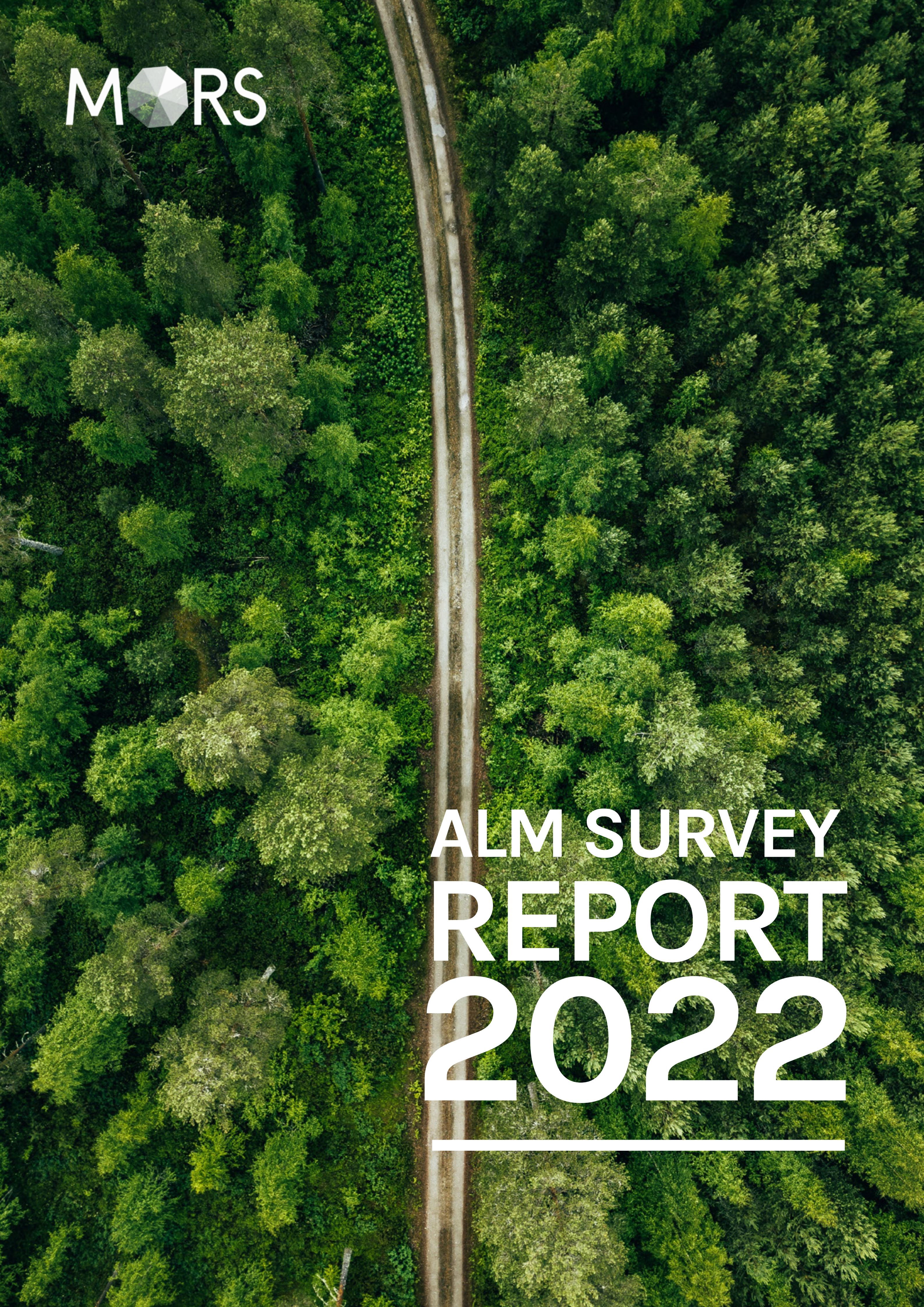
MORS



ALM SURVEY REPORT 2022

Introduction

This report has been compiled from the results of the MORS Software 2022 ALM Survey and has therefore essentially been written collaboratively by the banks that took part.

The contributors represent a diverse array of banks varying greatly in the nature of their business, and the geographical spread of the contributors represents a global view of the banking business in 2022.

Initially, MORS Software launched the ALM survey during Spring 2021 as a means of gaining an understanding of financial institutions globally, at a time when ALM, Balance Sheet Management, Financial Planning, and integrated Stress Testing alike had been experiencing exceptional challenges.

While most of us hoped that 2022 would bring much-needed stability in our markets, it has so far proven to be a year not dissimilar to the previous two. At the time of publishing the survey, the world was facing a continued and potentially increased volatility and lack of clarity. As we now publish this Survey Report, our markets and our banking industry is managing its way through yet another set of unprecedented challenges, which will undoubtedly shape our collective attention and focus for the remainder of this year and probably well into next.

The Russian invasion of Ukraine has triggered a chain reaction sending shock waves through almost all aspects of our lives. As we are all aware, macro-economic shocks and geopolitical events seriously affect financial markets and ripple through all aspects of banking.

At a time when the world has not yet recovered from the effects of COVID 19 and transitioning out of the restrictions imposed on the population at large, the Russia scenario has added insult to injury. War of any kind is always a major disruptor to financial markets, but when it involves a superpower and a significant global economy, the effects are potentially massive. As a major oil and gas supplying nation, the Russia scenario has sent the cost of energy through the roof. This has triggered the highest and fastest rise in inflation in decades. Sanctions imposed have led to the collapse of the Rouble, and the removal of many Russian banks from the SWIFT infrastructure has caused significant disruption to international trade.

The resulting creep in interest rates brings its own set of consequences, not least with respect to Lending Book quality. Combined with the general rising costs of living, a fuel price crisis, a post-COVID 19 sharp increase in real estate prices, pandemic induced wage stagnation, a shortage of housing stock introducing a whole range of complexities for banks trying to forecast their performance and plan effectively.

There is now much talk of the potential of a period of stagflation. The consequences of such a scenario will be significant and unambiguous. While not unprecedented in modern times, it has been decades since both inflation and unemployment have risen quickly and simultaneously. The current supply shock in the energy sector has the potential to drive economic growth down, not dissimilar to the 1973 OPEC Embargo. The resulting price increases in energy will increase the cost of manufacturing and the supply of almost all goods. With a simultaneous decrease in demand, the impact of such a scenario lowers the value of all assets and cascades firmly into the Retail Banking Book. A failure of central banks to act quickly in terms of monetary policy may trigger a snowball effect, resulting in significant economic sacrifices to be shared by all.

A market that in recent history has been saturated with liquidity now faces a shortage of liquidity, rising Probability of Default, increased Lending Pipeline Risk, a tangible and expressed threat of a global conflict, economic recession, and increased regulation.

Given current events, it's easy to overlook the ongoing consequences of COVID 19. While in many places, the pandemic is far from over, in places where it is waning, transitioning out of the pandemic is proving a source of chaos. Staffing shortages are wreaking havoc in meeting the sudden increase in demand for logistics, travel, leisure, and failing supply chains are continuing to put salt into the wound of an already fragile economy.

As if the above is not already enough to manage, major issues such as Climate Risk have not gone away. It begs the question that if banks are already not satisfied with the data and tools, they have in place, then how on earth will they manage in the coming 24 months? A sentiment echoed strongly in the responses to our survey.

Once again, banks have been clear in expressing a lack of confidence in their tools and systems. In particular, Scenario Analysis and stress testing have been a challenge, not to mention data management and data availability.

At the end of 2021, the EBA published its first Discussion Paper on changes to the measurement and reporting of Interest Rate Risk in the Banking Book (IRRBB) and Credit Spread Risk in the Banking Book (CSRBB). It is also clear from the banks included in this survey that meeting such regulatory requirements will feature heavily in their workload for 2022.

MORS Software would like to thank all banks that participated in the survey and in the creation of this report.

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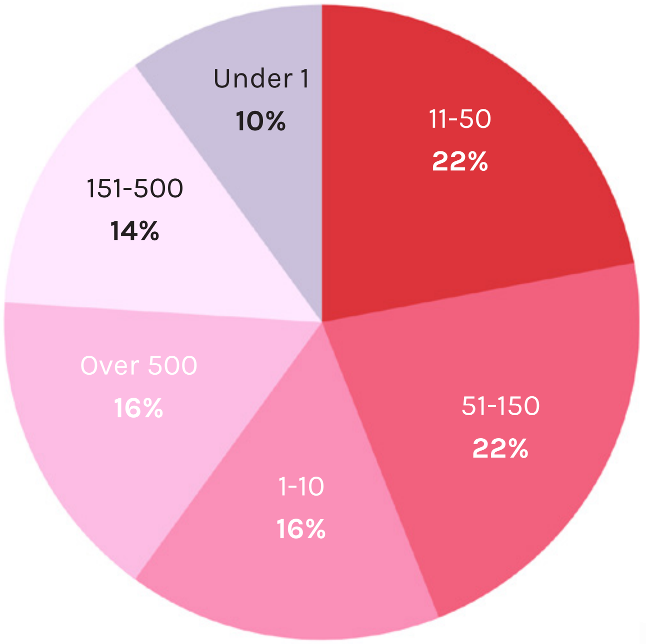
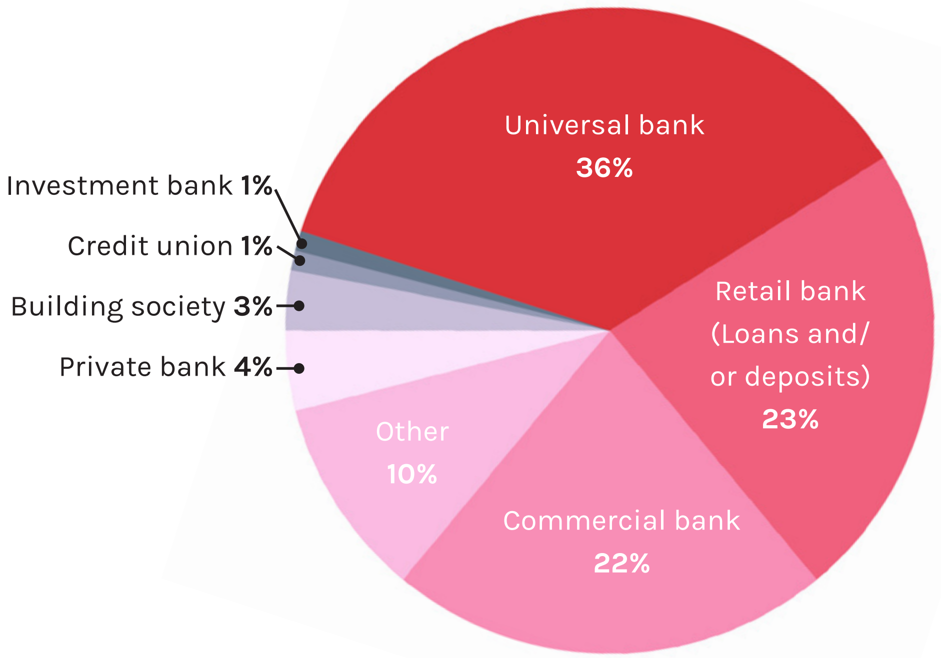
Participants' profile

73 banks from 30 countries replied to the ALM Survey 2022.

Size of a Balance Sheet



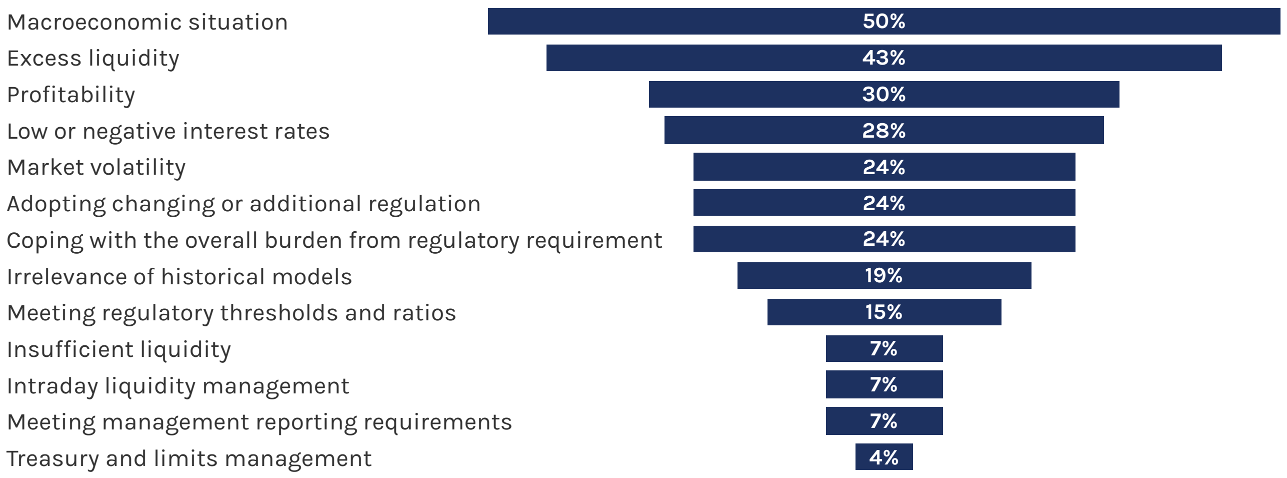
Type of bank



Challenges faced by banks in 2021

The first section of our survey focussed on the biggest challenges faced by banks in 2021 and the likely source of challenges in 2022.

What were the biggest ALM challenges in 2021?



"Half of all banks surveyed felt that the macroeconomic challenges driven by COVID 19 and the impending Russian invasion of Ukraine caused their main ALM challenges in 2021."

We asked what the biggest challenges in ALM were in 2021. It was not a surprise to read that, according to the responses, the biggest challenge in ALM in 2021 was the macroeconomic situation (50%). The second biggest was excess liquidity (43%), and the third biggest was profitability (30%).

In a market experiencing excess liquidity for some time and given negative or close to zero interest rates and narrow spreads, we were also not surprised to learn that profitability had again been problematic for nearly a third of our responders (30%).

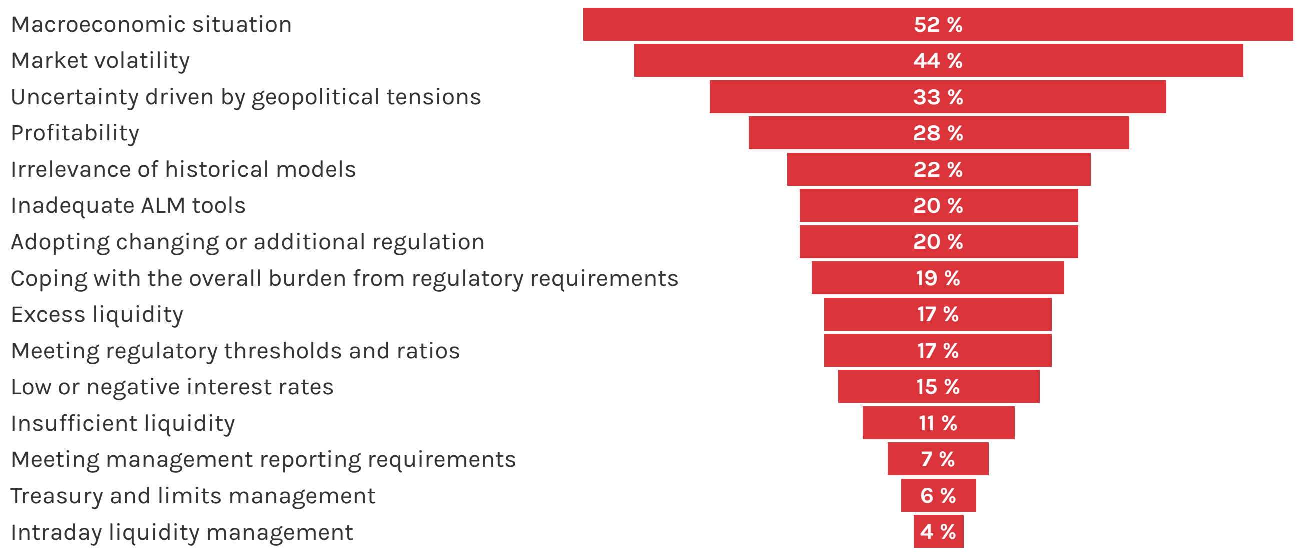
Interestingly, a quarter of responders felt that meeting their regulatory obligations was challenging. We expect that 2021 saw a continuation of the 'ratio trap' challenges experienced in 2020 as banks tried to use their own capital and liquidity buffers to drive growth.

What were the main macroeconomic challenges?

We asked in an open-ended question asking for further details on precisely what macroeconomic challenges banks had faced. Banks were quite clear in their answers, with the biggest macroeconomic challenges coming in the guise of ongoing low interest rates and signs of increases in inflation.

Also of ongoing concern was the uncertainty around the ending of COVID 19 measures and the possibility of a Russian invasion of Ukraine.

Which are the biggest expected ALM challenges in 2022?



According to the survey, responders expect that the biggest challenge in ALM in the next 12 months will be the macroeconomic situation (52%). The second biggest challenge will be market volatility (44%), and the third biggest will be uncertainty driven by geopolitical tensions (33%). We feel it is quite fair to assume that these three concerns are closely connected and that the 4th most significant concern, profitability (28%), is largely a result of anxieties caused by the top 3 largest concerns.

"Macroeconomic factors causing market volatility as a result of geopolitical uncertainty will be the main cause of concern for banks in 2022."

Interesting to note is that just short of a quarter of responders feel that their historic models may no longer be relevant. This suggests a need for better, more agile real-time scenario analysis and a move towards white box analytics instead of black-box models for NMD and Prepayment modelling.

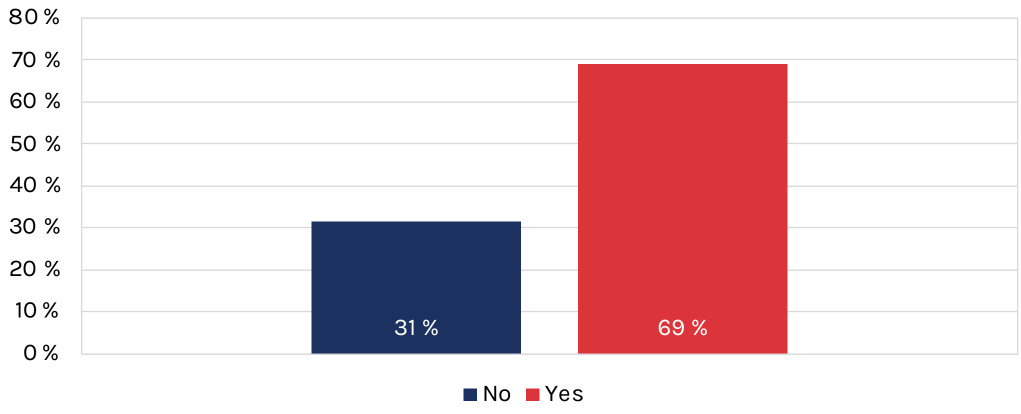
It is also interesting to note that while inflationary pressure and a rise in interest rates may drain the market of its excess liquidity, only a few (11%) of responders were concerned about a liquidity shortage.

The responses in this section revealed a paradox. While only 20% of responders felt that inadequate tools and systems would be a challenge in 2022, 69% of responders felt that their tools were inadequate in 2021. Either most of the inadequacies faced in 2021 have been overcome or banks are sleepwalking into more tools-related issues in 2022, having expected that market challenges would be less impactful than those of the previous two years.

ALM Systems and Tools

The next theme of the survey was ALM systems and tools. We asked whether banks experienced any problems with inadequate ALM tools. The majority of banks responding (69%) had problems with inadequate ALM tools.

Did you experience any problems with inadequate ALM tools?

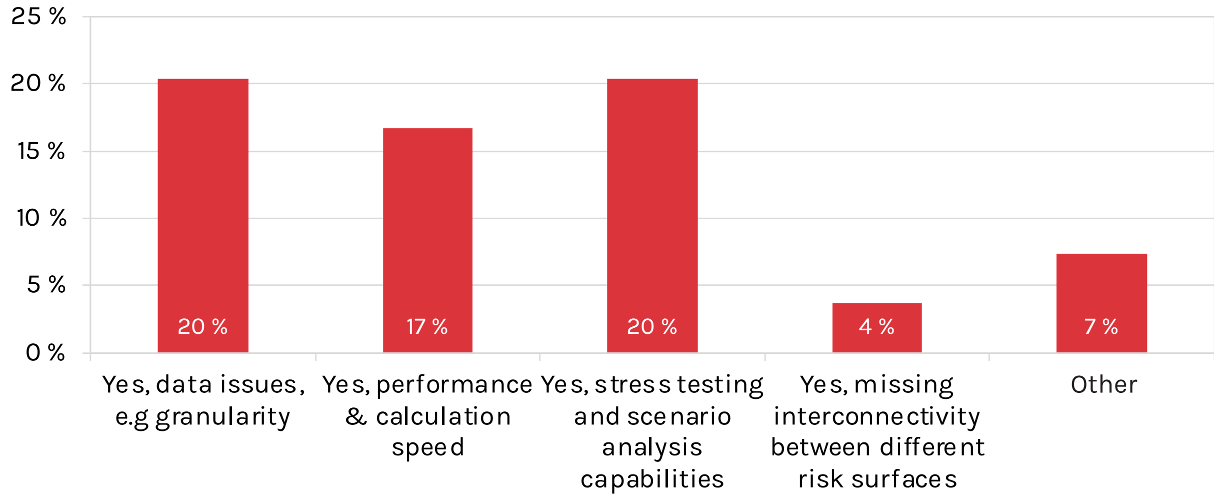


20% of the respondents had data issues, e.g., granularity. 20% of responders had problems with stress testing and scenario analysis capabilities, and 4% had issues with missing interconnectivity between different risk surfaces.

7% of responders answered 'Other' and thereafter specified all manner of different challenges, e.g., lack of toolkits used for hedge risk and problems with data systems in general.

"In 2021, 69% of banks experienced problems caused by inadequate ALM systems and tools."

Did you experience any problems with inadequate ALM tools?

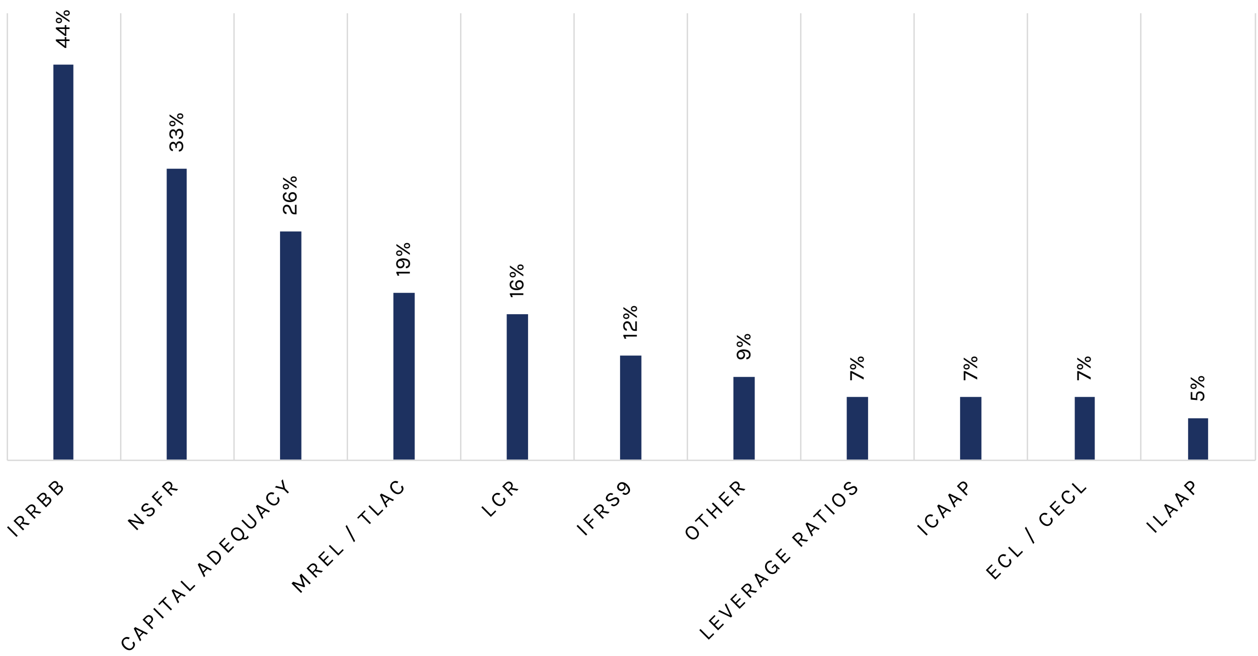


Related to the above, we also asked an open-ended question on what kind of systems or tools banks are planning to invest in in the next 12 months. Most respondents mentioned ALM systems, tools for IRRBB calculations, and FTP. It appears from the responses that system integration remains a key challenge for many banks.

Regulatory Obligations

We asked which regulatory metrics represented the banks' main constraints in 2021.

In terms of regulatory metrics and requirements, which one(s) were your main constraint(s) in 2021?



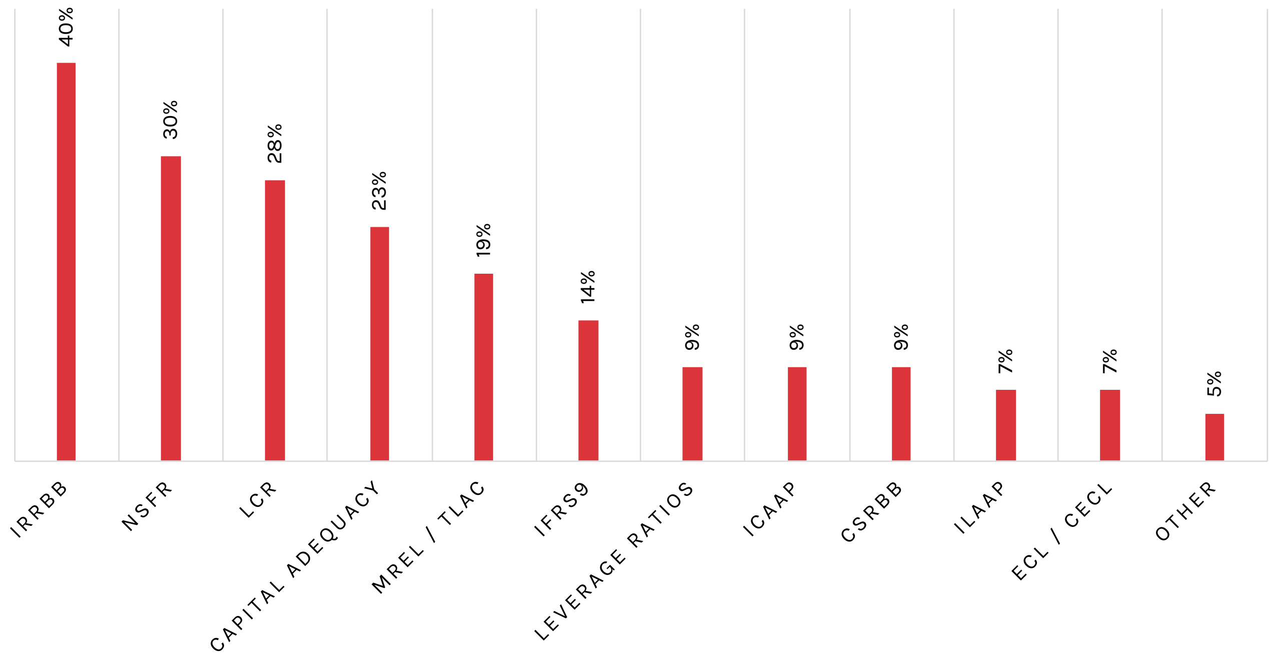
The main constraint, according to responders, was IRRBB (44%). The second main constraint was NSFR (33%), and the third one was Capital Adequacy (26%). It would appear that the ongoing interest rate climate was of major concern, and regulatory ratios for Liquidity and Capital Adequacy constrained the banks in their ability to fund growth.

It is interesting to note that MREL and TLAC feature on the list of concerns for the banks surveyed. Not surprisingly, our responders are clearly concerned that the necessity to retain 'own funds' under the EU BRRD may become difficult when trying to stimulate growth or defend against a deterioration in trading conditions.

"In 2021, almost half of the banks we surveyed felt constrained by regulatory requirements around IRRBB."

We also asked which regulatory metrics and requirements banks expect to be their main constraints in 2022. The main constraint, according to responders, is expected to be IRRBB (40%), followed by NSFR (30%), and, thirdly, LCR (28%).

In terms of regulatory metrics, which one(s) do you expect to be your main constraint(s) for the next 12 months?



Increased regulation around IRRBB and CSRBB is more than likely a key cause of concern for most banks. A significant reduction in liquidity in the market is also expected to drive concerns around funding.

Interesting to note is that the number of banks concerned about LCR has doubled from last year. 28% of banks feel that LCR will be a constraint in 2022 compared to only 16% in 2021. Likely driven by similar regulatory pressure, close to 20% of responders also expressed concern about MREL and TLAC. With declining market liquidity, it may become increasingly more expensive to maintain regulatory thresholds of required 'own funds.'

Conclusions

2021 was the 2nd year of an unprecedented scenario, COVID 19, and the global pandemic. 2022, while the world is still recovering from the global pandemic, and not least, the transition back to a sense of normality has already witnessed a 2nd Black Swan in as many years.

Russia's invasion of Ukraine, while predictable, has left the world largely unprepared for the ongoing evolution of consequences. A global superpower has invaded a modern and developed European country, and the disincentives applied in response have so far been largely economic.

Economic sanctions, while undoubtedly painful for Russia, on an economy of such global significance and one of the world's largest energy producers and suppliers, the effects of such sanctions will and are already affecting the rest of the world.

War by itself generates enormous economic hardship for all concerned. War immediately after a 2-year global pandemic in which most economies either stalled or shrank brings the threat of significant recession.

It seems almost inconceivable that, as an industry, we face a perfect storm. War, ongoing pandemic, inflation, increased interest rates, significant threat of recession, rocketing energy commodity prices, and increased regulation.

"There is a clear and present need for an integrated approach to risk management, scenario analysis, and stress testing."

The interconnected nature of the risks now facing most financial institutions is large-scale and complex. In an environment where 69% of banks have expressed concerns over the adequacy and effectiveness of their management tools and systems, the coming years do not look any easier. There is a clear and present need for an integrated approach to risk management, scenario analysis, and stress testing.

Economic hardship in the guise of fuel poverty, rising costs of living, economic uncertainty, and potential recession are an ideal recipe for increased Probability of Default in all flavors of bank lending. Coupled with a significant risk of falling retail deposits and tight regulatory constraints around LCR and NSFR combined with rising interest rates, recent explosive growth in residential real estate prices, the potential for a return to negative equity, and rising Loss Given at Default will be both damaging for bank performance but also difficult to manage within Regulatory Capital Adequacy constraints.

Concerns expressed in our survey with respect to the growing lack of relevance of historic models, the prevalence of black-box models, and inadequate scenario analysis capabilities, banks will be once again 'flying blind' in the face of another round of unprecedented circumstances.

Of particular short-term relevance is the number of mortgage offers in the market with a validity of up to 90 days. Driven by enormous post-pandemic growth in the demand for new mortgages, banks have committed to rates that, while once stable over the long term, are now rising rapidly. In the context of a potential reduction in funding, banks are managing a fragile mix of needing a new business, but not at any cost. If current historic models are proving troublesome, then the additional burden of Pipeline Risk will certainly not help.

Volatility and risk are what make the banking system work but require effective and agile management, systems, and tools. It appears clear that most banks are deeply concerned about their ability to navigate their institutions through this current period of uncertainty, but with no light at the end of the tunnel with respect to the Russia scenario, uncertainty will turn to certainty, a certainty that the banking sector is once again ill-equipped to survive a set of circumstances not seen since the 1940s. Combined with a regulatory framework that favors the consumer, not the investor, the future outlook remains bleak.

About MORS Software

MORS is a complete integrated Asset Liability (ALM), Risk and Treasury Management solution for banks.

MORS is atomic in structure and all components interact with each other to provide real-time holistic and synergistic functionality based around a common core of granular level data and common services. MORS can also be packaged into smaller point solutions to address specific customer needs.

MORS comes complete with MORS Analytics, a white-box solution for NMD, Prepayment, and Pipeline Risk modelling.

MORS combines multiple risk surfaces covering all aspects of the regulatory obligation together with a user intuitive multi-dimensional scenario analysis engine for modelling and stressing combinations of risk surfaces. Complete with a powerful and flexible planning and forecasting tools, MORS customers can easily assess the impact of unlimited numbers of scenarios on their P&L and Balance Sheet in real-time.

MORS Software, a company built on the Finnish culture of Sisu

Sisu [si-sue] Finnish (n.)

Persistence and determination to succeed, even in the face of adversity.

We get the job done with minimal fuss and the lowest profile of project risk.

Stamina, perseverance, and courage combined with a direct, open, and honest character and a habit of objective and efficient communication.

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