Systemic Risk: The Maltese Banking **Industry's Perception**

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Abbreviations

ECB	European Central Bank
ESRB	European Systemic Risk Board
EU	European Union
G10	Group of Ten
MFSA	Malta Financial Services Authority
NBFIs	Non-Bank Financial Institutions
SSM	Single Supervisory Mechanism

Executive Summary

The events leading to the onset of the financial crisis more than a decade ago have led the international community to devote significant resources towards the analysis of systemic risk. Since then, research and analysis has been geared towards the prompt identification of this risk together with mitigating measures in the form of macroprudential policy to complement micro-prudential measures. The Authorities overseeing Malta's financial stability have been extensively collaborating to ensure that systemic risk is being adequately addressed and take prompt corrective action should pockets of vulnerabilities be identified. As part of the Financial Stability function within the MFSA, a systemic risk survey was carried out in September 2019, with the main purpose of presenting the banking sector's views of risks and their confidence in the stability of Malta's financial system.

The feedback from credit institutions was collected through an online survey, divided into four parts and requesting responses in the form of pre-defined ratings and comment boxes. The respondents were asked to evaluate a broad variety of risks, according to the perceived probability of them materialising, as well as their possible consequences on the financial system and the institutions' capacity to cope with the outcomes if a systemic risk occurs. The survey was circulated across all active credit institutions being licensed in Malta at the time and was typically completed by executives responsible for risk management and compliance. All banks submitted replies to the questionnaire. For confidentiality reasons, the replies and findings from the survey were presented on an aggregate basis, with partial distinction between the core domestic banks and the entire banking sector. For the purpose of the report, risk ratings for each institution were assigned an equal weighting.

The feedback received indicates a certain level of heterogeneity in risk gradings due to size and business model differences, varying levels of linkages to local and foreign economies, and diverse adaptability to changing economic circumstances. This notwithstanding, shared concerns about cybercrime and IT deficiencies, in particular, were identified as having the potential to prominently affect the local financial system with risks not expected to abate in the coming years. Another prominent risk identified collectively by the banking sector includes geopolitical uncertainty with concerns raised about potential repercussions on EU economies from disorderly Brexit and subdued outlook on global economic developments. Risks related to real estate developments were given a certain level of prominence by the core domestic banks, with such concerns expected to persist over the foreseeable future. Although the NBFIs providing bank-like products are considered to be small in size, credit institutions adopting a less traditional business model outlined possible competition growth over the foreseeable future. Nevertheless, the overall impact from this risk materialising is expected to be limited.

Additionally, the respondents provided an evaluation of measures and mitigating techniques available for addressing the adverse outcomes of the risks materialising. Banks believe that an adequate level of preparation is present in relation to the risks identified as highly detrimental to the financial sector. Furthermore, respondents predominantly expressed an optimistic perception of the financial system's stability in a context of ongoing developments within the sector and the healthy state of local economy. At the same time, they noted the presence of vulnerabilities associated with regulatory complexities and jurisdictional challenges, which may potentially present repercussions to the entire system.

This is the first systemic risk survey carried out by the Authority across the banking industry in Malta. Apart from providing an aggregated view of the systemic risk perception, the survey findings are expected to be beneficial to the Financial Stability function as it provides specific guidance on emerging risks identified. Looking forward, a follow-up to this survey is expected to be beneficial, allowing for observations of changing landscape and evolving perceptions of systemic risk over time.

Introduction

Systemic risk has the potential to cause a partial or full impairment of the financial system with a possible spill-over onto the real economy. This makes it imperative to identify at an early stage the risk sources that may propagate into a systemic threat.

Accompanying the surveillance tools employed by the MFSA in gauging the stability of the financial system, is the *Systemic Risk survey*. This has been carried out in September 2019 in which all active banks licensed in Malta have voluntarily participated.

The main aim of this survey is to shed light on the most prevalent systemic risks outlined by the banking industry in Malta. In particular, the assessment focuses on the risks graded as material for financial stability purposes in terms of probability of risk materialisation, expected impact on the financial system in Malta, and banks' mitigation techniques appropriateness to manage systemic risks. Finally, the assessment will contribute in assisting the Financial Stability function when providing input to the ESRB and ECB country risk assessments.

What is systemic risk?

There are a multitude of literature and studies exploring the various aspects of systemic risk, with the interest rising abruptly following the 2007/08 global financial crisis. Systemic risk is assessed from different viewpoints, with researches devoting varying importance towards the confidence collapse by market players, financial markets' imbalances, financial fragility, information asymmetries, and asset bubble bursts, to name a few (Smaga, 2014).

An isolated shock may have a systemic impact when institutions are highly interconnected, with the risk being transmitted to a wide number of institutions which initially seemed solvent (ECB, 2009). The systemic impact becomes even broader should the interlinked financial institutions be of systemic relevance to the domestic economy, such that disruption to their operations creates imbalances and may lead to severe impairment to the stability of the financial system.

The widespread transmission of systemic risk could propagate horizontally where impairment affects the partial or entire functioning of the financial system. Propagation could also be vertical, such that impairments spill-over onto the real economy (ECB, 2000). The systemic intensity and magnitude on the stability of the financial system is strongly correlated with the degree of interlinkages held among institutions within and across the different industries of the financial services sectors and across financial systems of different economies.

Shock-triggering events that have systemic repercussions are diverse and develop over time, both in terms of source and intensity. These may originate from downside developments in macroeconomic conditions emanating both within the domestic economy and externally. They may also emanate directly from within the financial system through widespread imbalances, and possibly through market participants' collective behaviour (Smaga, 2014).

In view of the broad nature of systemic risk, there is no harmonised definition on the concept of systemic risk with some of the main established organisations and institutions providing the following definitions of systemic risk:

The Group of Ten (G10)

Systemic financial risk is the risk that an event will trigger a loss of economic value or confidence in, and attendant increases in uncertainty about, a substantial portion of the financial system that is serious enough to quite probably have significant adverse effects on the real economy. Systemic risk events can be sudden and unexpected, or the likelihood of their occurrence can build up through time in the absence of appropriate policy responses…

Two related assumptions underlie this definition. First, economic shocks may become systemic because of the existence of negative externalities associated with severe disruptions in the financial system….

Second, systemic financial events must be very likely to induce undesirable real effects, such as substantial reductions in output and employment, in the absence of appropriate policy responses….

(Group of Ten 2001, p.126)

The European Parliament and the Council of the European Union

'Systemic risk' means a risk of disruption in the financial system with the potential to have serious negative consequences for the internal market and the real economy. All types of financial intermediaries, markets and infrastructure may be potentially systemically important to some degree.

(European Parliament and the Council of the European Union 2010, p.5)

European Central Bank

Systemic events can be understood broadly as financial instabilities spreading to the extent that the financial intermediation process is impaired and economic growth and welfare suffer materially. Systemic risk is the risk of experiencing a systemic event.

(ECB 2010, p.147)

Notwithstanding the different approaches and detail to define systemic risk, a mutual attribute consistent in systemic risk concepts is the broad magnitude by which the emerging impact following a shock event affects financial institutions with the impact possibly propagating on to the entire financial system and real economy (European Parliament, 2009).

In a bid to mitigate the materialisation and build-up of systemic risk, policy makers introduced macroprudential instruments. The need for macroprudential measures became apparent following the global financial crisis, where micro-prudential policies in isolation proved insufficient to safeguard the stability of the financial system. This set the drive to supplement micro-prudential supervision with macroprudential instruments that consider the broad implications and amplifications emanating from systemic risk. Various macroprudential measures have been adopted in the EU, particularly those targeting the banking sector. Measures vary across countries, with the most commonly used being: the activation of the countercyclical capital buffer; identification of systemically important institutions and subsequent application of additional capital requirements on domestic and global systemically important institutions; systemic risk buffer; caps on loan-to-value, debt service-to-income, and loan-to-value ratios; higher risk weights applied to the portfolio of retail exposures secured by residential immovable property; and reciprocation to other EU member states of national macroprudential measures (ESRB, 2019).

Methodology

An online survey (Appendix I), was circulated among 23 credit institutions[1] that are licensed in Malta and was typically completed by executives responsible for risk management and compliance. All the participants have provided their response. The survey consisted of pre-defined ratings and free-text comment boxes. For confidentiality reasons, the responses and findings from the survey are presented on an aggregate basis, with a distinction

[1] The banks that participated in the *2019* systemic risk survey were: AgriBank plc, Akbank T.A.S. (Branch), APS Bank plc, Bank of Valletta plc, BNF Bank plc, CommBank Europe Limited, Credit Europe Bank NV (Branch), Credorax Bank Limited, ECCM plc, FCM Bank Limited, Ferratum Bank Limited, FIMBank plc, HSBC Bank Malta plc, IIG Bank (Malta) Limited, Izola Bank plc, Lombard Bank Malta plc, MeDirect Bank (Malta) plc, Merkanti Bank Limited, NBG Bank Malta Limited, Novum Bank Limited, Sparkasse Bank Malta plc, Turkiye Garanti Bankasi A S (Branch), and Yapi Kredi Bank Malta Limited.

being made between the perceptions of the core domestic banks[2] and those of the entire Maltese banking industry[3].

The main part of the survey consisted of 12 broad sources of risks, along with a brief description of triggering factors associated with the materialisation of systemic risk (Appendix II). The selection of risks was based on the analysis carried out by the Financial Stability function within the MFSA as well as the risk assessments conducted by the ESRB, the ECB and the SSM. Respondents were asked to grade each risk according to their perceived probability of them materialising, the possible consequences on the institutions' capacity to cope with systemic risk events, and the appropriateness of current policy measures to mitigate the risk. In addition, credit institutions themselves were encouraged to identify other types of risks they perceived to be systemic.

The survey results are illustrated through graphical representations with individual institutions' risk ratings being assigned an equal weight. For the purpose of the systemic risk heat maps (figures 2 to 5) for each risk source a weighted average based on the number of respondents has been assigned.

Throughout the survey, when providing risk grades for risk materialisation and impact, respondents were requested to consider two forward-looking time horizons. For the purpose of the survey, a short-term horizon is defined as a risk event taking place over the next 12 months, whereas a medium-term horizon relates to the risk event taking place within the next one to three years.

In the final section of the survey, respondents were asked to rate their overall perception of the financial system's stability in Malta. Moreover, respondents were provided with an option to provide any further comments about their views on the stability of the Maltese financial system and comment on the design and content of the survey.

Sources of systemic risk

The concept of systemic risk, as understood by the Maltese banking industry, is reflected through the following word cloud. This shows the most prominent words appearing in their response to the survey when asked to provide their interpretation of systemic risk as applied within the institution:

Figure 1 - Keywords used by banks in their interpretation of systemic risk

According to survey replies, the banking sector tends to emphasize the large-scale impact generated by a systemic event. Systemic events are thought to have significant repercussions on the financial system. This may jeopardise or bring to a halt the intermediation process, causing a possible downturn on the real economy. Overall, the banks' concepts of systemic risk are in line with the main definitions outlined by the international institutions.

The evaluations carried out by the SSM, ECB and ESRB, on a regular basis, identify various types of sources of systemic risk. These include risks that are exogenous to the financial system, thus originating from severe macroeconomic shocks, as well as

[2] Core domestic banks refers to six credit institutions, namely APS Bank plc, Bank of Valletta plc, BNF Bank plc, HSBC Bank Malta plc, Lombard Bank Malta plc, and MeDirect Bank.

[3] Banking system refers to the credit institutions that are regulated and supervised in terms of the Banking Act 1994, with the exception of Satabank plc.

endogenous to the financial system, such as risks emerging from financial imbalances or via contagion effects (ECB, 2019a).

International institutions identify a number of key sources of systemic risks. The ESRB and ECB (ESRB, 2019; ECB, 2019b) identify the disorderly increase in risk premia along with risks from NBFIs' activities as the top risks. The SSM (ECB, 2019c) identifies economic, political and debt sustainability challenges in the Euro Area, as well as cybercrime and IT deficiencies as key drivers expected to affect the Euro Area banking system over the next three years.

Shared views regarding these risk factors were reflected in the feedback obtained from the systemic risk survey. The critical risks are captured from the heat maps as depicted in figures 2 to 5, which identify the risks graded in terms of perceived probability and impact intensity. The identification of systemic risk sources is presented from both a core domestic banks' perspective, which represent the institutions that hold the strongest ties with the domestic economy, and from a Maltese banking industry perspective.

The Maltese banking industry graded vulnerabilities associated with cybercrime and IT deficiencies as being relevant from a micro level perspective. Cybercrime is fast becoming a pervasive business concern to every data-dependent industry, including the financial services sector, with different levels of damaging outcomes. In fact, banks perceive this risk as having the largest expected disruption on the financial system should it materialise.

Deterioration of global outlook and geopolitical uncertainties is also perceived to have a prominent impact on the stability of the financial system. The banks also expect such risk to intensify over the medium term both in terms of materialisation and impact. With respect to Brexit developments, banks concerns were mostly associated with the uncertainty brought about by the prolongment of the conclusion process and on the possible repercussions on the EU macro-economic outlook.

To date, the presence of banking activities arising from NBFIs is limited. Nonetheless, looking forward this is perceived as potentially creating competitive pressures, particularly by the banks operating a non-traditional business model.

Banks also indicated vulnerabilities arising from the real estate market, in conjunction with risks that emanate from credit dynamics and new regulations. These risks are also expected to prevail over the medium-term horizon.

In the subsequent sections of the report, in-depth assessments are presented outlining the views and expectations by the Maltese banking industry, particularly on the risk sources outlined above. The assessments focus on the risks which in the survey were given a material risk grade in terms of perceived probability to materialise, expected impact on the financial system, and institutions' attempts to mitigate systemic risk.

Survey Results

The Systemic Risk heat maps provide weighted average risk gradings for each risk source, in terms of 'expected impact on the financial system in Malta' [represented on the y-axis], against 'perceived probability of risk materialisation' [represented on the x-axis]. Risk gradings range between 'very low' to 'very high', in line with the risk grading options provided in the survey. Results in each heat map represent the weighted average of the risk grades assigned by the respondents for each risk source, where the weight is based on the number of respondents. The heat maps in figure 2 and 3 provide the overall aggregated perceived risk materialisation and expected impact over the short-term horizon, whereas the heat maps depicted in figure 4 and 5 focus on risk perception over the medium-term horizon.

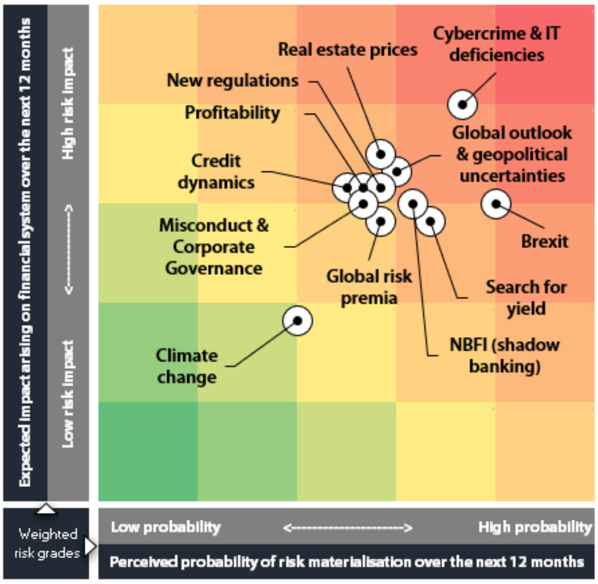

Figure 2 - Core domestic banks: risk event taking place over the next 12 months

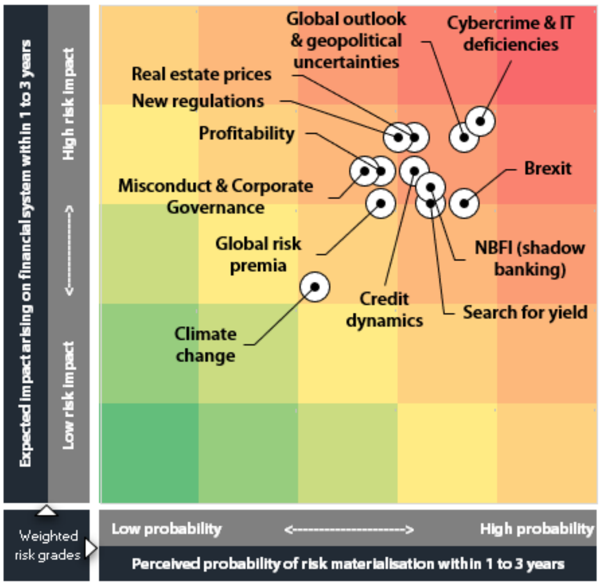

Figure 4 - Core domestic banks: risk event taking place within the next 1 to 3 years

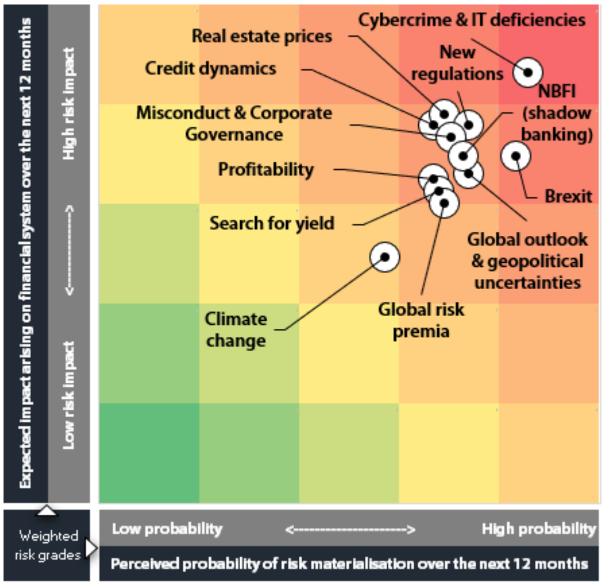

Figure 3 - Banking system: risk event taking place over the next 12 months

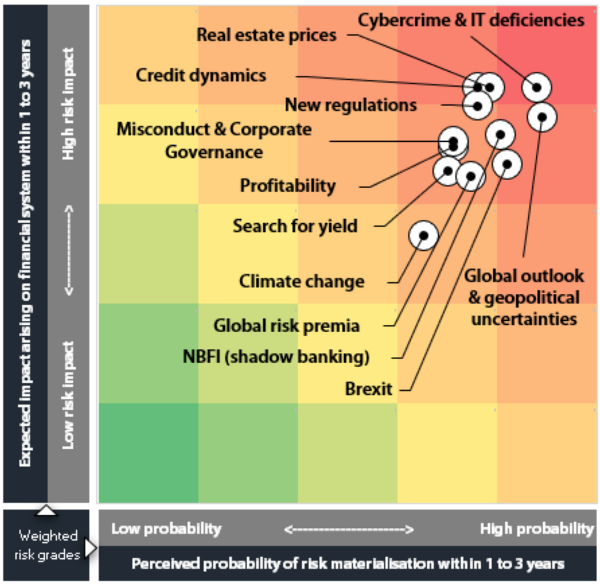

Figure 5 - Banking system: risk event taking place within the next 1 to 3 years

Perceived probability of risk materialisation

In terms of perceived likeliness of risk materialisation, results show that in the short term, banks are mainly concerned about the 'disorderly UK exit from the EU (Brexit)' and 'cybercrime and IT deficiencies'. This assessment is consistent with the risk grades provided by the core domestic banks. These risks are also expected to materialise over the next three years (medium term). Additionally, risks related to 'deterioration of global outlook and geopolitical uncertainties' and 'banking activities arising from NBFIs' are graded as likely to materialise and influence the industry in the future.

[Refer to figures 6 to 9]

Risks graded as likely to materialise

As one would expect, Brexit materialisation is considered by the banking industry to be very likely having numerous 'very high' and 'high' grades. This perception is prevalent both for the short- and medium- term horizons, indicating the industry's overall recognition that Brexit will materialise, whilst showing a level of uncertainty as to whether this would occur within the year or sometime in the future. This notwithstanding, banks affirmed their limited links with UK counterparties and exposures to pound sterling. Analogically to the views of many, banks expressed their concern on the uncertainty surrounding future UK and EU relationship.

Cybercrime and IT deficiencies related risks was also given a high grading over both time horizons, with future expectation being more pessimistic as assessed by the higher risk grading given for the medium-term horizon. Such expectations are prevalent when assessed both from the perspectives of core domestic banks and that of the entire banking industry. In their views, while institutional measures may be considered strong today, given the speed at which cyber-crime capabilities are increasing, the likelihood of that risk materialising is more immediate. In particular, this is based on recent observations of increased global cyber-threats. Moreover, the fast pace of technological innovation and the ever-evolving IT and cyber risk landscape pose new threats to the financial system.

Deterioration of global outlook and geopolitical uncertainties, although was given some prominence over the short-term horizon, the prospect of the risk materialising is expected to be stronger over the medium-term. Characterising this risk is the subdued global growth which prevails also within the Euro Area, together with trade tensions and weakened worldwide confidence and investment sentiment. As commented by respondents, despite deteriorations observed within the EU and globally, the local economic activity remains buoyant with certain sectors registering exceptional growth. Although forecasts, such as that of the European Commission (European Commission, 2019), project strong future economic growth, the extent to which the country's economic momentum will continue to persist in the foreseeable future is also highly dependent on global economic developments.

Future risk materialisation, graded over the medium-term horizon, is also expected to emanate from NBFIs that provide bank-like products (shadow banking). Respondents acknowledge that the regulatory framework is tighter for banks as compared to that of NBFIs. This may possibly generate a cost advantage to the NBFIs, prompting increased competition from other financial institutions which may draw pressure on banks in retaining their market share for certain services.

Survey Results

Respondents were requested to grade the perceived likeliness for the occurrence of a risk source over the next 12 months and within the next 1 to 3 years. The scores are based on external triggering event/s, such that the origination of each risk is assumed to have been triggered from outside the institution.

Probability of risk materialisation: Very high, High, Medium, Low, Very Low

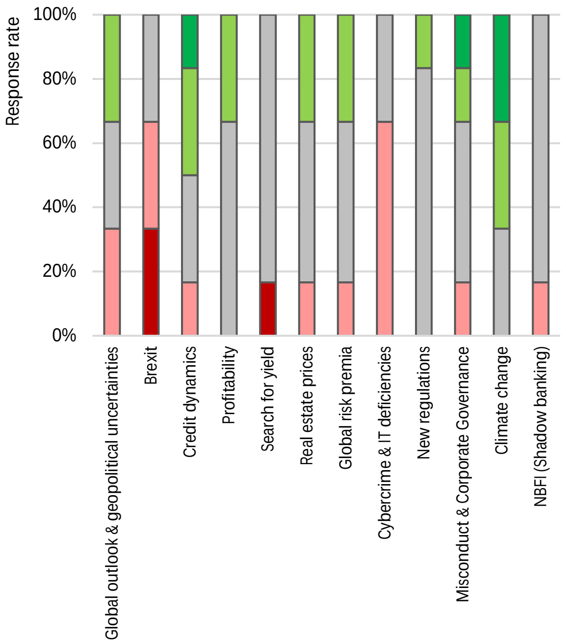

Figure 6 - Core domestic banks: Risk materialisation over the next 12 months

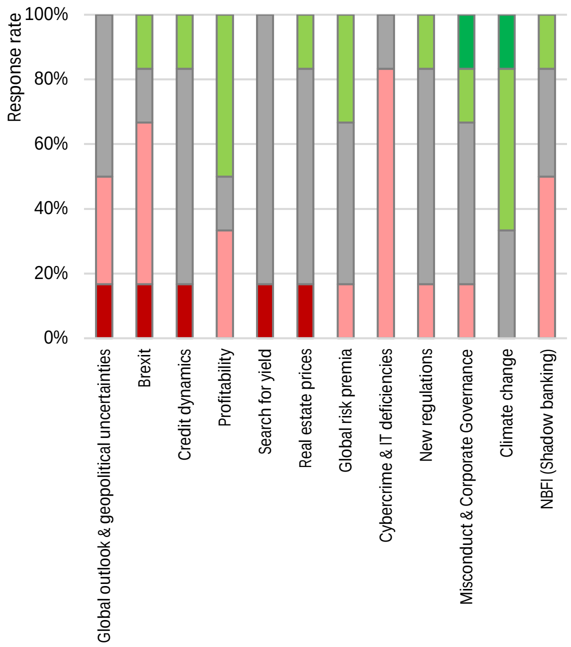

Figure 8 - Core domestic banks: Risk materialisation over the next 1 to 3 years

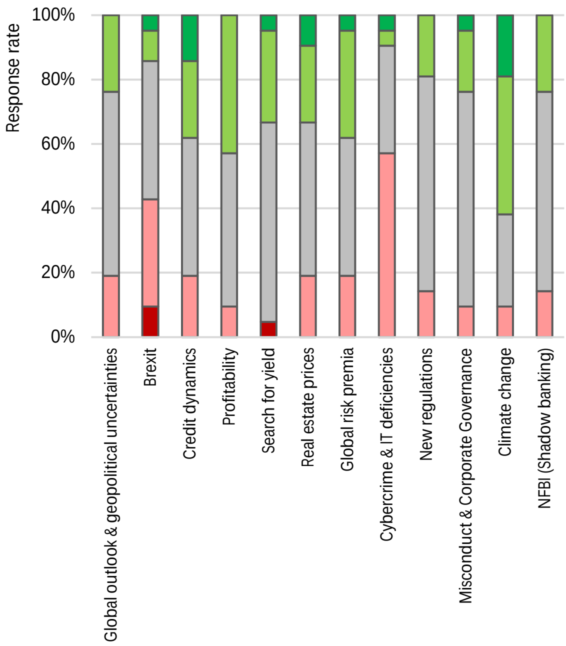

Figure 7 - Banking system: Risk materialisation over the next 12 months

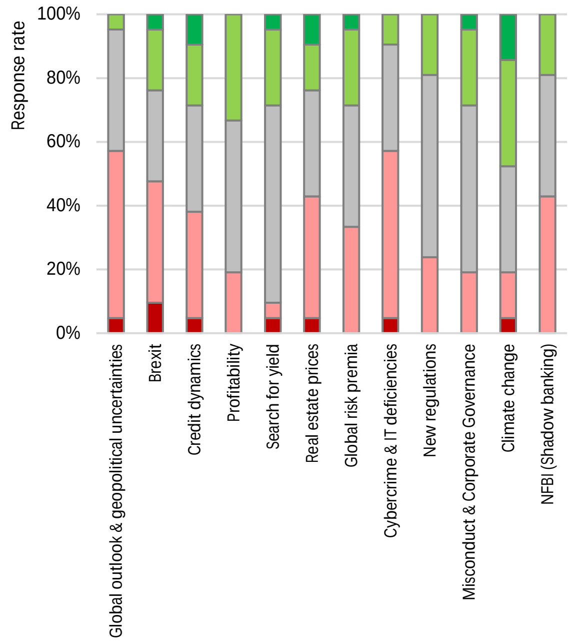

Figure 9 - Banking system: Risk materialisation over the next 1 to 3 years

Expected impact on the financial system in Malta

From the industry's point of view, the materialisation of 'cybercrime and IT deficiencies' related risks, could have repercussions on the operations of individual institutions with possible spill-overs across the financial sector. Other major vulnerabilities raised include those associated with 'real estate' developments, 'credit dynamics' and 'new regulations'.

Looking forward, the banking industry expects 'cybercrime and IT deficiencies' to prevail over the foreseeable future. Moreover, it is envisaged that 'real estate' developments along with 'global outlook and geopolitical uncertainties' will remain relevant over the medium term.

Other sources of risk that are perceived likely to intensify over the next three years include those emanating from 'new regulations', 'banking activities arising from NBFIs (shadow banking)', 'misconduct and corporate governance' and 'credit dynamics'. Core domestic banks in particular, also identify 'profitability' concerns as possibly impacting stability over the next couple of years.

[Refer to figures 10 to 13]

Risks graded as having a potential to impact the financial system in Malta

Cybercrime and IT deficiencies were rated by the core domestic banks as possibly having a detrimental effect on the financial sector, with this risk sentiment prevailing also over the medium term. From a banking system perspective, the potential short-term impact is perceived as likely to be substantial according to 67% of respondents. This risk rating diminishes to 57% under the medium-term state. Banks' growing dependency on IT solutions raises exposure to cyber-related threats. The risk impact emanating from cyber risks is closely linked to the sensitive nature of data that is at stake, together with the level of interconnectedness within the banking system.

Risks arising from global outlook and geopolitical uncertainties are expected to intensify over the next three years. This pessimistic outlook is predominantly driven by the slowdown in the EU and global economy in general, in conjunction with the ongoing trade conflicts initially triggered between the US and China which, in turn, could lead to expectations for material market corrections. Although the Maltese economy has managed to weather shocks, as evidenced by the resilience of the local financial services sector during the global financial crisis, the openness of the Maltese economy exposes it to exogenous shocks.

The impact arising from developments in the real estate market, from a banking system perspective, has been rated as 'high' by 30% of respondents and as 'very high' by 5%. Risk grading rises further when assessing perceptions over the medium term, where half of respondents grade the risk impact as 'high'. For the core domestic banks, both the short- and medium- term horizons have a similar risk grading with around half of respondents grading the risk impact as high or above. Banks pointed out significant increases in house prices over recent years which are driven by various demand side factors such as the exuberant economic growth and exceptionally high inward migration. Although demand driven price pressures are, up to a certain extent, counterbalanced by the increasing supply of dwelling constructions, the potential impact on the financial system is not to be underestimated.

The perceived impact of risk emanating from new regulations is expected to build up over the medium-term horizon. Several institutions share a view about uncertainty with regard to potentially conflicting requirements regarding capturing and sharing individual data as defined by the General Data Protection Regulation (GDPR), Markets in Financial Instruments Directive (MiFID II) and the Payment Services Directive II (PSD2). Furthermore, banks recognise that keeping up with the regulatory developments, such as increased regulatory requirements, involves investment in costly tools that may assist in facilitating the process.

Survey Results

Respondents were requested to grade each risk source according to the expected impact on the overall financial system in Malta, conditional that the risk materialises. Risk impact grading was requested from short- (within the next 12 months) and medium- (within the next 1 to 3 years) term materialisation perspectives. The expected impact grade reflects the overall banking sector risk exposures, counterbalancing capacities, and extent of contagion to the Maltese banking system, financial system, and/or real economy.

Expected impact on the financial system in Malta: Very high High Medium Low Very Low

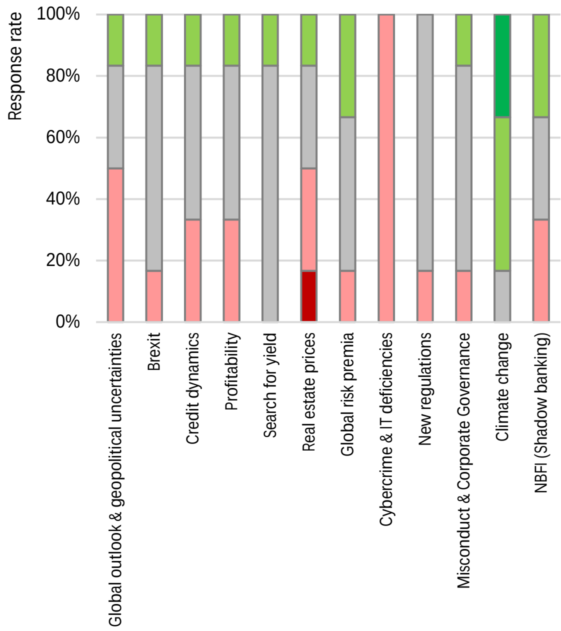

Figure 10 - Core domestic banks: Risk impact intensity over the next 12 months

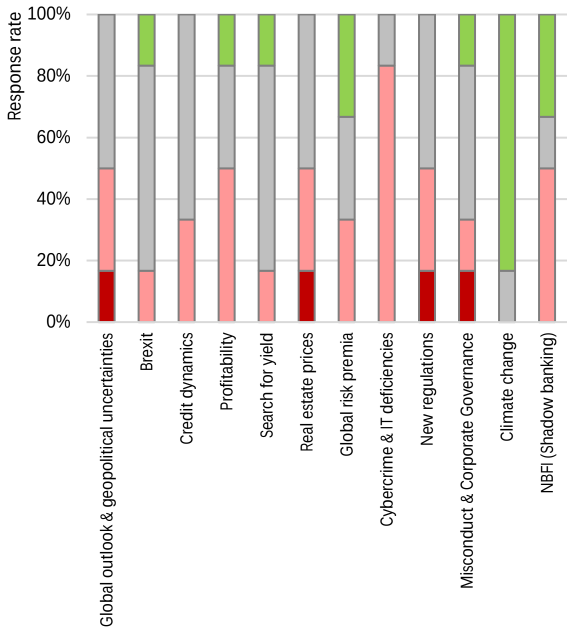

Figure 12 - Core domestic banks: Risk impact intensity over next 1 to 3 years

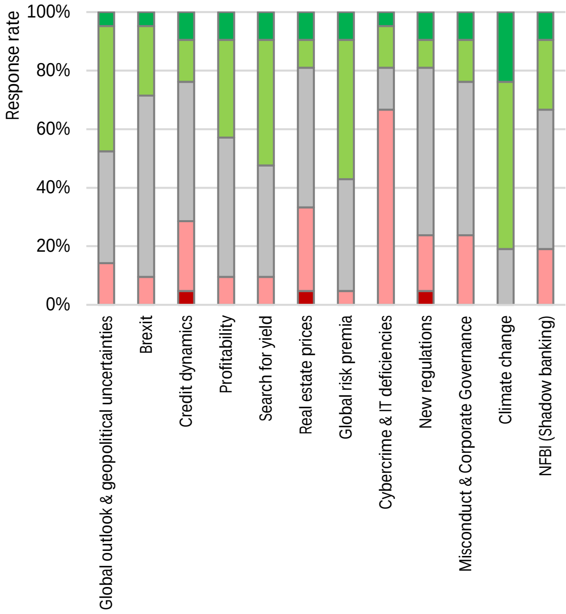

Figure 11 - Banking system: Risk impact intensity over the next 12 months

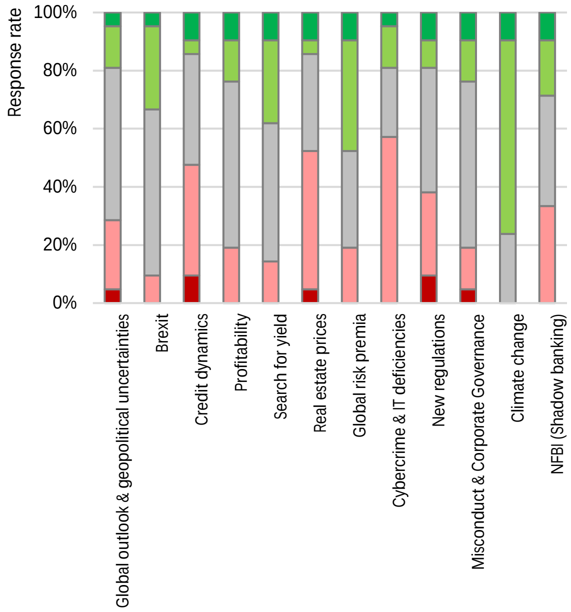

Figure 13 - Banking system: Risk impact intensity over next 1 to 3 years

The risk impact emanating from NBFIs that engage in banking activities (shadow banking) is expected to increase over the next three years. At the current juncture, the number of NBFIs engaged in traditional credit intermediation is assessed to be small and consequently the risk impact that stems from these entities is considered to be contained. This notwithstanding, looking forward, banks operating a non-traditional business model expect competition from NBFIs to grow. Banks note that shadow banking activities introduce new forms of risks which may hinder the ongoing stability of the financial system.

Around a quarter of respondents consider the sector-wide impact of misconduct and corporate governance as high in both the short- and medium-terms. Respondents drew their concern on the possible deterioration of confidence and sentiment in financial institutions and competent Authorities in general. The increased scrutiny from international bodies in relation to anti-money laundering is perceived as potentially contributing to reputational risk of the jurisdiction. From both prudential and financial stability perspectives, misconduct threatens the integrity and effective implementation of supervisory objectives.

Expected impact arising from credit dynamics has been graded by the banking industry as 'high' or above by 29% of respondents in the short-term, increasing to 48% over the medium-term. Certain banks indicated that in the event of exuberant mortgage growth fuelled by increasing real estate prices, the borrowers could face debt servicing challenges. On a positive note banks believe that the recently introduced borrower-based measures directive is expected to reduce the probability of this event occurring.

The vulnerabilities associated with profitability deterioration have been graded as significant, particularly by the core domestic banks. Of concern is the low-for-long interest rate environment which continues to draw pressures on banks' profitability. In addition, this environment has also encouraged a search for yield behaviour. However, the management of investment exposures considered as relatively more risky and lucrative, are to a certain extent contained within banks' risk appetite frameworks. Additionally, both the pace and nature of Fintech developments are increasingly putting pressures on competition against products and services offered by the traditional banks, which in turn is expected to create profitability challenges.

Appropriateness of risk mitigation techniques

Credit institutions in Malta consider themselves adequately prepared to deal with vulnerabilities and risks which have the potential to spill-over across the financial sector. In their evaluation of measures and mitigating techniques (both those which are already in place or shortly to be implemented), they mostly declare an 'appropriate and sufficient', or an 'appropriate and expected to be sufficient' preparedness in diminishing adverse outcomes. This also holds for those risk sources that were rated by the banks as being highly detrimental, with due consideration being given to the challenges ahead.

[Refer to figures 14 and 15]

Preparedness to address identified risk sources

When assessing the measures aimed at minimising the impact of a serious, untoward incident related to cybercrime, the institutions indicated that they allotted substantial resources towards improving security controls to the application, data and network security. This implies ongoing investments in new technologies, staff training and for certain banks the provisioning for losses accrued due to IT deficiencies. Most institutions adopt a proactive approach towards improving fraud detection before it reaches end-customers. Accordingly, banks are moving away from static detection and prevention procedures, and instead are adopting dynamic strategies that continuously evolve within their business functions.

In a bid to target risk impacts causing profitability strains, certain institutions following close monitoring of their credit and investment portfolios, have adapted their business strategies and applied cost control measures that enabled continued business viability. Certain banks, particularly those holding strong ties with the local economy have engaged in a de-risking strategy to improve profitability and efficiency. Banks having a business model which focuses on a particular niche or sector, had less exposure to the low interest rate environment given the bespoke service they provide to their customers. In a bid to maintain competitivity and meet customer demands, banks had to invest heavily in technology, which, although improves on efficiency, also increases costs.

In order to diminish the risk associated with real estate market exposures, credit institutions employ several measures in their credit risk management framework. These include due consideration given towards financing maturity, economic activity exposure diversification, strengthening of provisions and thorough assessment of the borrowers' ability to repay, along with applying collateral haircuts. Even banks that do not have substantial or direct exposure to the real estate sector, still identify their commitment in maintaining a watchful eye on future developments, since shocks can propagate onto other sectors of the economy. Certain respondents also pointed out adjustments made to their risk appetite framework and policies, by applying the new binding borrower-based measures' caps on the loan-to-value and debt service to income ratios, as well as maturity caps.

Credit institutions are strengthening their internal governance in tackling risks related to misconduct and corporate governance, by ensuring on an ongoing basis that they abide by best standards of governance practices. On a sectoral level, the integrity and stability of the financial system is being safeguarded through MFSA's active work towards accelerating its effectiveness in both detecting and responding to instances of misconduct by supervised firms. Operational effectiveness is a key priority for the Authority, being achieved through additional resources, both in terms of manpower and integrating technology with the current supervisory framework.

When addressing the challenge stemming from increasing presence of NBFIs providing bank-like activities (shadow banking), almost a quarter of respondents highlighted substantial investments made in Fintech and modernisation of their services as a way of adapting to the changing landscape. Although a small number of respondents stated that they do not have relevant measures in place, as they do not feel that the competition from NBFIs will affect their operations, they are actively searching for technology-based solutions aimed at enhancing services provided.

Addressing risk impacts emanating from new regulations and the growing complexity of the regulatory environment, certain banks bolstered their resources to ensure that they remain compliant and integrate new regulations within their business in a timely manner. Apart from this, banks also highlighted their continuous efforts in monitoring new and upcoming regulations. Overall, although a strengthened regulatory framework contributes to safeguarding the financial system, the complexities arising from the requirement to comply with the new regulations, along with integrating them with existing polices, may become onerous for banks, particularly the smaller institutions.

Survey Results

Respondents were requested to self-evaluate their readiness in limiting the materialisation of each risk source and the potential impact on the institution by assigning a grade ranging between 'appropriate and sufficient' to 'no measure in place'. Assessment on the appropriateness of measures include those that are currently in place and those which are expected to be implemented shortly.

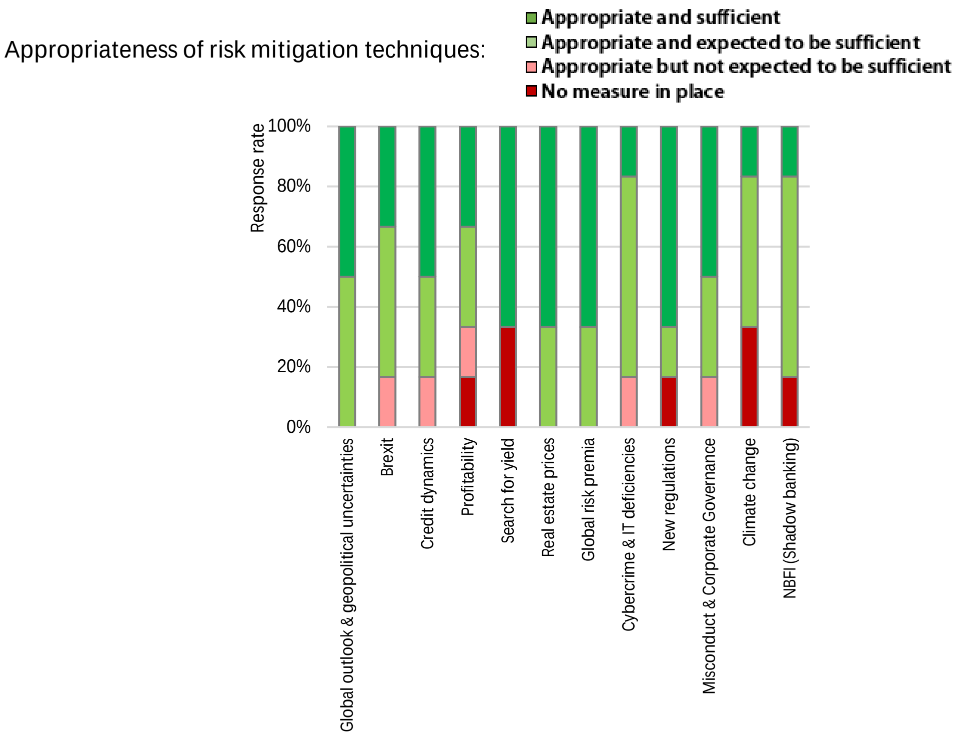

Figure 14 - Core domestic banks: Appropriateness of risk mitigation techniques

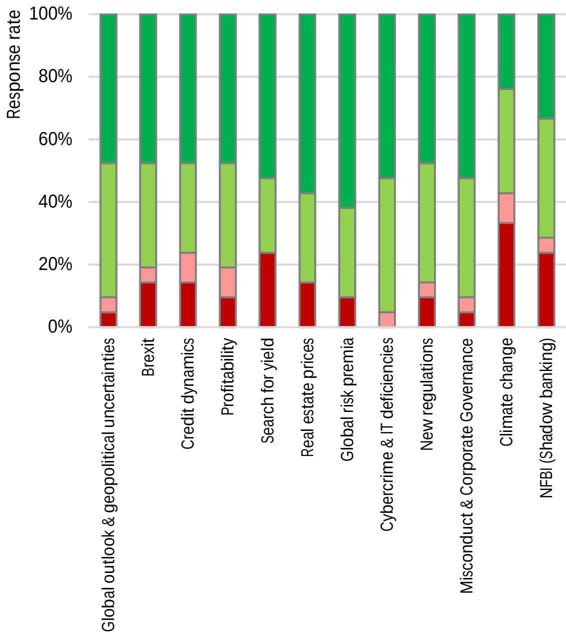

Figure 15 - Banking system: Appropriateness of risk mitigation techniques

Perceived state of the financial system's stability in Malta

Most respondents consider the current state of the financial system in Malta as being stable, with nearly 90% of the banking system respondents rating it as 'stable' or 'very stable'. They based this assessment on the positive current macroeconomic conjuncture as well as outlook in terms of consolidation of government finance and low unemployment. Additionally, they consider the local banking industry as being well capitalised, characterised by ample liquidity and healthy profitability. They observe continued commitment from the MFSA aimed at expanding the resources and strengthening its infrastructure, with a growing drive to safeguard the stability of the sector.

The ongoing local initiatives towards developing Fintech and Blockchain solutions are perceived as a way forward to enhance the sustainability of the financial sector. Moreover, regulatory initiatives such as the introduction of borrower-based measures strengthened confidence in the stability of the sector due to advocating improved resilience of lenders and borrowers against the potential build-up of vulnerabilities stemming from the real estate market.

According to 10% of the banking system respondents, the short-term stability of the Maltese financial system is perceived to be deteriorating. The same rating was graded by 29% of respondents when assessed from a medium-term perspective. This grade is partly based on the recent developments that influenced Malta's jurisdictional reputation. Feedback provided points out the risks associated with money laundering, calling for close monitoring and action by the government and the competent authorities. In this respect, respondents acknowledged the ongoing initiatives and commitments taken by the Authorities in combatting money laundering, financial crime and the financing of terrorism.

Additionally, respondents pointed out a growing dependency on certain sectors and economic activities, such as real estate, tourism and gaming sectors, which may result in excessive risk concentration. Furthermore, another factor causing concern is the complexity surrounding the regulatory environment which poses a challenge not only to the institution itself but also to the supervisory Authority in maintaining its supervisory obligations.

Survey Results

Respondents were requested to assess the overall state of the financial system's stability in Malta by assigning a grade, ranging from 'very stable' to 'stability deteriorating' for both short- and medium- term horizons, together with a brief description outlining the rationale behind the grades.

Perceived state of the financial system's stability in Malta: **Short term** **Medium term**

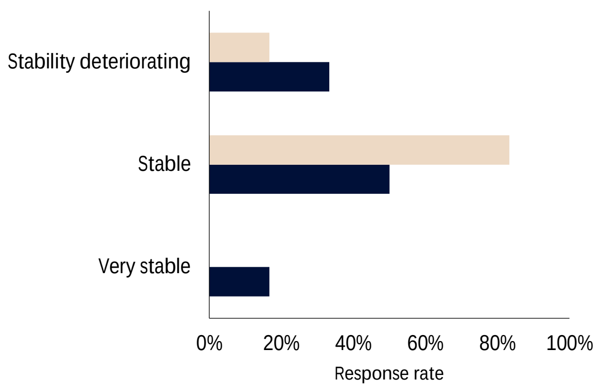

Figure 16 - Core domestic banks: Perceived state of the financial system's stability in Malta

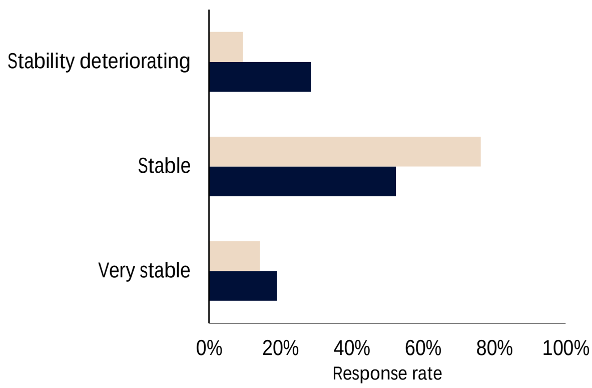

Figure 17 - Banking system: Perceived state of the financial system's stability in Malta

Concluding Remarks

This was the first systemic risk survey that was carried out by the MFSA across the entire banking industry in Malta. We thank the participating institutions for submitting their comprehensive and timely replies which provided very useful insight into the systemic risk perception within the industry. Primarily this helped in mapping out the systemic risks as outlined by the industry both in terms of perceived materialisation and expected impact, together with banks' preparedness to mitigate risks. This analysis is in line with the risk identification mapping studies conducted by the ESRB, ECB and SSM, which enables comparison of the domestic industry risk perception with that of the EU and Euro Area.

Furthermore, the assessment contributes towards identifying the pertinent systemic risks which banks synchronously identified as critical, giving insight for the Financial Stability function within the MFSA to establish the areas which may require further analysis and research, together with possible targeting of mitigating actions.

The risk categories presented in the survey cover a broad range of vulnerabilities perceived by banks to have a potential impact on financial stability. Following the assessments on survey replies, it was concluded that overall banks have a sound understanding of the systemic relevance that certain risks may have on the soundness of the financial system and real economy. Although banks showed a certain level of heterogeneity when assessing risks from an institution perspective, with assessments dependent on factors such as business size and model, they also shared similar concerns when assessing systemic risk from a financial stability perspective.

Banks drew close attention towards risks related to cybercrime and IT deficiencies, expecting the risk to persist over the medium-term horizon. The feedback suggested that cybercrime is gradually becoming a key issue for stakeholders, giving rise to possible implications on the operations of individual institutions and that of the financial sector. The survey also provided interesting observations particularly with regard to local developments, such as risks emerging from the real estate market, misconduct and reputation concerns.

It can be noted that the respondents are predominantly aware of the necessity to employ adequate mitigation measures to address current and emerging systemic risks. However, it was evident from the replies that cost concerns hinder the continuous implementation of additional safeguards and technological investments, particularly in view of the current environment which already draws challenges on profitability levels. The survey response provides an opening to further discussion and research regarding the risk mitigation techniques applied by the institutions. This is particularly relevant to the risks graded as highly likely to materialise and having possible, systemic consequences on the state of financial stability.

Additionally, the survey offered an interesting opportunity to observe the changing perception of the financial system's stability in a context of ongoing developments within the sector and the macroeconomic environment, both locally and globally. Whilst the outlook was mostly optimistic and favourable, the institutions have outlined concerns about jurisdictional reputation, dependency on certain economic activities and regulatory complexities as factors that may influence stability.

The Authority intends to repeat the survey on an annual basis, which would allow for observations of changing landscape and perception of systemic risk over time. Such analyses would complement the existing analyses undertaken by the Financial Stability function of the MFSA, contributing to a more holistic approach when assessing systemic risk together with better identification of emerging vulnerabilities within the financial system.

References

ECB., 2000. 'Systemic Risk: A survey' [online]. Working Paper series No 35. Available from: https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp035.pdf?aed583ed969941da13ed774ce848f750 [Accessed 4 October 2019].

ECB., 2009. 'Financial Stability Review' [online]. Special feature: The concept of systemic risk. Available from: https://www.ecb.europa.eu/pub/pdf/fsr/financialstabilityreview200912en.pdf [Accessed 4 October 2019].

ECB., 2010. 'Financial Stability Review' [online]. Special feature: New quantitative measures of systemic risk. Available from: https://www.ecb.europa.eu/pub/pdf/fsr/financialstabilityreview201012en.pdf?d7c0bb7e124ce142b02c7cbe4f6b6c33 [Accessed 8 October 2019].

ECB., 2019a. 'Macroprudential policy at the ECB: Institutional framework, strategy, analytical tools and policies' [online]. Occasional Paper Series No 227. Available from: https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op227~971b0a4996.en.pdf [Accessed 10 October 2019].

ECB., 2019b. 'Financial Stability Review' [online]. Available from: https://www.ecb.europa.eu/pub/financial-stability/fsr/html/index.en.html [Accessed 19 August 2019].

ECB., 2019c. 'ECB Banking Supervision: Risk assessment for 2020' [online]. Available from: https://www.bankingsupervision.europa.eu/ecb/pub/ra/html/ssm.ra2020~a9164196cc.en.html#toc1 [Accessed 19 August 2019].

ESRB., 2019. 'Annual report 2018' [online]. Available from: https://www.esrb.europa.eu/pub/pdf/ar/2019/esrb.ar2018~d69ff774ac.en.pdf [Accessed 19 August 2019].

ESRB., 2019. 'A Review of Macroprudential Policy in the EU in 2018' [online]. Available from: https://www.esrb.europa.eu/pub/pdf/reports/esrb~32aae4bd95.report190430_reviewofmacroprudentialpolicy.pdf [Accessed 10 October 2019].

European Commission., 2019. 'European Economic Forecast – Autumn 2019' [online]. Available from: https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/autumn-2019-economic-forecast-challenging-road-ahead_en [Accessed 11 November 2019].

European Parliament., 2009. 'Defining and Measuring Systemic Risk' [online]. Directorate General for Internal Policies. Available from: http://www.europarl.europa.eu/document/activities/cont/200911/20091124ATT65154/20091124ATT65154EN.pdf [Accessed 8 October 2019].

European Parliament and the Council of the European Union., 2010. 'Regulation (EU) No 1092/2010 of the European Parliament and of the Council', Chapter 1 Article 2 (c). [online]. Available from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32010R1092 [Accessed 8 October 2019].

Smaga, P., 2014. 'The Concept of Systemic Risk' [online]. The London School of Economics and Political Science. Available from: http://eprints.lse.ac.uk/61214/1/sp-5.pdf [Accessed 4 October 2019].

The Group of Ten., 2001. 'Report on Consolidation in the Financial Sector' [online]. Chapter III Effects of consolidation on financial risk. Available from: https://www.imf.org/external/np/g10/2001/01/Eng/index.htm [Accessed 8 October 2019].

Appendix I – Systemic risk survey

Malta Financial Services Authority survey on Systemic risk - 2019

The scope of this survey is to track perceptions of systemic risk within the Maltese banking industry. This survey enquires about the perceived probability of risk materialisation and expected impact over the short- and medium-term horizons, together with the internal policies currently in place or intended to be implemented in mitigating risks. Brief explanations on the rationale behind the grading provided is vital in enabling identification of systemic risk severity across the industry.

Findings of the survey will be used for research and statistical purposes and will be reported only in an aggregated form.

Section 1 - Systemic risk definition

Provide your internal definition of systemic risk utilised within your institution.

Section 2 - Assessment of probability of risk materialisation, expected impact and risk mitigation

Risk *sources*	Perceived probability of risk materialisation from external sources within the next:		Expected impact arising on the institution conditional that the risk materialises within the next:		Expected impact arising on the financial system in Malta conditional that the risk materialises within the next:		Brief explanation behind the grading provided	List the key indicators (no actual data required) and possible thresholds considered in providing the assessment	Appropriateness of risk mitigation techniques (currently in place and/or expected to be implemented shortly)	Brief description of measure/s in place or intended to be implemented in mitigating the risk
	12 months	1 to 3 years	12 months	1 to 3 years	12 months	1 to 3 years				
Deterioration of global outlook and geopolitical uncertainties	Select	Select	Select	Select	Select	Select			Select	
Disorderly exit of United Kingdom from the EU (Brexit)	Select	Select	Select	Select	Select	Select			Select	
Credit dynamics (excessive credit growth and quality issues)	Select	Select	Select	Select	Select	Select			Select	
Deteriorating bank profitability	Select	Select	Select	Select	Select	Select			Select	
Search for yield behaviour	Select	Select	Select	Select	Select	Select			Select	

Imbalances/overvaluation on real estate prices	Select	Select	Select	Select	Select	Select			Select	
Reassessment of global risk premia	Select	Select	Select	Select	Select	Select			Select	
Cybercrime and IT deficiencies	Select	Select	Select	Select	Select	Select			Select	
Impact of new regulations	Select	Select	Select	Select	Select	Select			Select	
Misconduct and Corporate Governance	Select	Select	Select	Select	Select	Select			Select	
Climate change related risks	Select	Select	Select	Select	Select	Select			Select	
Banking activities arising from non-bank financial intermediation	Select	Select	Select	Select	Select	Select			Select	
Additional risks:										
	Select	Select	Select	Select	Select	Select			Select	

Section 3 – **Perceived state of the financial system's stability in Malta**

How do you perceive the overall stability of the Maltese financial system?

State of financial stability within the next:		Brief explanation behind the grading provided
12 months	1 to 3 years	
Select	Select	

Section 4 - Additional comments

Additional comments related to financial stability and suggestions on the content of the survey.

Appendix II – Risk sources included in the survey

The following are the risk sources that were included in the survey. The extent to which a risk may be systemic is dependent on the extent to which triggering factors would result in a widespread negative impact on the financial system and possibly real economy. In view of this, a number of potential risk drivers which may propagate a risk source into becoming systemic were provided in the survey.

Risk sources	Potential risk drivers which may propagate into a systemic risk
Deterioration of global outlook and geopolitical uncertainties	Risk driven among others by: subdued global economic growth; US trade sanctions and protectionism; geopolitical developments weighing on national economic interests; political fragmentation in Euro Area.
Disorderly exit of United Kingdom from the EU (Brexit)	Risk driven among others by: possible 'disorderly' (no-deal) Brexit; material economic and financial disruptions following the exit; downside risk to EU economic prospects; severe shock in pound sterling.
Credit dynamics (excessive credit growth and quality issues)	Risk driven among others by: rapid growth of credit related to mortgage, construction and real estate economic activities; granting credit in amounts which may be inadequate to customers' ability to repay; possible deterioration in credit quality; reversal in economic growth leading to changes in credit dynamics.
Deteriorating bank profitability	Risk driven among others by: challenges to sustainable sources of profit in the low interest rate environment; structural changes like digitalisation and FinTech adding to profitability pressures; low profitability makes it harder for banks to internalise the stock of non-performing loans accumulated.
Search for yield behaviour	Risk driven among others by: continued and prolonged environment of low interest rates may induce more risk-taking to achieve higher returns; crowded investment positions in risky assets possibly giving rise to disproportionately inflated asset prices.
Imbalances / overvaluation on property prices	Risk driven among others by: continuous increases in house prices may lead to potential overvaluations in residential real estate and commercial real estate markets leading to an unsustainable boom; may compromise private consumption; rapid developments in real estate prices may affect housing investment and the construction industry.
Reassessment of global risk premia	Risk driven among others by: mispricing of risks and excessive risk-taking amid low funding costs and search for yield; risk premia could reverse abruptly as a result of geopolitical tensions, changes in the economic outlook of major economies or in market sentiment.

Cybercrime and IT deficiencies	Risk driven among others by: increasing number of cyber threats which are becoming even more sophisticated; increasing reliance on external parties that provide risk management to a large portfolio of customers; threaten operational resilience by disrupting the vital economic functions provided by the financial system.
Impact of new regulations	Risk driven among others by: transposition of international standards into EU law still subject to political debate; impediments to greater financial integration; potential regulatory arbitrage with respect to new/existing regulations; complexities in integrating new regulations within existing internal polices; time constraints in adopting new regulations.
Misconduct and Corporate Governance	Risk driven among others by: adverse outcomes of open misconduct cases or emergence of new ones; risks around public anger against or distrust of financial institutions; risk of loss of confidence in the competent Authorities.
Climate change related risks	Risk driven among others by: weather phenomena might cause severe losses in economic activities to which banks are exposed; transition towards environmentally oriented trends may put profitability pressures on businesses to which banks are exposed; the market for green financial products is growing rapidly potentially implying the creation of bubbles in particular segments; uncertainty for banks financing green investments due to difficulties in assessing risk level.
Banking activities arising from non-bank financial institutions (NBFIs)	Risk driven among others by: non-bank financial institutions (NBFIs) involves activities that are typically performed by banks; risk may arise through non-banks' ownership links with the banking system; interconnectedness of non-banks could amplify a possible repricing of risk premia; non-bank competitors may reduce margins for the banking sector due to their increased presence in the market and proactivity towards FinTech.

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