Day 1 The insurance sector in a digital post-pandemic world
Opening Statement

The opening statement on the first day was made by Fabio Natalucci, Deputy Director in the Monetary and Capital Markets Department at the IMF. Fabio began by commenting on the easing of financial conditions around the world since the start of the pandemic, reflecting both fiscal and monetary policy support. Central banks cut interest rates aggressively and made large scale asset purchases (currently totalling more than US$10tr for the G10).

At the IMF, there is now an emphasis on looking not just at the central economic projections (the WEO forecast) but also at the distribution of economic outcomes. For 2022, the economic recovery is expected to continue, but there is more uncertainty about the growth outcomes, with a significant downside tail. Indeed, the big theme in financial markets since the spring has been concern about economic growth. This has led to declining bond yields, driven largely by lower real rates. In some advanced economies there has also been an increase in market-based measures of inflation expectations. Additionally, there has been an increase in inflation risk premia, likely reflecting in part uncertainty about the inflation outlook and how transitory higher inflation (particularly driven by various supply bottlenecks) will prove to be.

The substantial support for economies and financial markets has had wide-ranging impacts. For emerging market bonds, there has been significant spread tightening. Flows into emerging markets have strengthened and new bond issuance has been strong. In the corporate bond market, both investment grade and high yield spreads have tightened and expected default rates have fallen. In parallel, there has been an increase in risk appetite, with non-bank financial institutions playing an increasing role.

Fabio pointed out, however, the potential unwanted consequences of this policy support. One of these relates to the search for yield and the use of financial leverage, which has pushed down yields and expected investment returns. For some (particularly life) insurance companies, guaranteed returns are now above the return on investments in some areas of the world. There is also a potential duration mismatch between assets and liabilities; and an increase in credit exposures. These are risks which require continued careful monitoring.

Fabio concluded that there is a clear recovery from the pandemic, but this is at different speeds around the globe. There could be unintended consequences, particularly for the corporate and nonbank financial sector, which need to be carefully watched.
Panel discussion

The panel members were:

- **Esko Kivisaari**, Chairperson of the Actuarial Association of Europe (AAE) AI/Data Science Working Group
- **Martin Eling**, Director of the Institute of Insurance Economics at the University of St. Gallen, Switzerland.
- **Pascal Bied-Charreton**, CEO of Moonshot Insurance
- **Marguerite Soeteman-Reijnen**, Chairperson of the Executive Board of Aon Holdings BV
- **Godfrey Kiptum**, CEO of the IRA (Insurance Regulatory Authority) of Kenya

and the Moderator was
- **Timothy Shakesby**, Head of Conduct of Business Oversight at EIOPA

The panel discussed the theme of the insurance industry in a digital post-pandemic world.

**How did your interaction with financial service providers, insurers in particular, change in the pandemic?**

**Timothy** began by noting that Covid had shortened the development cycles of many of the changes that were evident before the pandemic. **Marguerite** commented that the growing abundance of data, along with the pandemic, had jointly accelerated technological change (notably cloud computing and AI). The questions now are how this change can increase operational efficiency and lead to the development of new business models. Those new business models can address a wide range of new issues, notably social change and environmental issues. At the same time, customers are also demanding an enhanced digital experience: “the Amazon and Uber of insurance”. That is, digitally enabled business models with 24/7 availability and real-time connectivity. The problem is that the way the insurance sector does business “has not changed that much since Lloyds started in a coffee house in 1688”. However, the culture within large insurance companies has changed over the past year. In the past, failure was not an option. Now, there is tolerance for failure when trying new projects.

**Pascal**, from Moonshot Insurance, a company launched 5 years ago as a project to develop a completely new digital insurance product commented that the existing insurance industry model is outdated in terms of the customer experience: it is far away from the digital platforms that we have become accustomed to in other areas of life. Moonshot is a B2B2C model, working with e-commerce platforms to distribute their product. Pascal has an optimistic outlook on the size of the overall insurance market, which he thinks will inevitably increase given the fragilities that have been revealed by Covid. For example, the travel insurance market looks very likely to expand. Risks of cancellation, delay and different routings have all made airline passengers more concerned about risks and the need for insurance to cover those risks. Access to open data from airlines for flight information means that an insurtech with a brokerage status, like Moonshot, can be much more proactive in claiming for delays and cancellation.

**Martin** started by saying that digitalisation provides opportunities for both cost efficiencies and new revenue streams. It means that the insurance business model is shifting from the traditional loss compensation model to a more holistic risk management approach where prevention will become more important. These developments provide the opportunity to increase the overall welfare of society. Martin sees digitalisation providing a force for changing insurability through two channels. First, better data enables a more accurate prediction of loss probabilities and helps overcome the perennial problem of the insurance industry – asymmetric information. Second, digitalisation might transform the risk landscape by turning some of the low severity, high frequency risks to high severity, low frequency risks. For example, motor insurance claims might be changed in that way by the move to autonomous vehicles.
Godfrey pointed out that, in Kenya, mobile money is well established, with 49 million users, a large majority of the population. Insurance companies’ involvement at the moment is largely as managers of M-Pesa e-wallet savings accounts that can be drawn down to cover unforeseen events. Systems which allow greater distribution of insurance products are set to be rolled out on the M-Pesa platform in the coming months. Key to this will be allowing direct payments (for premium payments and claims) via M-Pesa wallets, rather than through the traditional banking system. Three insurtech startups developing such systems have received support from the Kenyan Insurance Regulatory Authority (IRA), Godfrey’s organisation. It has support from six other African countries (Nigeria, Ghana, Rwanda, Uganda, Zambia and Zimbabwe). Telemedics and telematics are other areas of digitalisation where development has been accelerated by Covid.

Two key challenges in the rollout of such products were identified by Godfrey: having a workforce with the technical skills and ability to develop such systems; and extending consumer protection. For insurance regulators the key issues are regulating this new branch of the industry. Such regulation would need to be on the same digital platform and in real time, given the fluid nature of the development of such products.

There are risks, of course. Currently, with many people still working from home, insurance companies’ commercial property rental income has been hit. Digital distribution of insurance products may also raise cyber security risks. However, this itself raises the opportunity for insuring cyber risk.

Esko shares the optimism for the digital revolution, which is bringing many new opportunities, but he has some reservations. Just as industrialisation had its adverse side effects (climate change and biodiversity loss), digitalisation may have (some yet unforeseen) adverse consequences. “When such changes take place they must be done responsibly so as not to cause havoc”, commented Esko. The key to the success of insurance in this environment will be the closing of protection gaps, especially with a focus on greater social inclusion and fairer ways of sharing risk. Information asymmetry has traditionally acted to the benefit of the insured, but richer data may mean it becomes a greater benefit to the provider.

Poll results and discussion

A poll of the conference participants showed 80% had seen a partial or full move to digital solutions provided by financial service providers (particularly insurers) during the pandemic. The shift to digital technologies was seen as the most important trend in the post-pandemic world. The panellists then commented on these survey findings.

Esko noted that the 20% who thought there had been no move towards digital must come from Finland, the Baltics and Nordic countries, which were fully digital already; but Martin commented that many still struggled with digital solutions in his country (Switzerland). Esko also wondered what the role of brokers – intermediaries between the client and the insurer – would be in a post-pandemic digital world. Martin reported on a recent seminar with Swiss brokers. The view expressed there was that their role would not be solely selling insurance products but being a more holistic partner in satisfying insurance needs for their clients. Marguerite commented that the unique data and digital infrastructure of the insurance industry could help in the development of response and recovery mechanisms and, just as important, improving prevention. In addition, we are already seeing that technology enables a tailoring of the approaches to build better products, better services and better prices. Pascal commented that his firm is classified as a digital broker, so the concept of broker is already changing. Godfrey pointed out that the move to digital is seen in Kenya but that there were, as yet, few opportunities to use exclusively digital platforms.
Ethical use of data

The insurance industry has highlighted the benefits of greater use of data and digitalisation for customers (for example, in the personalisation of products), but consumer associations are concerned about blurred ethical boundaries in using more and more data.

Marguerite presented the ethical issue as essentially one of financial innovation versus consumer protection. In this context it is an issue of access (affordable mainstream products) versus suitability (the appropriateness of the products). All participants in the insurance industry should aim to develop sufficient matches for client protection in their product development systems. Better communication about the products which clients are offered is key. Better internal controls in insurers can also help avoid consumers having unsuitable products. Creating a suitable pool of risks – using AI techniques, for example, and international diversification where needed – so that the insurer and insured have appropriate products is the key requirement.

Martin said the issues depend on the type of insurance. In Europe there is the concept of social insurance with redistribution between young and old, poor and rich; and private insurance where we have risk adjusted pricing. In both areas better data can be useful but, of course, there are ethical issues. For motor insurance, the use of data will probably be more acceptable than it is in health insurance, for example. Indeed, in motor insurance more data can make the previously uninsurable (or only a very high price) much more insurable: for example, by the use of data collection on driving patterns.

Esko liked Marguerite’s comments about aligning the interests of clients and insurers; and Martin’s idea of making bad risks good risks. We should, however, be ready for much more significant disruptions. Judging the benefits of these changes, however, will be difficult. We do not know how they should be assessed – growth in coverage, decrease in systemic risk, an increase in social inclusion or a decrease in protection gaps, for example.

Pascal commented that regulation (particularly GDPR) was pushing the industry to become more transparent and responsible. When consumers share data, it is important that they know why it might be to their benefit. There needs to a bigger push by insurers to explain the positive benefits of greater information and data collection. This is a big opportunity for the business.

Timothy raised the issue that the positive externalities of insurance enable many activities in society. This raises many questions which may not be relevant for purely market-determined products. Greater data availability and transparency also raise governance issues: it may mean more accurate risk assessment is possible (intentionally or unintentionally) but it could reinforce and replicate biases that are already evident.

Godfrey thought that more data would be useful in developing straightforward insurance products, which are important for markets in their infancy. There must be safeguards about improper use of data, but generally more data will help appropriate product creation.

Marguerite raised the issue of information asymmetry. For greater data availability to help, it is important that data are “complete, accurate and accessible”. Human checking may well still be needed to ensure that data are truly unbiased.
Cyber Risk insurance

Cyber insurance is a relatively new area of research and development. Information security is a classic IT topic but recently it has become more prominent in the economics and business domain. Martin commented that there is a big mismatch between the supply of, and demand for, cyber insurance. On the supply side, there are four big characteristics that limit its growth: heavy tails (greater risk of extreme events); non-linear dependencies coming from accumulation risk; modelling and parameter uncertainty (because we do not have enough data); and a heavy asymmetry of information (those wanting cybersecurity insurance are generally those who have a problem). These properties raise serious issues about risk pooling and make cybersecurity insurance a relatively unattractive proposition from an insurance provider’s perspective. On the demand side there are also issues: neither clients nor brokers seem to really understand the product; such insurance may not provide the cover that is really needed; and prices are likely to be high. So, although cybersecurity insurance seems undoubtedly to be a potential growth area, this mismatch between supply and demand may be hard to overcome.

The solutions to that mismatch may be more pooling of data and pooling of risks. A public-private partnership might help in this respect (for example, with government taking some of the bigger risks).

Marguerite commented that clients often don’t know what cover they need and the rapidly changing nature of the cybersecurity threat meant that insurance providers often found it hard to keep up with developments. A recent Aon survey showed that only 40% of firms surveyed had adequate strategies for remote working; only 21% had baseline measures to understand their third-party risk; only 31% had adequate measures to deal with ransomware; and only 36% had adequate levels of data security.

This state of preparedness and the lack of data means that a collaboration between clients and companies and between the private and public sector is needed to make such risks effectively insurable. But the problem is big. Last year, McAfee estimated cybersecurity losses were US$1tr (1% of Global GDP)\(^1\). Esko commented that the European market is underdeveloped compared to the US and suggested that this might be because of GDPR, which might impede the sharing of information on such events. But if information systems collapse or in the event of a data breach, the event is usually severe and affects multiple companies and thousands of customers. This makes such risk hard to insure. Firms need to respond by protecting their data, making databases insurable.

Martin said a distinction could be made between the ‘cyber risks of daily life’ – hacker attacks on a particular company – which are already insurable today; and the bigger events, with multiple firms involved and larger loss amounts. In this area, risk pooling does not work well and, because insurance companies are fearful of these, they are reluctant to go into the market on a broader scale. However, this market looks set to be a big one: according to KPMG, cyber risk insurance will be the largest non-life insurance market in 15 years. Marguerite added that 90% of the buyers of cyber insurance are corporates. Looking ahead, a key issue is what types of cyber risk are insured and whether these are insured separately from non-cyber risks. The insurance industry has an important role to play to make this risk insurable: it is a huge opportunity.