criteria and i.

CONCLUSION

The growth of private credit increases the diversity in lending and can therefore contribute to economic growth, for example by financing start-ups and growth companies. But this trend also leads to risks. Given its limited size, the systemic dimension of this in the Netherlands currently seems limited. However, the explosive growth and opacity call for vigilance and emphasize the importance of more transparency. The growth of private credit and the shift to more illiquid and risky investments in general require that robust risk management by financial institutions is in place.

SOURCES

- Global Financial Stability Report (IMF, October 2023)
- The global drivers of private credit (BIS, March 2025)
- Promoting Global Financial Stability – Annual Report (FSB, November 2024)
- Financial Stability Review (ECB, May 2024) <

RALPH VERHOEKS PHD (left) and **ANNICK VAN OOL PHD** (right) both work as economist at the division Financial Stability of De Nederlandsche Bank (DNB).

PENSION REFORMS AND ACTUARIES

BY **PIERRE DEVOLDER**

The future of pension is for sure one of the most important and difficult social challenges in many countries. Numerous reforms, especially in the first pillar of social security, have been launched these last decades, in order to respond to the aging pressure. Traditional collective state pension schemes were very often organized on a Pay As You Go (PAYG[1]) basis whose sustainability is threatened, so future challenges are huge, especially for actuaries.

It is quite obvious that the demographic evolution, observed in nearly every country and characterized simultaneously by a decrease of the number of active people (persistent low levels of fertility rates) and an increase of the number of retirees (baby boom effect and increase of life expectancy) will induce major effects on these PAYG techniques. It is also well known that it is possible to finance a pension collective structure, using other techniques: mainly, the fully funding (FF) approach, where each generation saves for their own pensions. These FF schemes are less sensitive to demographic issues (even if the longevity risk affects equally both techniques) but are exposed to other forms of risk such as the market risk. The relative place given to these two techniques (PAYG or FF) in the general architecture of pension can be quite different from one country to another. >

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[1] PAYG: a financing system in which the contributions paid by the workers, usually in a year, are directly used to finance the pensions to be paid to the retirees in the same year.

In some cases, the PAYG system has been closed and replaced by a new complete FF philosophy (for instance Chile); in other cases, PAYG is still present but a part of the social security contributions is invested in a FF vehicle (for instance Sweden); sometimes the first pillar in PAYG is small and a second pillar of pension organized on a sectorial or occupational basis represents a major part of the pension incomes (for instance The Netherlands). Other countries have also a first PAYG system and a smaller FF second pillar (for instance Belgium). Finally, in some cases, PAYG is nearly the only one (for instance France). This illustrates the huge diversity of pension arrangements in countries confronted to the same kind of demographic evolution. Independently of this financing mode, important new developments have emerged in terms of design of pension plans. For instance, classical social security PAYG systems are based on a Defined Benefit philosophy: the pension benefit is then computed in function of various parameters such as the salaries (last salary, average salary) or the duration of the career. However, nothing prevents from having other definitions of benefits based on different actuarial links between benefits and contributions.

A famous example of this type of system is the Notional Defined Contribution based on a Defined Contribution mechanism (fixed contribution rate) but still in PAYG. We can also refer to point systems, hybrid pension plans, cash balance, collective Defined Contributions, et cetera.

All these solutions illustrate the huge diversity in the pension landscape and the necessity to understand the underlying logic behind all these proposed mechanisms. This deep understanding is particularly important when reforming a pension structure if we want to take into account and balance multi-dimensional (and sometimes opposite) objectives such as: financial sustainability, social adequacy, fairness and transparency.

THE ROLE OF ACTUARIES

By definition, pension is an interdisciplinary topic, encompassing legal, actuarial, economical or tax points of view. As actuaries, we have of course to play a central role in the management of pension systems. Traditionally, pension actuaries are mainly focused on private and occupational pension schemes. However, we must also become a central stake holder in the reform of public social security pensions.

In this context, it seems relevant for actuaries to have a global view on the actuarial techniques applicable for all the pillars of pension. It appears also that many forms of integration between the different pillars occur more and more and request global analysis of a multi pillar system. Actuary should highlight the common philosophy of the actuarial reasoning, behind any kind of funding or design of a pension plan. Among various examples of topics where actuaries must deliver strategic messages, we can think about actuarial neutrality in terms of retirement ages, automatic adjustment mechanisms of contributions and benefits, inter and intra generational fairness, socioeconomic segmentation of longevity, et cetera.

In this perspective we have tried to offer in our new book[2] a broad and up-to-date textbook on the underlying actuarial principles of pensions, covering social security schemes as well as private pension funds. We have deliberately presented the basic principles in a coherent and unified manner, applicable to public programs as well as to occupational pension plans. We have also included more recent techniques such as Notional Defined Contribution, point systems or hybrid schemes based on risk sharing mechanisms, less familiar to the actuarial community. The book covers also more classical topics such as a complete presentation of the individual and collective fully funded methods. <

[2] Pierre DEVOLDER/ Sébastien de VALERIOLA : Actuarial Pension Funding Theory, Springer -Verlag, 2025.

COLUMN

INCREASING THE VISIBILITY OF AAE TO STRENGTHEN RECOGNITION, RELEVANCE, AND VALUE

Last year, AAE convened a task force on the Target Operating Model, strongly supported by member associations; its work informed an organisation geared for more effective collaboration and delivery. This year, the Communications Panel (CP), supported by the AAE Board, has set a clear goal: **Increasing the visibility of AAE to strengthen recognition, relevance, and value**. Our ambition is to make the value of membership clearer for members of AAE's member associations with a focus on topics that matter to them.

As the CP, our role is to underpin AAE's communications with purpose and relevance. We aim to increase engagement with core AAE materials – public consultations, position papers, and Actuview's scientific and CPD content. We will do so by advising on clarity, brevity, and practical insight.

AAE's strategic objectives are: **SO1** strengthening relations with European institutions so decisions are informed by sound actuarial insight; **SO2** promoting professionalism through shared standards and ethics; and **SO3** fostering a European community by connecting specialists and sharing knowledge.

Visibility matters. Our magazine, **The European Actuary**, is a long-form publication showcasing actuarial expertise to multiple audiences shared across several channels. Beyond the magazine, our aim is to meet members even more strongly through the media they prefer, with relevant topics: short videos and podcasts suit younger actuaries; concise briefs and guidance support technical stakeholders; and member interviews to showcase the breadth and depth of expertise across AAE. Stakeholders expect clear, well-argued positions in public consultations.

A survey on volunteer motivations highlights the importance of connecting local and European views; promoting volunteer rotation, good governance, and efficiency; and recognising contributions, as well as networking, personal interaction, and clear communication about opportunities. These findings guide our choices on formats and outreach.

The CP will advise on audience definition and success metrics. We will encourage member associations to translate article summaries into local languages and repost them on their websites and channels. Feedback will refine content and timing, maintaining a regular cadence.

Looking ahead, we favour rigour over volume. AAE membership is leverage – driving policy impact, building professional confidence, and accelerating learning. As the Communications Panel, we will support the Board in putting the audience at the centre, making the message matter, and demonstrating – through measurable outcomes – how AAE membership delivers value. We welcome input from member associations and individual actuaries.

Jette Lunding Sandqvist is *Chairperson of the Communication Panel of the AAE*

COLOPHON

The European Actuary (TEA) is the quarterly magazine about international actuarial developments. TEA is written for European actuaries, financial specialists and board members. It will be released primarily as e-mail newsletter. The views and opinions expressed in TEA are those of the authors and do not necessarily reflect the official policy or position of the Editorial Board and/or the AAE. The Editorial Board welcomes comments and reactions on this edition under info@actuary.eu.

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The deadline is 1 February 2026.

EUROPEAN AGENDA
Please check
https://actuary.eu/events/
for the most actual forthcoming events.