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FINANCIAL SECTOR ASSESMENT PROGRAM

June 2024

TECHNICAL NOTE ON BANKING SUPERVISION

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TECHNICAL NOTE

BANKING SUPERVISION

Prepared By
Monetary and Capital Markets Department

This Technical Note was prepared by IMF staff in the context of the Financial Sector Assessment Program (FSAP) in the Netherlands. It contains technical analysis and detailed information underpinning the FSAP's findings and recommendations. Further information on the FSAP can be found at http://www.imf.org/external/np/fsap/fssa.aspx

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Glossary

AFM	Autoriteit Financiële Markten (Authority for the Financial Markets)
ALMM	Additional Liquidity Monitoring Metrics
AWB	Algemene Wet Bestuursrecht (General Administrative Law Act)
BKW	Bankwet – Bank Act
BCBS	Basel Committee for Banking Supervision
BCP	Basel Core Principles for Effective Banking Supervision
BPR	Besluit Prudentiële Regels (Decree on Prudential Rules)
BRO	Bankbreed Risico Overleg (Bank Wide Risk Committee)
CET1	Common Equity Tier 1
COREP	Capital Reporting Framework
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
DNB	De Nederlandsche Bank – the Central Bank of the Netherlands
EBA	European Banking Authority
ECB	European Central Bank
ECL	Expected credit losses
ESRB	European Systemic Risk Board
EU	European Union
FINREP	Financial Information Reporting Framework
FSAP	Financial System Assessment Program
FTE	Full-time equivalent
GFC	Global financial crisis
ICAAP	Internal Capital Adequacy Assessment Process
IFRS	International Financial Reporting Standards
ILAAP	Internal Liquidity Adequacy Assessment Process
IMAS	ECB Information Management System
IMF	International Monetary Fund
ICT	Information communication technologies
IT	Information technology
JST	Joint Supervisory Team
ITS	Implementing technical standards
LGD	Loss given default
LSI	Less Significant Institution
MBF	Market-based finance

MMD	Micro-Macro Dialogue
MOF	Ministry of Finance of the Netherlands
NCA	National Competent Authority
NPL	Nonperforming loan
NPE	Nonperforming exposure
P2R	Pillar 2 requirement
P2G	Pillar 2 guidance
RAS	Risk Assessment System
RTS	Reporting Technical Standards
RWA	Risk-weighted assets
SEP	Supervisory Engagement Plan
SI	Significant Institution
SRB	Single Resolution Board
SREP	Supervisory Review and Evaluation Process
SSM	Single Supervisory Mechanism
WFT	Wet op het Financieel Toezicht (Financial Supervision Act)
ZBO	Zelfstandig bestuursorgaan

EXECUTIVE SUMMARY[1]

Supervision of less significant institutions (LSIs) is effective in the Netherlands. The De Nederlandsche Bank's (DNB) supervisory approach to LSI supervision is intrusive and transparent. It builds on well-developed supervisory tools which support strategically focused, ongoing supervisory dialogue with banks. The supervisory framework blends the robust SSM/EU framework with Dutch elements, enriching the spectrum of supervisory techniques and tools. The LSI supervisory capacity is founded in a solid knowledge base of a broader DNB and it is used to cover critical topics, which include, (i) comprehensive and thorough assessments of risk managements' outcomes, (ii) deep dives into governance, behavior and culture and (iii) the development of the nature risk agenda. DNB and the Autoriteit Financiële Markten (AFM), a conduct supervisor, cooperate very closely while complementing prudential and conduct supervision, to tackle central issues, including Interest-Only (IO) Mortgages. DNB's LSI supervision also factors-in macroprudential deliverables. Furthermore, the supervisory process relies on strong enforcement and thorough licensing processes, on side of DNB. A vigorous governance of DNB's LSI supervision includes 2nd and 3rd lines of defense.

Since the 2017 FSAP, DNB has further developed already good practice.[2] First, DNB has been able to unleash the full potential of the SSM Supervisory Review Process by developing a thorough risk-by-risk approach, which helps challenging banks' Internal Capital/Liquidity Adequacy Assessment Process (ICAAP/ILAAP) and is used to set capital and liquidity requirements. DNB provides detailed feedback to banks' calculations, including underlying methodologies and assumptions, in an interactive supervisory dialogue, which results in transparent and precisely targeted decisions. Second, DNB has stepped up its approaches in climate risk supervision, also by introducing a broader category of nature risk, making them holistic.[3] Third, the governance, behavior and culture frameworks have been applied in practice, delivering concrete findings and recommendations that have been enforced and followed up. In this regard, DNB has also leveraged the roles of supervisory boards, including their independent members, to channel some messages to banks' managements. Finally, DNB has continued in intensive supervision of IO Mortgages, employing tools from across its supervisory toolboxes and integrating its actions in a broader framework.

The FSAP encourages DNB to maintain its proactive and creative approach, and proposes some extensions to solidify this practice. Tested by headwinds of the COVID-19 pandemic, international geopolitical tensions and macroeconomic challenges, LSI supervision has sourced additional information, including loan-level data, and upgraded its analyses, incorporating new input. Although supervision weathered these challenging conditions very well, it should further discuss how these lessons could enrich its day-to-day practice. As the collecting and processing of granular data proved to be a right way forward, DNB should consider how to further develop this

[1] This Technical Note was prepared by David Lukáš Rozumek, Monetary and Capital Markets Department, in the context of the 2023 Netherlands Financial Sector Assessment Program.

[2] The progress on 2017 FSAP recommendations is summarized in Appendix I.

[3] This topic is further discussed in a separate note on Technical Note on Climate Risk Supervision.

practice, and potentially top it up by new analytical tools using modern technologies, including machine learning. DNB and the AFM should also continue the rigorous practice in IO Mortgage supervision, while further emphasizing the quality of inputs for risk managements of banks, in particular, updated clients' disposable incomes and collaterals' values, and motivating banks to improve risk controls and the data aggregation process.

Going forward, supervision must reflect a changing market landscape and rapid deployment of new technologies.[4] Essentially, banking supervision must find a recipe to accomplish in the following areas:

- *Enhancing reported/collected data sets*, to advance capabilities of offsite supervision to run a thorough analysis.
- *Upgrading its analytical toolbox,* with tools which allow processing of large data sets, across different sectors, and allow examiners to offload routine analytical work and focus on complex issues and/or root causes of identified issues.
- *Promoting a level playing field across sectors,* by leveling supervisory outcomes. While unifying microprudential frameworks across sectors – credit institutions (banks) and nonbanks providing credit - is challenging, if not impossible, collecting comparable data and aligning analytical tools and approaches, while connecting information across sectors, can help in achieving comparable supervisory outcomes (which is even more important than unified regulatory frameworks); the previous two points might be important preconditions for this action.

Table 1 provides the main recommendations to enhance the supervision of the banking activities conducted in the Netherlands with a direct bearing on its financial stability. These recommendations are focused on LSI supervision.

Table 1. The Netherlands: Main Recommendations[1]

#	Recommendation	Addressee	Priority	Timeframe
	Organization of Supervision			
1.	Define intermediate steps in the budgetary process to provide additional safeguards to the independence of DNB's supervisory function and the AFM (¶ 35).	DNB, AFM, MOF	M	ST
2.	Implement the practice of a periodic benchmarking of supervisors' salary levels against relevant peers in the financial industry (¶ 37).	DNB, AFM	M	ST

[4] Supervision already reflects this development, for instance, in its focus on the important topics of operational resilience and cyber-risk.

Table 1. The Netherlands: Main Recommendations (Concluded)				
3.	Explore further options to benefit from the second and third lines of defense in strengthening the processes of supervision (¶ 40).	DNB	M	MT
4.	Ensure maximizing opportunities for collaboration between DNB and the AFM, especially to jointly engage with financial institutions and to share data, through systematic measures (¶ 43).	DNB, AFM	M	ST
	Supervisory Approach and Tools			
5.	Ensure that authorities have a clear legal basis to access granular, transaction/loan level data on a regular basis for risk monitoring and analysis, including residential and commercial real estate loans (¶ 52).	DNB, AFM, MOF	H	MT
6.	Explore opportunities to leverage DNB's membership in the SSM/EU to implement largely automated supervisory tools based on advanced technologies, allowing processing of large data sets, in LSI supervision (¶ 55).	DNB	M	MT
	Governance and Risk Management			
7.	Further clarify the requirement of independent supervisory board members in law (¶ 60).	MOF	H	MT
8.	Continue supervisory efforts in the data aggregation field to further highlight its importance to banks and step-up their practice (¶ 62).	DNB, AFM	M	MT
	Credit Risk Supervision			
9.	Further exploit lessons learned from the prolonged period of challenging economic conditions to strengthen risk management systems of banks and to enhance supervisory approaches of offsite supervision (¶ 65).	DNB	M	ST
10.	Consider translating supervisory expectations related to collateral valuations into regulatory requirements or guidance (¶ 70).	DNB	H	MT
11.	Introduce a requirement for all mortgage credit providers and their mortgage clients to periodically update the information on the clients' financial situation (¶ 71).	DNB, AFM, MOF	H	MT
12.	Consider a reporting requirement for transactions with related parties (¶ 73).	DNB	M	MT

[1] In terms of priorities, H, M, and L stand for high, medium and low. In terms of time frame, I, ST, and MT stand for immediate (within one year), short-term (within 1–3 years), and medium-term (within 3–5 years).

SCOPE

1. **DNB's LSI supervision is reviewed in a broader context of the EU regulatory environment.** The Dutch system of supervision is framed by the EU legislation and measures taken by the EU institutions, including the European Banking Authority (EBA) and the European Central Bank (ECB), as a part of both the European System of Financial Supervisors (ESFS) and the Single Supervisory Mechanism (SSM). DNB incorporates the EU approaches to all banks with due regard to the nature, scale and complexity of the institutions. Hence, for a solid understanding of the Dutch system of supervision, it is critical to understand the EU and SSM foundations in which it is established, which set its basic contours and boundaries. This applies not only to the EU-27 framework, but also to the SSM framework, which DNB applies to less significant institutions (LSIs). This note is not intended either to represent an analysis of the state of the banking sector or crisis management framework.

2. **The team took a detailed look at supervision of LSIs, using selected Basel Core Principles (BCP) as a guiding structure for the discussion.** Dutch LSIs are a heterogenous group of institutions, which includes retail, investment, captive and other specialized banks. The review considered all these categories of business models, regardless of the number of entities which operate within this segment. The recommendations which are made regarding supervisory approaches, supervision of traditional financial risks or supervisory resources are meant to be applied for the supervision of LSIs and these recommendations do not consider the quality or resources of the SSM supervision.[5] The recommendations which are made on DNB's institutional arrangements cannot apply such criterion as they are universal across activities of LSI and SI supervision. The mission selected the following core principles (CP) of the BCP to structure discussions with DNB along fundamental pillars of LSI supervision: CP1 - Responsibilities, objectives and powers, CP2 - Independence, accountability, resourcing and legal protection for supervisors, CP3 - Cooperation and collaboration, CP8 - Supervisory approach, CP9 - Supervisory techniques and tools, CP11 - Corrective and sanctioning powers of supervisors, CP12 – Consolidated supervision, CP13 - Home-host relationships, CP14 - Corporate governance, CP15 - Risk management process, CP16 – Capital adequacy, CP17 - Credit risk, CP18 - Problem assets, provisions, and reserves, CP19 - Concentration risk and large exposure limits, CP20 - Transactions with related parties, and CP26 - Internal control and audit. DNB prepared a self-assessment anchored by these CPs and a questionnaire prepared by the mission. Additionally, the ECB responded to questions related to its function vis-à-vis LSI supervision in the Netherlands. This note builds on these responses, as well as on around 40 meetings which took place in Amsterdam and additional virtual meetings within this FSAP, the documents shared in virtual data rooms by DNB and ECB, additional responses by DNB, and on research of publicly available information. The ECB also shared information regarding its oversight of LSIs.

[5] These topics are discussed in the Euro Area FSAPs.

3. The mission maintained close coordination and consistency with other FSAPs in the euro area working on banking supervision, particularly the work of the concurrent 2023 Belgium FSAP.[6]

4. The rest of the note is divided into two sections: The first section introduces banking sector in the Netherlands. The second section takes a closer look at its effectiveness of Dutch LSI supervision, while considering external circumstances.

BANKING SECTOR IN THE NETHERLANDS

A. Market Structure

5. The banking sector in the Netherlands is relatively large compared to GDP, highly concentrated, while market positions of the largest banks are stable.[7] In terms of total assets, the banking sector amounts to approximately 253 percent[8] of GDP as of June 2023, with the market share of systemically important institutions (SI) around 93 percent, while the market share of top-4 banks[9] is 76 percent. The SI landscape has been mostly stable over the last years, with only one bank newly categorized as SI.[10] Four of the SI banks have full or partial state ownership,[11] two of them as a legacy from the global financial crisis.

Table 2. The Netherlands: Dutch Banks Key Financial Indicators
(In percent)

		2018	2019	2020	2021	2022
Return on equity	SI	8.71	7.62	3.27	8.35	8.00
	LSI	4.63	9.08	1.97	8.24	5.80
Return on assets	SI	0.52	0.46	0.19	0.49	0.48
	LSI	0.54	0.93	0.22	0.92	0.63
Net interest margin	SI	1.44	1.42	1.28	1.23	1.34
	LSI	1.26	1.15	1.05	0.96	1.08
Cost-to-income ratio	SI	53.70	50.32	49.39	49.74	49.12
	LSI	53.57	49.51	58.03	48.38	52.41
CET1 to RWA	SI	16.45	16.48	17.03	16.97	15.68
	LSI	21.36	20.08	25.20	24.99	23.35
Leverage ratio	SI	4.61	4.88	5.23	6.54	5.80
	LSI	9.87	8.53	10.25	10.34	9.18
NPL ratio	SI	1.95	1.86	2.24	1.73	1.60
	LSI	1.88	1.63	2.29	1.98	1.80
RWA density	SI	30.46	31.19	28.68	29.76	33.23
	LSI	48.06	44.30	38.79	38.99	40.16
Loan to deposit ratio	SI	123.45	124.52	106.46	104.01	108.04
	LSI	104.27	102.76	97.46	94.09	95.04

Source: DNB.

[6] Belgium Financial Sector Assessment Program Financial System Stability Assessment, 2023.

[7] The structure of the Dutch banking sector is elaborated in Appendix III.

[8] Compared to 335 percent in 2016.

[9] ABN Amro, De Volksbank, Rabobank, ING.

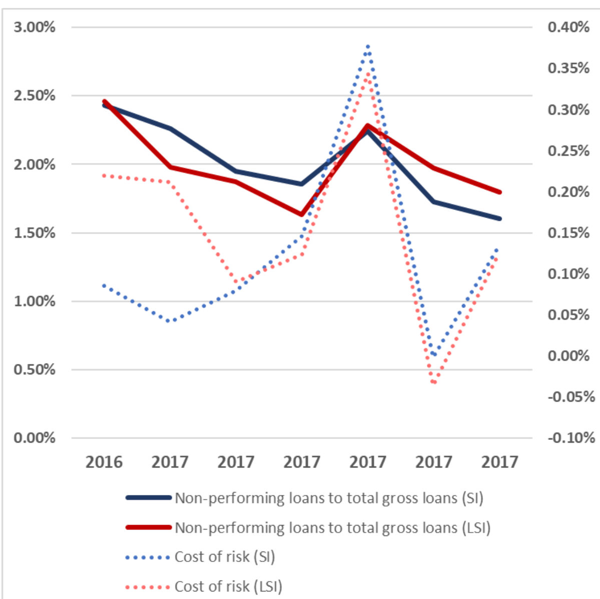
[10] Leaseplan was recategorized from less significant institutions (LSI) to SI, and acquired by ALD/SocGen shortly after.

[11] ABN Amro, BNG Bank, NWB Bank, De Volksbank.

6. Although the number of less-significant institutions (LSI) has remained largely stable, the sector has been evolving in complexity. The LSI population counts 24 banks, including new banks which emerged from Brexit[12] or large investment firms.[13] The sector has also experienced some mergers/acquisitions[14] and voluntary[15] or forced[16] exits of the market. In relative terms, the Dutch LSI sector is quite small compared to other SSM countries, with a market share of 8½ percent in terms of total assets. However, the average size of the balance sheet of a Dutch LSI is around €8,5 billion, which is relatively high within the SSM, where the average is €2,3 billion (2021). Business models of Dutch LSIs vary considerably, spanning across universal, corporate, custodian, emerging markets, financial conglomerate and specialized banks.

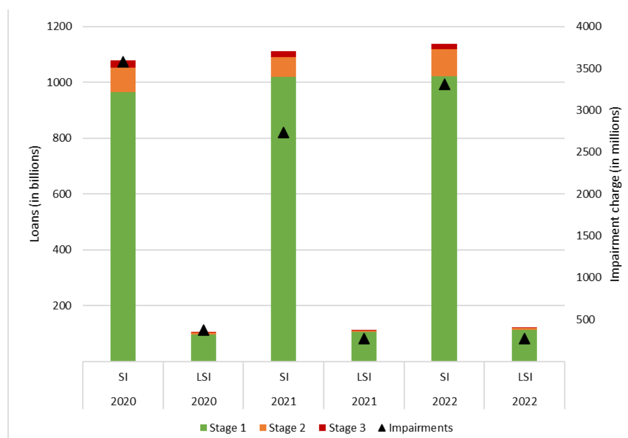
7. The ratio of nonperforming loans (NPL) is low (Figure 1). Extremely low levels of non-performing assets reflect the strength of Dutch economy with historically low levels of bankruptcies and high levels of liquidity, resulting among others from the recent government COVID-19 support programs—both for households and businesses. With a vast majority of assets categorized as Stage 1 (82 percent of total assets, Figure 2), stable economic outlook and the efficient foreclosure/insolvency regime in the Netherlands, banks are well positioned to maintain low levels of cost of risk.

Figure 1. The Netherlands: Non-Performing Loans and Cost of Risk



Source: DNB.

Figure 2. The Netherlands: Asset Quality and Impairment



Source: DNB

[12] Natwest, Norinchukin, Commonwealth Bank of Australia.

[13] MUFG Securities.

[14] Van Lanschot Kempen – Hof Hoorneman.

[15] TD Bank.

[16] Amsterdam Trade Bank bankrupted as a consequence of the Russia war in Ukraine.

8. The Netherlands has a large mortgage market where Interest-Only (IO) mortgages play a significant role. The loans with real estate collateral represent 38 percent of the overall balance sheet of the Dutch banking sector. These include residential mortgages (27 percent), commercial real estate (4 percent) and corporate loans secured on real estate. The Dutch mortgage market is also relatively large in the international comparison, with the volume amounting 83 percent of GDP, compared to the EU average at approximately 40 percent of GDP and the US market at approximately 50 percent of GDP. The LSIs offering residential mortgages are therefore exposed to a downturn of the residential real estate market. Furthermore, the Dutch mortgage market features a high level of IO loans. The share of IO loans stands at 43.8 percent of total residential mortgages in the first quarter of 2022.[17]

9. The majority of bank balance sheets are funded through customer deposits. Deposits of households and businesses (55 percent of the total balance sheet) are the main funding source for Dutch banks. A large part of the deposits (58 percent) is covered by the deposit guarantee scheme.[18] With regard to the other, unsecured deposits, 17 percent comprise current accounts of businesses which represent operational deposits.

10. Capitalization of the Dutch banking sector remains solid, and banks have shown resilience. Despite the economic shocks resulting from both the COVID-19 pandemic and international geopolitical tensions, Dutch banks' capital and liquidity positions remain well-above the minimum requirements as well as above the EU average. Moreover, the recent EBA/ECB stress test[19] shows that Dutch banks can withstand an adverse stress scenario, including a period of both higher inflation and a strong decline in economic growth.[20]

11. The profitability of Dutch banks is highly dependent on interest rate income. The increase in policy interest rates by the ECB has widened net interest margins – so far, banks have managed increasing revenues from higher interest rates on the asset side while keeping the growth of interest rates on liability side, largely represented by deposits, relatively slow. Even though margins have started tightening with the rise of deposit rates, margins may still remain higher than in the negative interest rate environment as banks are no longer hampered by the zero lower bound. The current average return on equity (RoE) of Dutch LSIs is 5.8 percent (2022, 2021: 8.24 percent / 2021 SSM LSI average: 3,5 percent) while the RoE of the top-4 Dutch SIs is 8.0 percent (2022, 2021: 8.35 percent).

12. Dutch banks have ample liquidity and hold sufficient liquidity buffers. All Dutch banks have LCR and NSFR ratios of more than 100 percent. The average weighted LCR ratio of Dutch banks is 157 percent (March 2023) and the average weighted NSFR ratio is 134 percent (December 2022). A key part of the liquidity requirements is the liquidity buffer; this is the amount that banks

[17] DNB Loan-level Database.

[18] Deposit holders covered for up to €100,000 for the case of a bank's failure.

[19] EBA 2023 EU-wide stress test.

[20] See also the Technical Note on Systemic Risk Analysis.

already have available or can access rapidly (for example by selling assets) in order to meet their liabilities. In the case of Dutch banks, the liquidity buffer mainly comprises central bank reserves and cash (67 percent of the liquidity buffer). A much smaller proportion of the buffer comprises bonds (25 percent of the liquidity buffer), which are partly carried at amortized cost on the balance sheet. Regardless of the accounting treatment, banks are obliged to include assets at market value in the liquidity buffer. Hence there is no impact on the liquidity portfolio when liquidating (because it's at market value), but possibly an impact on the capital.

B. Risks and Challenges

13. A prolonged period of economic pressures has tested governance and risk management systems while key risk indicators remain strong. A massive fiscal and monetary stimulus has assuaged the impact of the COVID-19 pandemic on the Dutch economy and as a result also on the Dutch banks, resulting in lower default rates during the COVID-19 pandemic than in previous periods, ultimately avoiding significant losses of banks as consequence of the pandemic. Also, during the COVID-19 pandemic, some banks have accelerated their shift towards digital customer service and processes, and consequently increased investments to digital operational resilience, to ensure availability and security of digital services to customers. Although, the Russia war in Ukraine implicated temporarily higher energy prices and increased cyber-risk, the Dutch banks have remained resilient and profitable.

14. Additionally, recent failures of foreign banks abroad have brought an opportunity to take a stock of domestic practices. The rise of social media, the ease with which new bank accounts can be opened and the speed at which money can be transferred, significantly influence depositors' behavior. As a result, regulatory assumptions on liquidity outflows are influenced by additional factors which can dramatically increase pressure on liquidity positions of banks in times of stress. The Dutch banks had an opportunity to reflect on these lessons learned while being challenged by DNB supervision which developed a tool allowing the sensitivity analysis of liquidity outflows.

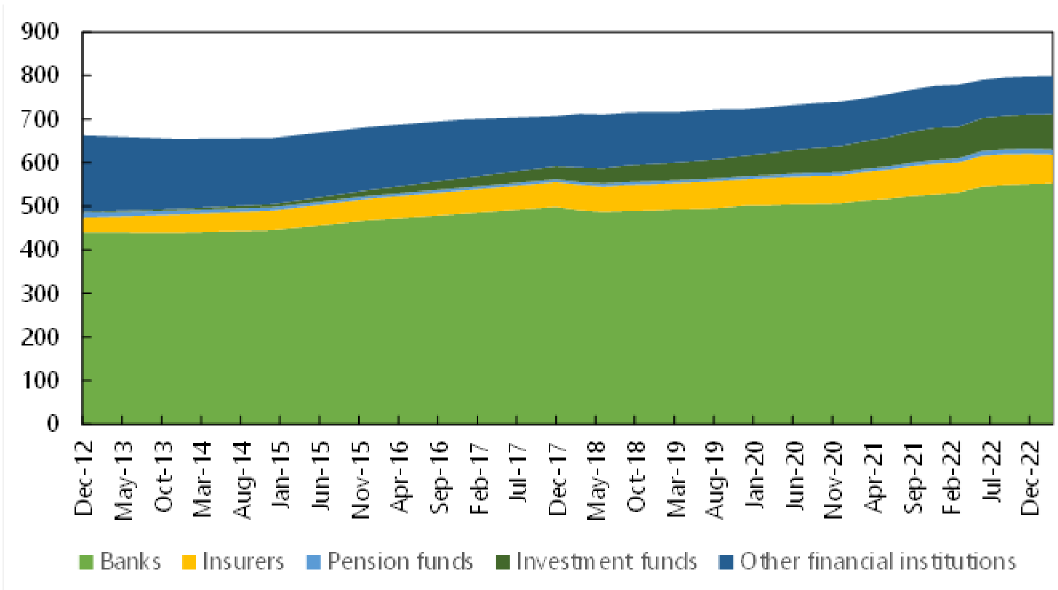
15. Through the stress period, DNB has responded to mounting challenges by upgrading internal governance and by intensifying supervisory activities. During the COVID-19 pandemic, the "Bankbreed Risico Overleg" or Bank Wide Risk Committee (BRO) was founded, consisting of DNB's senior management. It has been in operation since then, providing DNB's senior management a platform to discuss latest developments in monthly meetings. Additional analyses have been conducted, including:

- Analysis of direct and indirect exposures of the Dutch LSIs to specific countries, sectors and institutions;
- In-depth analysis of credit risk via loan tape reporting;
- Analysis of liquidity risk, funding issues and interest rate risk;
- Intensified monitoring, where necessary additional reporting, and contact with banks.

16. Over past years, competition from nonbanks has increased, taking over some growth potential of banks' traditional services. Nonbanks are active providers of all kinds of lending products including general/specialized loans or mortgages, often servicing a portion of riskier clients (or clients with specific needs) and offering more aggressive terms than banks (for example, longer interest rate fixed period on mortgages).[21] Also, payment institutions have partly taken over another typical role of banks in the financial system. Although payments have not been an important source of revenues for banks, they have always represented a service which could attract additional business. Furthermore, banks are confronted with FinTechs which, however, do not have the potential to challenge banks, unlike BigTechs that might enter the market at some point.[22] Banks have responded to this competition by replicating some of the operating models of NBFI (for instance, creating structures outside of the banks' balance sheets to meet the clients'/investors' demand) which adds complexity to supervisory tasks. DNB and the AFM have expanded tools which apply across the market, targeting certain products and services rather than entities.

Figure 3. The Netherlands: Residential Mortgages by Sector

(in billions EUR)

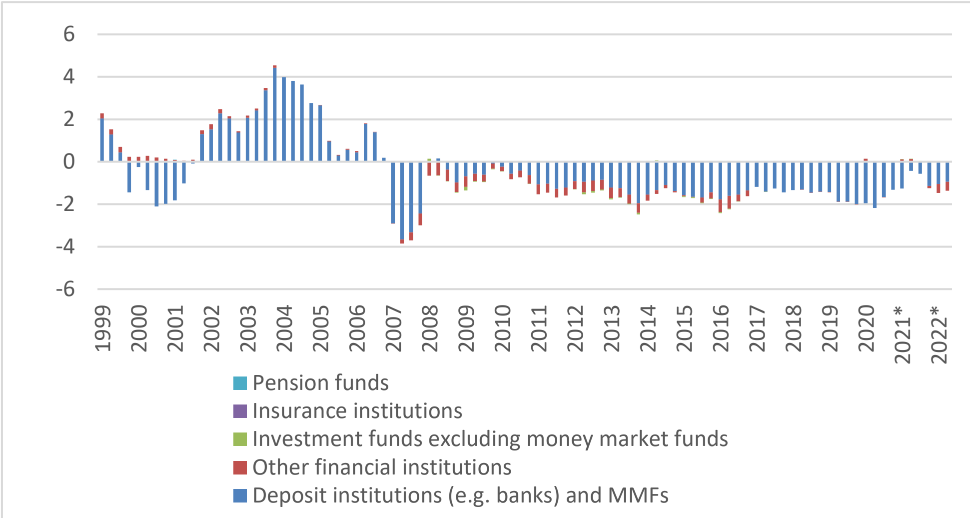


Source: DNB.

[21] Nonbanks can benefit from differences in regulatory requirements but also from a greater flexibility in structuring their balance sheets or lower operational costs.

[22] KPMG: State of Banks, 2022 Edition: "Banks made substantial improvements, but struggle to match leading digital experiences and face strong competition from FinTechs and BigTechs that offer new innovative ways of doing banking."

Figure 4. The Netherlands: Household Net Borrowing by Originator, >1y maturity



Source: DNB.

17. IO mortgages have a specific risk profile which, in conjunction with a certain market situation, can be a source of market disruptions.[23] IO mortgages (performing mortgages originated on interest only basis) generally pose a higher risk compared to amortizing mortgages. The vulnerability can be triggered by changes in interest rates or fluctuations of real-estate markets in interplay with the financial position of borrowers. Considering that 45 percent of mortgages are currently interest only and the maturity profile will experience a spike between years 2035 and 2038, the product requires a persistent attention of all stakeholders. Although the affordability risk is currently low and less than 2 percent of households are expected to be at risk of a residual debt if they sell their homes, a potential problem lies with their ability to refinance if they do not want to sell the property. Additionally, by 2040, nearly 80 percent of the main breadwinners in households with an interest only mortgage will have reached retirement age, while in most cases, retirement means a lower income. The volume of IO mortgages has been gradually decreasing for a decade. The recent increase in interest rates implied increased demand for this product across age groups.

Table 3. The Netherlands: Interest-Only and Other Mortgages, (2022Q1)

	SI		LSI	
	IO	**Other**	**IO**	**Other**
Amount outstanding (bn EUR)	221.6	270.3	36.8	60.9
Average loan to value (percent)	47.0	57.4	53.2	60
Median loan to value (percent)	45.9	57.4	54.0	60
Average maturity (years)	17.7	22.3	22.1	23.0
Median maturity (years)	16.0	25.0	25.0	25.0
Average interest reset period (years)	7.9	10.0	11.1	12.2
Median interest reset period (years)	6.0	8.0	10.0	14.0

Source: DNB.

23 See the Technical Note on 'Macroprudential Policy Framework'.

18. From a supervisory angle, there are additional risk factors associated with IO mortgages. These factors include:

- Lack of monthly principal payments can translate into a lack of continuous monitoring of the relationship with the borrower;
- Lack of an adequate update of borrower risk profile;
- Reliance on collateral as the primary source of repayment;
- High likelihood of the need for refinancing at maturity;
- When originated in mass volumes significantly increases risks for a bank/the system.

19. The presence of climate and broader nature risks is widely recognized by financial institutions and other economic actors as a major risk factor.[24] The Dutch government has published – in December 2022 – a state level strategy to mitigate and manage climate change impacts. The Netherlands is aiming for 60 percent reduction in carbon emissions by 2030 and for being climate-neutral, fossil free, nature-inclusive and fully circular by 2050. The Netherlands is vulnerable to rising sea levels and flooding by rivers. Although there is only a small likelihood of flooding in the Netherlands, potential consequences are severe. In serious but not inconceivable scenarios, flooding could result in losses of up to EUR 60 billion. Some of these losses could, through various channels, be incurred by financial institutions. As DNB started – in 2019 – to request LSIs to pay attention to climate-related risks, almost all Dutch LSIs have started with integrating climate- and environmental risks within their practices and with aligning with guidance by the ECB and EBA. However, the level and depth of action show a wide variety of practices, with some LSIs having more advanced approaches than others.

BANKING SUPERVISION IN THE NETHERLANDS

A. Introduction

20. Banking supervision in the Netherlands is integrated into the EU regulatory and supervisory system. DNB follows the EU regulatory framework embodied in the EU Single Rulebook and the SSM regulation, across banking supervision. DNB combines the robustness of the EU framework with its own approaches which build on the long-established experience with supervision of large internationally active banks. DNB actively participates in the SSM and EBA structures as one of the key contributors. The mission has gathered evidence that common SSM methodologies, processes, and procedures are sensibly applied and complemented by proprietary frameworks which are aligned with the SSM good practice.

21. LSI supervision benefits from a solid capacity of DNB as a whole – that has been further strengthened over years. Decades of supervising the large international financial industry in the Netherlands have shaped a strong capacity base which is also available to LSI supervision. DNB tries to leverage this advantage proportionately across its functions, guided by complexity and

[24] See also Technical Note on Climate Risk Supervision and Technical Note on Climate Risk Analysis.

systemic importance of a specific agenda. As a result, LSI supervision has a potentially good access to profound expertise to establish strong supervisory frameworks. However, LSI supervision also has to increasingly compete with demands of the SSM and SI supervision, which may create some imbalances in the local equilibrium of available resources for the development of frameworks for LSI supervision.

22. As the role of the SSM in banking supervision has been growing, DNB has started expressing further demand for the SSM's support in LSI supervision. While joining the ECB's and national most experienced supervisors to create and maintain robust supervisory frameworks for SI supervision is well justified, LSI supervision may suffer from some shortages of capacity to develop its own framework, if the national contribution to the EU project is not compensated with a substantial pay-back from the SSM, including to LSI supervision. Although DNB has managed to provide sufficient resources to LSI supervision so far, the issue could create some pressures on effectiveness and efficiency of LSI supervision in the long term.

23. A broad knowledge base of Dutch banking supervision is valuable for supervision of a heterogeneous group of LSIs and is further extended by international cooperation. As Dutch LSIs operate a wide range of business models, including international or investment banking, a broad knowledge base is needed to cover all relevant topics. Proactive cooperation with European counterparts and international authorities – facilitating all available tools, such as periodic supervisory and crisis management colleges, and benefiting from a large number of Memoranda of Understanding (MoU) – further enhances the capacity of LSI supervision, while all potential initiatives to deepen these engagements, especially within the SSM, are valuable for Dutch banking supervision. At some point, the capacity of the ECB – which largely relies on a country desk – might be insufficient to provide effective support for such approach at the SSM/ECB level.

24. DNB sets the strategy and priorities for LSI supervision independently, while taking the SSM priorities and risk assessment into account. The SSM sets supervisory high-level priorities that drive the supervisory activities for SIs, while supervisory priorities for LSIs are set by the NCAs and should mirror the risks and challenges faced by the LSI sector. Hence, the responsibility to determine its priorities and activities fully remains with DNB while the ECB plays a consultative role. For 2023, the following priorities determined by DNB for LSI supervision were:

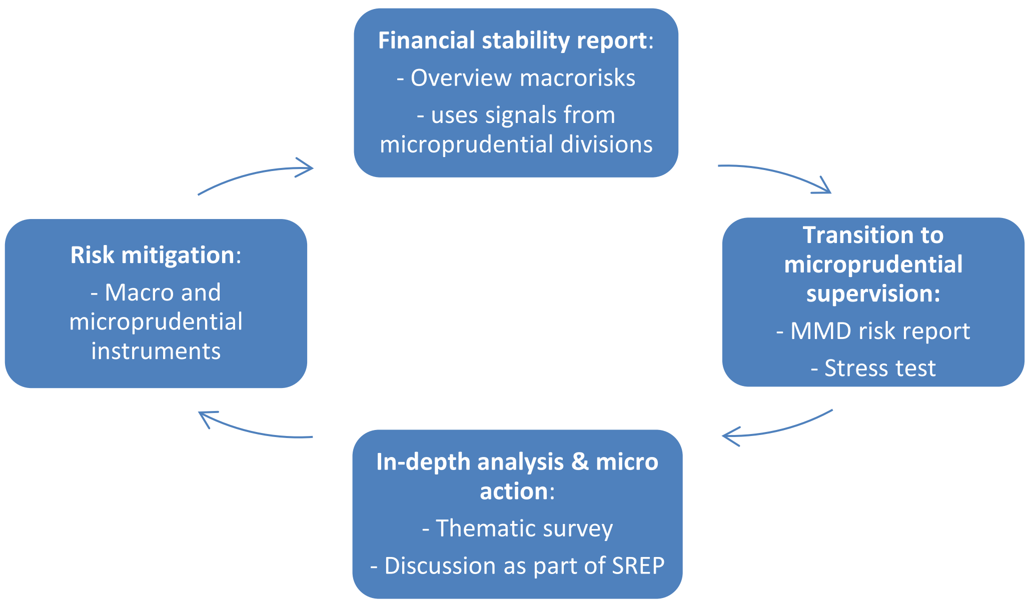
- Credit Risk
- Outsourcing
- Data quality
- Liquidity risk

Additionally, the ECB publishes annual reports[25] summarizing its activities in LSI supervision while identifying major themes relevant for the whole SSM.

[25] LSI supervision report 2022 (europa.eu)

25. DNB integrates macroprudential considerations to the LSI supervisory process and benefits from the support of its prudential objectives by the AFM's conduct supervision in its LSI supervisory framework. DNB produces a micro-macro dialogue (MMD) risk report, which provides an overview of the current macro risks, based on the risks identified in the semi-annual Financial Stability Report (Figure 5). The MMD risk report moreover mentions the potential impact of these risks on financial institutions and provides indicators which the supervisors use to determine the impact of certain macro risks on their institution. Additionally, stress tests are used to analyze the impact of adverse macro-economic scenarios on financial institutions. Banks are required to take into account the macro risks in their own stress tests (as part of the SREP) while DNB conducts top-down stress tests. The AFM complements DNB's program, for instance, by setting conduct rules for mortgage lending.

Figure 5. The Netherlands: Incorporation of Macro Risks into Micro Prudential Supervision



Source: DNB.

26. Looking ahead, DNB can expect to face challenges requiring creativity and visionary steps to upgrade its supervisory framework. DNB needs to be future focused through anticipating and responding proactively to changes in the financial system, with a particular emphasis on technological innovation, climate/nature risk, and developments arising from the macroeconomic environment and geopolitical tensions. While DNB recognizes all these issues, including in its strategic documents, practical aspects of concrete responses will determine the way to success in meeting its policy objectives. New tools and approaches might be needed. as well as fresh perspectives on some legacy issues, including mortgage lending.

B. Regulatory and Legislative Framework

27. Since 2017, the EU has adopted several new laws to elevate prudential standards and reflect innovations – while implementing Basel III – with an important legislative package under way.[26] The EU has taken several steps in implementing Basel III while it seems that these efforts can be accomplished by so called 'CRDVI/CRRIII package' where the EU Council presidency and the European Parliament recently reached provisional agreement on the amendment of Capital Requirements Directive (CRD) and Capital Requirements Regulation (CRR).[27] Unlike some other jurisdictions, the EU applies the Basel framework to all banks – while employing the proportionality principle – which makes its framework robust and consistent. Furthermore, the EU legislators responded to some contemporary issues by adopting measures to foster credit risk management or to shield the system from the impacts of the COVID-19 pandemic. For the Netherlands, some legislative acts including the amended Payment Services Directive (PSDII) or Covered Bonds Directive are potentially impactful, including on the market landscape.

28. The EU delegated acts and EBA guidelines[28] have a significant and direct impact on the Dutch regulatory framework, as DNB follows both very closely. The EBA regulatory framework completes the EU Single Rule Book, with a rich set of guidelines, reports or technical standards. DNB transposes these documents without material changes, even if they are not endorsed as the EU – directly applicable – regulations. In practice, supervisors specifically reference the EBA products in their work, also for practical reasons. The EBA regulatory framework spans across all regulatory topics, including credit or climate risk or reporting and disclosure.

29. Although the ECB has limited direct involvement in day-to-day supervision of LSIs, its products largely inspire LSI supervision. DNB extensively applies the ECB framework also in LSI supervision, including guidance on internal models, NPLs or climate-related and environmental risks. This approach supports the consistency of the supervisory approach while it is also efficient in organizing supervision.

30. DNB is actively contributing to all EU regulatory initiatives while occasionally complementing the EU framework with some national elements. DNB ensures that the EU framework is suitable to the Dutch financial system by contributing to the EU projects across the topics. Additionally, this approach helps refresh the supervisory capacity by frequent contacts with DNB's peers. Where necessary, DNB sets additional benchmarks, for instance, by establishing healthy balance sheet ratios to complement the SREP framework.

31. The purpose of prudential regulation is further supported by conduct of business rules, including regulation which is supervised by the AFM. The AFM requirements positively influence the quality of banks portfolios and foster trust of market participants and clients in the banking system. By supervising conduct rules, complementing prudential requirements, covering, for

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[26] Appendix IV.

[27] Latest updates on the banking package - European Commission (europa.eu). (December 2023).

[28] A selection of the most relevant pieces issued since the last FSAP is included in Appendix IV.

instance, the origination and monitoring of loans, the AFM significantly contributes to the frameworks supporting the resilience of the financial system.

C. Supervisory Independence, Powers, and Resources

32. The Netherlands has developed a system for independent state agencies, including DNB and the AFM, which carefully balances powers and accountability. The operational independence, accountability and governance of DNB as a prudential supervisor, and the AFM as a conduct supervisor, are anchored in national legislation,[29] the Articles of Association of DNB and the Articles of Association of the AFM, and framed by the EBA Regulation[30] and SSM Regulation,[31] in case of banking supervision. DNB and the AFM are accountable for their supervisory activities, primarily to the Minister of Finance and the Minister of Social Affairs and Employment (when it comes to supervision of pension funds), and their operations can be audited by the Court of Audit.

33. The four-year budget limits of DNB and the AFM are informed by multi-year strategies. The supervisory authorities are subject to the Cost Framework that limits the growth of their budget for a period of four years.[32] The multi-year limits in the Cost Framework contribute to financial certainty for supervisory authorities and supervised institutions, as well as administrative and political rest. The limits build on the Supervisory Strategy[33] of each authority which sets the strategic agenda for a four-year term.

34. The yearly budget process is well elaborated by the supervisory authorities, incorporating supervisory objectives and key performance indicators (KPIs).[34] The yearly budgets of DNB and the AFM identify the objectives/KPIs of financial supervision for the upcoming year, based on the government wide framework of outcome orientated budgeting. The draft budgets for the supervisory activities of DNB and the activities of the AFM are (i) submitted for consultation to panels of representatives of supervised institutions, (ii) subsequently approved by the Supervisory Board of DNB and the AFM, then – before December 1[35] - (iii) submitted to the Minister of Finance and the Minister of Social Affairs and Employment for their approvals, and (iv) after the approval, published on the websites of DNB and the AFM. At the end of the budget year DNB and the AFM have to draw up an annual report relating to the duties assigned under the Wet op het Financieel Toezicht or 'Financial Supervision Act' (WFT), including the evolution of meeting

[29] The Bank Act 1998, the Financial Supervision Act (Wet op het Financieel Toezicht, WFT), the Government Accounts Act 2001, the Autonomous Administrative Authorities Framework Act (AAAFA), Act on Funding Financial Supervision (AFFS).

[30] Article 42 of the Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC (europa.eu)

[31] Article 19 of the Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions (europa.eu).

[32] Article 4, Wbft 2019

[33] Supervisory Strategy 2021-2024 (DNB) and Strategy 2023-2026 (AFM)

[34] https://www.dnb.nl/en/about-us/organisation/budget-and-accountability/

[35] Article 3 Wbft 2019 and Article 26 Kaderwet zbo.

KPIs, and send it to the Minister of Finance, the Minister of Social Affairs and Employment and to Parliament.

35. While the next stages of the budget process are effective in practice, the Dutch authorities are encouraged to further detail its structure, to provide independence safeguards to supervision. The ministries assess the budget proposals based on the following aspects (i) formal compliance with law, (ii) procedural agreements,[36] (iii) the definition of key performance indicators,[37] and (iv) factual or procedural errors. The ministries can return the budget proposals to the supervisory authorities to fix any shortcomings related to the mentioned aspects. In practice, the budgetary process is cooperative and informal and potential deficiencies are corrected during ongoing consultations between the ministries and supervisory authorities. While this practice has proved to be operational under normal circumstances, it does not provide sufficient safeguards to the supervisory authorities in the case of a disagreement between the ministries and supervisory authorities and it does not provide a sufficient shield against political interventions.

36. Recommendation 1: Define intermediate steps in the budgetary process to provide additional safeguards to the independence of DNB's supervisory function and the AFM.

37. As DNB and the AFM compete on the labor market for a similar range of experts as financial institutions, the competitiveness of both authorities' jobs should be measured against similar jobs in the financial industry. DNB and the AFM derive the salary levels from the mid-point of the economy. While this practice can be relevant for some jobs, it may disadvantage supervision in hiring experts for areas with specific skill sets. Since financial institutions are major competitors to supervision on the labor market, not all positions with them provide relevant benchmarks, hence only the positions requiring the same level of expertise as supervision should be selected for regular comparisons. Additionally, the gender, as well as broader, diversity aspects can be taken into account.

38. Recommendation 2: Implement the practice of a periodic benchmarking of supervisors' salary levels against relevant peers in the financial industry.

D. Organization of Supervision

39. DNB has established a clear and robust organization, including the internal governance framework of three lines of defense. The organization of supervision[38] clearly defines responsibilities of specific units; their hierarchy is logical and reflects the requirements of the SSM to separate SI supervision. At the same time, it supports proportionate allocations of expertise and

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[36] To what extent have the outcomes of the budget discussion between Ministers and supervisory authorities been taken into account? To what extent have the outcomes of the financial statement discussion between Ministers and supervisory authorities been taken into account? Where applicable, have other agreements between Ministers and supervisory authorities been taken into account?

[37] Controleprotocol.

[38] Appendix II; also: https://www.dnb.nl/en/about-us/organisation/organisational-structure/ and DNB organisation chart as of 1 May 2023 (the organizational chart).

sharing of general supervisory experience. To measure and report on its performance DNB uses 'Planning & Control Cycle'. Internally, DNB tracks detailed performance of objectives, goals, strategies and measures set by the Supervisory Board. Overall, DNB implemented an adequately elaborated strategy and planning process which is firmly anchored in the policy objectives of supervision. Furthermore, internal governance is fostered by internal evaluations and audits on DNB's supervisory performance which are done on a regular basis by the Risk Management & Strategy department (the 2nd line of defense) and the Internal Audit department (the 3rd line of defense).

40. While the existing functions of the 2nd and 3rd line of defense already provide valuable feedback to supervision, their contribution could be further expanded. Risk Management & Strategy department provides independent views on various supervisory topics as well as on the supervisory practice. A possibility to reflect at the time of the review is extremely useful for strengthening the supervisory process, however its extension in time could offer additional opportunities to discuss a respective issue, in other words, implementing the practice of regular follow-ups could significantly improve the existing good practice. Similarly, internal audit could provide support outside of the current thorough audits, which typically occur annually. A concise and focused format of audits ('quick scans') where the primary objective would be a consultancy to supervision could be extremely helpful. Additionally, some audits, for instance, on information security, could be recurrent, with a pre-defined frequency.

41. Recommendation 3: Explore further options to benefit from the second and third lines of defense in strengthening the processes of supervision.

E. Supervisory Cooperation

42. The domestic supervisory cooperation is primarily represented by well-established cooperation among DNB and the AFM. WFT provides a framework for the cooperation, including the exchange of information between DNB and the AFM, and it is complemented by a cooperation agreement between the two supervisors.[39] DNB's and the AFM's management boards meet periodically, the cooperation at lower levels is fluent, considered seamless, including the information exchange. Smooth cooperation is supported by a shared view that prudential and conduct regulation are intertwined by common long-term goals.

43. Several modifications to the cooperation framework could enhance its efficiency, further promote the perception of supervision speaking one voice and acting in accord and extend information sharing. Although the domestic cooperation is strong, it could be further developed. The cooperation focuses on dialogue among supervisors but this dialogue typically does not include simultaneous interactions with the industry. Joint meetings, joint examinations, and similar opportunities to work together while engaging with the industry could increase the effectiveness and efficiency of supervision. These interactions could bring additional insights and

[39] Samenwerkingsconvenant tussen de Stichting Autoriteit Financiële Markten en De Nederlandsche Bank N.V., from 2016.

stronger emphasis on messages communicated to the industry. Additionally, supervisors could create a standardized, but flexible IT solution for sharing data and information which would facilitate regular exchanges as well as ad hoc sharing of even larger sets of information, in a flexible and secure way.

44. Recommendation 4: Ensure maximizing opportunities for collaboration between DNB and AFM, especially to jointly engage with financial institutions and to share data, through systematic measures.

45. International cooperation is facilitated through an extensive set of MoUs which are updated as needed. DNB enters Memoranda of Understandings (MoUs)[40] with supervisory authorities and other governmental institutions in order to provide a formal framework for the exchange and handling of supervisory information while considering a substantial interest of the Dutch financial system. DNB facilitates available EU cooperation frameworks and modalities, including colleges of supervisors. DNB operates in both, home and host, modes, actively engaging with other supervisors.

F. Supervisory Process

46. The supervisory cycle is sufficiently tight and entails a logical chain of actions and feedbacks. All supervisory activities are well integrated in the supervisory cycle. DNB supervisory system is smoothly operating and coherent across SI and LSI supervision. The proportionate implementation of the SSM supervisory framework to LSI supervision contributes to an overall high level of consistency and robustness of supervisory approaches towards the entire banking system. DNB manages to maintain adequate internal governance with incorporated feedbacks and efficient information management, supporting the continuity of processes. For instance, the 'fit and proper' process is sufficiently intrusive, orchestrating available investigative tools and supervisory information through a robust governance. The process is anchored in a pre-defined structure of involved functions and procedures. At the same time, DNB manages to synchronize the process with the ECB and maintain the level playing field across SIs and LSIs.

47. The SREP process steers the majority of supervisory activities and outcomes. In practice, the SREP qualitative and quantitative assessments are very thorough and build on a number of inputs, including from internal processes and analytical tools of LSIs, to verify the robustness of LSIs' governance and risk management.[41] The Supervisory Review Process (SREP) outcomes are shared with banks in an ongoing supervisory dialogue, in a very transparent way, following the risk-by-risk logic. The final result is communicated to senior managements, both in a written and oral format. Banks confirmed that DNB's risk-by-risk approach makes the result

[40] Memoranda of Understanding (dnb.nl).

[41] The SREP structure is included in Appendix V.

foreseeable and easy to interpret. Banks understand where supervisors see the areas for improvements and which actions are expected to be taken.

48. DNB practices risk based, forward-looking, intrusive supervisory approach which is framed by the risk assessment system (RAS). Supervisors monitor the soundness of banks around four elements: (i) business models, (ii) governance and risk management, (iii) risk to capital, (iv) risk to liquidity/funding – on an ongoing basis through the RAS. From the operational perspective, the RAS supports supervisors in their day-to-day work. The RAS builds on regular reporting data (mostly COREP and FINREP), qualitative information (including self-assessments by banks), and also includes ad hoc information received by supervisors from various sources on an ongoing basis. The information sourced from banks' self-assessments is cross-checked with other available information sources and later verified in on-site examinations. The outcome of the RAS is a risk analysis with short narratives accompanied with scores that facilitate comparison and internal communication. The underlying methodology for the RAS is anchored by the ECB approach.[42]

49. Supervision has a wide range of standardized systems/tools to support its regular offsite and onsite tasks while custom-designed tools respond to specific developments. The core data (from COREP[43] and FINREP[44]) is stored in DNB systems and the 'Information Management System' (IMAS) which is administrated by the ECB. IMAS can be used for SI and LSI supervision, however, it provides only a limited functionality to LSI supervision, compared to SI supervision. Hence, LSI examiners review the core data in DNB's own systems and dashboards. DNB has also developed its proprietary system – SUPREMO – which allows monitoring pre-defined ratios and corresponding thresholds, and creates reports to periodically monitor capital and liquidity adequacy. DNB also develops satellite analytical tools, for instance, simulating different stress levels on liquidity outflows when analyzing LCRs of banks.

50. The SREP integrates supervisory knowledge to challenge banks' ICAAP and ILAAP, on the risk-by-risk basis. DNB performs thorough assessments of Internal Capital Adequacy Assessment Process (ICAAP) and Internal Liquidity Adequacy Assessment Process (ILAAP) of banks, analyzing and challenging individual calculations by banks, including underlying methodologies and assumptions. These thorough, risk-by-risk assessments are discussed with individual banks together with the supervisory capital or liquidity requirement. DNB has managed to build a strong analytical capacity and profound expertise which is required for this approach. In return, supervision precisely articulates requirements to banks and banks understand the weaknesses of their approaches as well as risk hot spots. DNB pays similar attention to qualitative aspects. All findings are linked to the SREP structure. DNB's approach to the SREP represents good practice.

51. The conditions in the COVID-19 pandemic underscored the need to analyze granular data. DNB was collecting detailed information about individual loans ('loan-tapes') which are usually required before onsite examinations. These data sets were analyzed to identify irregularities and

[42] ECB Supervisory methodology.

[43] Capital Reporting Framework.

[44] Financial Information Reporting Framework.

determine the asset quality. DNB succeeded in promptly and flexibly responding to the situation while – at the same time – expanding capabilities of offsite supervision. Banks upscaled their reporting activities without major issues, achieving a good quality of reported data. The monitoring of granular information on various risks allowed risks to be compared across different institutions, through close cooperation of several organizational parts of DNB. This agile approach provided supervision with sufficiently detailed and accurate information on recent developments, to support well targeted actions.

52. The efficiency of supervision could be further supported by access to regularly reported granular, transaction/loan level data. The COVID-19 experience demonstrates advantages of regular analyses of granular data. Going forward, this practice could also help in developing tools mapping microprudential treatment of the same risk exposures across the system and designing measures to maintain level playing field. Regular analyses of granular data would enhance efficiency and effectiveness of supervision (across sectors) while avoiding significant burden on banks (financial institutions). However, first, legal impediments need to be lifted:

- The Bankwet – 'Bank Act' (BKW) does not allow DNB to collect personal data which represents an issue if reports contain such data, or data than can constitute personal data when linked with other information;
- The BKW/Uitvoeringsbesluit – 'Implementing Acts' do not anticipate collecting extensive datasets on a regular basis.

53. Recommendation 5: Ensure that authorities have a clear legal basis to access granular, transaction/loan level data on a regular basis for risk monitoring and analysis, including residential and commercial real estate loans.

54. Once DNB is in a position to legally collect relevant supervisory data, it needs to ensure a proper governance to protect this data. Although the FSAP did not observe any particular weaknesses in the current arrangements, the nature of supplementary data may require additional measures. Specifically, DNB should focus on ensuring relevant precautions to protect any personal data, and to make sure this sensitive data is adequately managed.

55. Advanced technologies pose new challenges to supervision while also offering opportunities to increase intrusiveness and broaden the range of supervision. Technologies capable of processing 'big data' or using 'machine learning' models have the potential of a qualitative step-up and increase in efficiency of supervision. Currently, major supervisors are exploring this potential, or developing and testing first generations of tools using advanced technologies. For DNB, this upgrade could be necessary with the increase in the complexity of the financial system and growing penetration of the banking market by NBFIs. As the Netherlands and DNB significantly invest into the SSM project, limited resources are available to develop such tools exclusively for Dutch LSI supervision. Additionally, it is sensible to join forces with partner SSM/EU-NCAs to scale up the capacities for the development of tools suitable to LSI and SI supervision across the SSM/EU.

56. Recommendation 6: Explore opportunities to leverage DNB's membership in the SSM/EU to implement largely automated supervisory tools based on advanced technologies, allowing processing of large data sets, in LSI supervision.

G. Supervision of Risk Management and Governance

57. The risk management requirements are well elaborated, closely following the EU regulation. Pursuant to article 3:17 of the WFT a bank must organize its operations in such a way as to safeguard controlled and sound business operations. Article 23 of Besluit prudentiële regels - the 'Decree on Prudential Rules' (Bpr) further elaborates this requirement by stating that banks should pursue a policy aimed at managing relevant risks.[45] These national rules are framed by the EU regulation, especially the CRD which sets requirements for the treatment of risks by banks. Among others, it determines that the risk management function should ensure that all material risks are identified, measured, and properly reported.[46] Additionally, DNB applies the EBA Guidelines for Common Procedures and Methodologies for the Supervisory Review and Evaluation Process (SREP) and Supervisory Stress Testing (2022) and the Guidelines on Internal Governance (2021). This framework is operationalized by the SSM LSI SREP Methodology.

58. The governance framework is also very robust while regulatory requirements are further explained by guidelines and supported by sound supervisory practice. Corporate governance requirements are established by national law[47] as well as the EU regulations.[48] DNB also issues supervisory guidance on the responsibilities of the bank Board and senior management with respect to corporate governance to ensure there is effective control over the bank's entire business.[49] Furthermore, there is a banker's Oath, where the Code of Conduct is enshrined in the Banker's Oath.[50]

59. Supervisors assess the internal governance and risk management system in RAS while extending the approach to 'behavior and culture' addressing the root causes of governance-related issues (Figure 6). The supervisory practice follows a well-structured logic of the RAS which captures all important aspects of internal governance and risk management systems. DNB's

[45] The policy should be laid down in procedures and measures for the management of risks and implementation in the business processes. These procedures and measures should include authorization procedures, limit settings, limit monitoring and procedures and measures for contingency situations, and should be geared to the nature, size, risk profile and complexity of the activities of the institutions.

[46] Article 76 of CRD.

[47] Pursuant to article 3:17 WFT a bank must organize its operations in such a way as to safeguard controlled and sound business operations. This essential requirement is further elaborated by other articles of the law and in decrees. For instance, Article 17 BPR further elaborates this by stating that: (i) a bank must have a clear, balanced and adequate organizational structure, both generally and at the level of management and internal control; (ii) the business operations of a bank must include a clear, balanced and adequate division of tasks, responsibilities, powers and responsibilities; (iii) rights and obligations must be adequately defined; (iv) reporting lines must be clear; and (v) the system of information and communication must be adequate.

[48] EBA Guidelines on Internal Governance (September 2017); EBA Guidelines on Sound Remuneration Policies (December 2017); EBA ESMA Guidelines on the Assessment of Suitability of MB members and KFH

[49] Governance (dnb.nl).

[50] The Banker's Oath - Tuchtrecht Banken

approach is comprehensive while broadening the scope of the governance framework to behavior and culture. When supervising behavior and culture, DNB considers the Board's decision-making, leadership and communication. DNB investigates whether these activities contribute to the bank's objectives and risk culture while considering group dynamics, behavioral patterns, and mindsets. Concretely, the assessment following the RAS structure includes:

- the identification of behavioral patterns in leadership, group dynamics and decision-making and the organizational capacity to adapt to changing circumstances;
- the assessment of the effects of these patterns: do they contribute to or impede the company's performance and risk profile; and
- influencing institutions to change the risky behavioral patterns that were observed.

Supervisory findings and recommendations are enforced and followed-up (DNB verifies remedial actions by banks).

Figure 6. The Netherlands: Internal Governance and Risk Management Assessment

Source: DNB

60. Additionally, DNB demonstrated on practical examples the significance of independent supervisory board members. The supervisory board of a bank must be constituted and consist of at least three supervisory board members (article 3:19 WFT). Supervision has established supervisory dialogue with supervisory boards, leveraging their role to oversee the implementation of proper governance by Boards, in order to convey important messages and receive feedback on strategic developments. Especially, in crisis situations, the role of independent members was invaluable. Pursuant to article 3:17 WFT a bank must organize its operations in such a way as to safeguard controlled and sound business operations. Article 17 BPR further elaborates on this requirement by stating that a bank must have a clear, balanced and adequate organizational structure, both generally and at the level of management and internal supervision. As stated by the legislator in the explanatory memorandum of article 17 BPR, the requirement of a clear, balanced and adequate organizational structure can entail, depending on the circumstances of the case, that a bank should have a supervisory board with independent members. As such, the requirement of independent supervisory board members is legally embedded in article 17 BPR. DNB can demand with reliance on article 17 BPR from banks to have a supervisory board with independent members and DNB does this where applicable. However, it might not be directly clear that the principle-based rule of article 17 BPR (clear, balanced and adequate organizational structure) can include a requirement for banks to have independent supervisory board members. While the current practice of appointing independent supervisory board member is already well established, its further clarification in law would ensure consistency across institutions and in time.

61. Recommendation 7: Further clarify the requirement of independent supervisory board members in law.

62. Increasing demands for data from banks, in combination with some legacy issues, warrant further work in the area. Banks face a combination of legacy issues with new challenges which justifies a high priority on the supervisory agenda. While legacy issues center around core systems (including inherited from merged or acquired banks) which is complicated to upgrade or replace, new challenges are primarily associated with new demands (for instance, supporting climate risk management). DNB/SSM has established a comprehensive and long-term program to tackle these issues and to implement elements of BCBS 'Principles for Effective Risk Data Aggregation and Risk Reporting' across banks, leveraging the SSM efforts. Although the activity of DNB is on a right track, the long-term and strategic nature of this agenda, together with its relation to other recommendations, motivate the following recommendation.

63. Recommendation 8: Continue supervisory efforts in the data aggregation field to further highlight its importance to banks and step-up their practice.

H. Supervision of Credit, Market, and Operational Risk

Credit Risk

64. DNB implements a consistent and overall strong approach to credit risk supervision while building on the EU regulatory framework. Regulatory requirements for credit risk are based in the EU legal framework. The CRR covers minimum requirements to measure credit risk for capital purposes. Importantly, it contains the definitions of forbearance, non-performing and defaulted loans (¶58).[51] Additionally, the CRR describes the credit granting and monitoring process[52] and contains capital requirements with respect to credit risk,[53] including the usage of internal models, the need for stress testing (Chapter 3), and the use of credit risk mitigation techniques (Chapter 4). The CRD is transposed in Dutch national law (WFT). Section II of the CRD describes requirements for credit institutions with respect to their arrangements, processes, and mechanisms pertaining to risk management amongst which credit risk. Also, the EBA has issued several regulatory products that further explain the requirements or provide guidelines for credit institutions addressing internal processes for credit risk management (Box 1). DNB's supervisory practice is strong, leveraging the depth and extent of the regulatory framework in its day-to-day tasks.

[51] Article 47a describes the definition of non-performing loans, Article 47b describes the definition of forbearance, Article 178 describes the definition of default.

[52] Article 179 of CRR.

[53] Title II of CRR.

Box 1. Overview of the EBA Framework for Credit Risk

- Guidelines on credit risk management practices and accounting for expected credit losses, which aim at ensuring sound credit risk management practices associated with the implementation and on-going application of the accounting for expected credit losses.
- Guidelines on loan origination and monitoring, which specify the internal governance arrangements for granting and monitoring of credit facilities throughout their lifecycle. They introduce requirements for borrowers' creditworthiness assessment and bring together the EBA's prudential and consumer protection objectives. The guidelines aim to ensure that institutions have robust and prudent standards for credit risk taking, management and monitoring, and that newly originated loans are of high credit quality.
- Guidelines on stress testing, aim to achieve convergence of the practices followed by institutions for stress testing across the EU as they provide detailed guidance on the way institutions should design and conduct a stress testing program/framework. The guidelines specify that banks should take into account credit and counterparty risk in their stress testing programs.
- Guidelines on the application of the definition of default, which harmonize the definition of default across the EU prudential framework and improve consistency in the way EU banks apply regulatory requirements to their capital positions. A detailed clarification of the definition of default and its application is provided in these Guidelines, which cover key aspects, such as the days past due criterion for default identification, indications of unlikeliness to pay, conditions for the return to non-defaulted status, treatment of the definition of default in external data, application of the default definition in a banking group and specific aspects related with retail exposures.
- Guidelines on management of non-performing and forborne exposures. These Guidelines target high NPE banks with the aim of achieving a sustainable reduction of NPEs to strengthen the resilience of their balance sheets and support lending into the real economy.
- Several guidelines with respect to the usage of Internal Ratings Based (IRB) models, e.g.
    - Regulatory Technical Standards on assessment methodology for IRB approach
    - PD and LGD guidelines
- Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis. These Guidelines detail the criteria to be fulfilled by legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis before 30 June 2020.
- Guidelines defining general frameworks:
    - Guidelines on internal governance
    - Guidelines for common procedures and methodologies for the supervisory review and evaluation process (SREP) and supervisory stress testing

65. **DNB's practice has been tested and gradually upgraded through the prolonged period of uncertainty and economic challenges.** For example, during the COVID-19 pandemic, DNB undertook enhanced monitoring of emerging credit risk and NPLs, based on granular data from monthly reported loan tapes, which substantially extended its good practice. Against this background, DNB was also evaluating practices of banks in asset classification and provisioning, including the governance measures regarding management overlays or expected credit losses (ECL) models. While the performance of models under different crisis situations remains a point of attention, the robustness of governance frameworks has already been tested and in many cases increased by banks. Supervision can take stock of this experience and update its benchmarks, if needed. Similarly, the extended credit risk monitoring proved to be useful in the time of macro-economic pressures, which followed the Russian invasion of Ukraine.

66. Recommendation 9: Further exploit lessons learned from the prolonged period of challenging economic conditions to strengthen risk management systems of banks and to enhance supervisory approaches of offsite supervision.

67. IO mortgages have presented a series of challenges to strengthen supervisory measures capturing related risks. DNB's supervision holistically considers systemic factors related to the sustainability of this product, including the efficiency of collateral repossessions, the development of real estate market, demographic developments, etc. DNB closely monitors relevant prudential indicators related to IO mortgages. Furthermore, DNB has recently conducted a horizontal analysis on LSIs' risk management of IO mortgage portfolios and has asked LSIs to explicitly incorporate the specific risks of IO mortgages in their ICAAP.

68. The AFM – in its capacity of conduct supervisor - initiated in 2018 a multi-year supervisory campaign targeting all mortgage providers with IO mortgages on their balance sheet. All mortgage providers must ensure that all their customers with an (partial) IO mortgage are aware of the consequences that the IO mortgage has on their financial situation, are able to timely make a conscious decision and to undertake steps to improve their financial situation if necessary. This implies that all IO-mortgage providers must have insight in the number of IO-customers that are financially vulnerable and have a customer outreach program in place targeting all of the above. The mortgage providers must keep reapproaching customers regularly until the end of maturity and will proactively assist IO customers with financial difficulties and provide the customers with a tailored solution.

69. While implementing a robust supervisory approach to IO mortgages, DNB, the AFM and banks need a strong support in legislation to ensure the credibility of primary data. The data on the creditworthiness of borrowers and the value of collaterals are critical for risk management of banks and supervisory assessments. As comes to the information about borrowers, banks perform an outreach to their client to provide information on a voluntary basis, based on the AFM supervision initiatives on IO mortgages, The risk profile of this product dictates the immense importance of accuracy of this input through the life of the mortgage while also posing a challenge of receiving accurate information from clients. An appropriate legal underpinning is essential to strengthen the risk management practice of banks as well as improving the conduct standards (resulting in preventing and overcoming arrears, the installment of a continuous customer outreach program, etc.).

70. Collateral valuation frameworks could be further elaborated. While the EBA[54] and the ECB[55] developed their frameworks, these remain quite high-level and relatively concise to address the issue of appraising residential real estates. Both frameworks are largely overlapping, ensuring regulation of all banks across the EU member states. The ECB focuses on immovable property, while

[54] Guidelines on management of non-performing and forborne exposures (October 2018) and Guidelines on loan origination and monitoring (August 2022).

[55] Guidance to banks on non-performing loans (March 2017).

the EBA Guidelines also include movables in the scope.[56] These frameworks provide a solid basis for establishing a supervisory practice elaborating on these requirements. And indeed, DNB has developed strong analytical tools to support its examinations and establish a solid practice in this area. While the supervisory practice can provide important incentives to banks, DNB could also consider converting supervisory expectations into regulatory requirements or guidance. To foster greater consistency of regulatory application across the SSM, such a step could also initiate a further substantiation of minimum requirements on collateral management, including valuation and monitoring. Additionally, the AFM could revisit its proposal of Guidance on Real Estate Valuations ('Leidraad Vastgoedtaxatie').[57]

71. Recommendation 10: Consider translating supervisory expectations related to collateral valuations into regulatory requirements or guidance.

Box 2. Overview of Systemic Measures Related to Sustainability of Interest-Only Mortgages[1]

Prudential Measures

- In 2022, the ECB and DNB formulated a set of supervisory expectations for the four largest mortgage providing banks in the Netherlands. The following expectations were imposed: banks have to substantially limit production of IO mortgages, stop the production of IO mortgages without a maturity date, significantly reduce exposure of IO mortgages, intensify monitoring, i.e., through the introduction in new contracts of an obligation for clients to update personal information, and increase provisioning.
- In 2022, DNB conducted a horizontal analysis on the interest-only mortgages of the smaller mortgage providing banks in the Netherlands. Following this, in 2023, DNB expected these banks to explicitly incorporate the risks stemming from their interest-only mortgage portfolio in documentation submitted as part of the SREP process.
- Since 2022, DNB requires banks using internal models to apply a minimum floor to their risk weighting of domestic mortgage loan portfolios. In taking this measure, DNB uses one of the options and discretions provided by the Fourth Capital Requirements Directive (CRD IV) and the Capital Requirements Regulation (CRR), specifically Article 458 of the CRR.

Conduct of Business Measures

- The AFM initiated in 2018 a multi-year supervisory campaign targeting all mortgage providers with IO mortgages on their balance sheet.
- The AFM has set the following objective for this program: all mortgage providers must ensure that all their customers with an (partial) IO mortgage are aware of the consequences that the IO mortgage has on their financial situation, are able to timely make a conscious decision and to undertake steps to improve their financial situation if necessary. The AFM formulated the following supervisory expectations:

[56] The content consists of principles/requirements encompassing: (i) monitoring and controls; (ii) individual valuation vs indexation; (iii) appraisers; (iv) frequency of valuation; (v) valuation methodology, with the focus on expected future cash flow (and gone concern approach); (vi) back testing; (vii) IT databases of banks; (ix) valuation of foreclosed assets.

[57] Guidance on Real Estate Valuations, consultation document (2015).

Box 2. Overview of Systemic Measures Related to Sustainability of Interest-Only Mortgages (Concluded)

- The mortgage providers were expected to improve their insights in the specific customer risks of the IO mortgages on their balance sheet. For these purposes the AFM in cooperation with DNB developed a segmentation matrix classifying their IO-customers in risk buckets according to end LTV and time to event such as maturity date and retirement year. These reports were submitted to the supervisors on quarterly basis and since June 2023 on semiannual basis.
- The providers were expected to set up an ongoing customer outreach program to inform all IO-customers on their mortgage situation and future affordability of their mortgage and the alternatives to improve their financial situation. In case of potential future financial vulnerability, the providers are expected to encourage and facilitate customer to undertake a remedial action. Customers who have no financial resources to undertake action, receive a tailored solution. The providers must outreach to high-risk customers on a personal basis.
- The providers were expected to set up a management process for a reoccurring customer outreach until the end of the maturity of the IO mortgage. The providers will keep reporting on the continues client outreach in the future to the AFM on semiannual basis.

- The AFM performed in cooperation with the providers a research on effective methods of consumer outreach from a behavioral perspective and published practical insights from that research assisting providers to increase effectivity of their client outreach.
- Mortgage providers must have adequate procedures and measures in place ensuring consumer interests are taken into account in a balanced manner when developing and maintaining a financial product. Providers must periodically review their products, including IO-mortgages. Mortgage-products should only be developed and maintained that are in the interest of the customer and that are offered to a defined group of customers for whom the product is suitable (the target group).

Industry Self-regulation

- The Code of Conduct for Mortgage Financing was established in 1989.

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[1]Additional information on the overall legal environment are included in Appendix VI.

72. Recommendation 11: Introduce an obligation for all mortgage credit providers to periodically update the information about the (interest only) mortgage client's financial situation.

73. The EU/Dutch regulatory framework does not establish the requirement to monitor and control separately and in aggregate related party exposures, on the basis of regular reporting, as requested by the Basel Core Principles.[58] Also, no framework has been established for competent authorities to perform an assessment of the information that has been collected to meet supervisory needs. Typically, supervision of related party risk is carried out by external auditors, but

[58] The Basel Committee Core Principles for Effective Banking Supervision– in Principle 20/7 – requires the supervisor to obtain and review information on aggregate exposures to related parties, while Principle 10/12 requires the supervisor to establish a process to periodically review the information collected to determine that it satisfies a supervisory need.

their analysis of related party risk is very limited. The reporting framework does include information requirements related to large exposure and concentration limits.

Recommendation 12: Consider a reporting requirement for transactions with related parties.

Market Risk

74. The regulatory framework relevant for market risks spans across the banking and capital market regulation and is applied proportionately by prudential and conduct supervision, utilizing separate toolboxes. The EU prudential framework is centered around several articles of CRD/CRR[59] and it is complemented by conduct regulation, primarily contained in MIFID/MIFIR.[60] Both relevant EU agencies – the EBA and ESMA – have delivered a number of technical standards and guidelines to specify selected requirements.[61] DNB evaluates information and data from various sources – including COREP (market risk), an internal DNB quarterly report (kwartaalrapportage), ICAAPs or onsite examinations – using the RAS and supporting systems, e.g. SUPREMO. The framework established by banks, including risk appetite and limits, is discussed during updates of the RAS on market risk and in onsite visits (or quick scans). In case DNB, for instance, does not agree to the limits, DNB requests the bank to take mitigating actions. In addition, DNB can use Pillar 2 measures and include a capital add-on for market risk in the SREP. Conduct supervision is performed separately by the AFM. Although, DNB and the AFM exchange findings from this area, the authorities are invited to further maximize their cooperation opportunities, as discussed above (¶43).

Operational Risk

75. The regulatory and supervisory framework for operational risk is generally comprehensive. The EU framework lays foundations for operational risk regulation in the CRD/CRR and Digital Operational Resilience Act (DORA),[62] while they are further elaborated it in the EBA

[59] Art. 83 of CRD provides the basis for the regulation of market risk; CRR in Art 92, Art.34, Art. 102-106 (Trading book"), Part Three, Title IV ("Own funds requirements for market risk"), Title V ("Own funds requirements for settlement risk"), Title VI ("Own funds requirements for credit valuation adjustment risk), Chapter 6 of Title II (Counterparty credit risk) outlines uniform rules concerning risk specific prudential requirements that banks shall comply.

[60] Markets in financial instruments and amending Regulation (EU) No 648/2012; Markets in financial instruments and amending Directive.

[61] For instance, EBA Reporting Technical Standard (RTS) on exclusion from CVA of non-EU non-financial counterparties; EBA RTS on non-delta risk of options in the standardised market risk approach; EBA RTS on prudent valuation and Amended Version; EBA RTS on the definition of market; EBA RTS on the definition of materiality thresholds for specific risk in the trading book; EBA RTS on the standardised approach for counterparty credit risk; EBA ITS on appropriately diversified indices; EBA ITS on closely correlated currencies; EBA RTS on the treatment of non-trading book positions subject to foreign-exchange risk or commodity risk; EBA Guidelines on corrections to modified duration for debt instruments, etc.

[62] DORA brings harmonization of the rules relating to operational resilience for the financial sector applying to 21 different types of financial entities, covering important topics such as: Information and Communications Technology (ICT) risk management; ICT incident management and reporting; testing of the operational resilience of ICT systems; and the management of ICT third party risks.

technical standards and guidelines.[63] DNB has published and regularly updates an overview which details how EU guidelines and recommendations are implemented in Dutch law with references to the relevant national provisions. DNB applies the SSM Manual to supervise operational risk. To structure the supervisory analysis, DNB has developed a dedicated section in the RAS, where operational risk is analyzed in detail. For the analysis, DNB uses DNB IT questionnaire (a bank's self-assessment), ICAAPs, or interviews with banks' specialists on operational risk. DNB organizes internal SREP panels in which the results of all banks are compared. These SREP panels are an important tool to ensure a level playing field. They also provide the quality assurance of individual assessments.[64]

76. DNB has considerably stepped up its practice in supervision of outsourcing. The SREP includes a review of the outsourcing risks for individual banks. Based on these results a series of onsite inspections have been conducted with a focus on the institution's risk management capabilities over its outsourced services. However, the monitoring of service providers is not subject to supervision yet, as required by the DORA. An informal monitoring is currently applied on important service providers, for instance, based on publicly available information. DNB also pays particular attention to third party reports within the notified outsourcing arrangements by banks. In addition, banks are requested to prove their knowledge and (risk) management over service providers during on-site inspections and in the horizontal analyses of IT and outsourcing.

77. During the COVID-19 pandemic, some banks have accelerated their shift towards digital customer service and processes, moving the issues of operational resilience further to the center of supervisory attention. Banks are also adjusting their branch footprint accordingly. All these (accelerated) developments increase the necessity for digital operational resilience, to ensure availability and security of digital services to customers. To this end, DNB, together with ECB, has intensified supervisory attention on risk areas relevant to digital operational resilience, including IT risk management, the 3rd party oversight and risk management, and IT Cyber security. Additionally, new insights into operational resilience of banks have emerged and been reflected in the practice of banks and supervision after the Russian invasion of Ukraine.

I. Supervision of Liquidity Risk

78. DNB has implemented LCR and NSFR as well as all other elements of the modern regulatory framework, together with a robust supervisory practice. DNB imposes specific liquidity requirements through Pillar 1 and Pillar 2 requirements. Pillar 1 requirements of the 100 percent LCR and 100 percent NSFR are applicable to all banks. These requirements directly follow the CRR[65] and the LCR Delegated Regulation.[66] Pillar 2 requirements are institution-specific and

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[63] Guidelines on *operational risk* mitigation techniques (May 2013); Guidelines on the management of *operational risk* in market-related activities (May 2013); Regulatory Technical Standards on assessment methodologies for the use of AMAs for *operational risk* (November 2019); ESAs Joint Committee Technical standards under the Digital *Operational* Resilience Act (DORA) (July 2023); Guidelines on ICT and security *risk* management (July 2023); Guidelines on *outsourcing* arrangements (July 2023); Guidelines on *outsourcing* arrangements (February 2019)

[64] Including if they cover all important developments across banks.

[65] Part Six of CRR.

[66] CDR (EU) 2015/61.

include: (i) a six month survival period, covering the gap between the LCR (1 month) and the NSFR (1 year), based on the internal stress test of institutions; (ii) limits to the asset encumbrance of selected banks; and (iii) quantitative and qualitative requirements for a higher risk banks. DNB analyses regular reporting (e.g., LCR, NSFR, ALMM),[67] ILAAPs, internal management information of a bank, etc., to inform liquidity dashboards and the RAS and consequently assess liquidity risk in the SREP (discussed in internal SREP panels to decide the final scores and propose liquidity requirements).

79. Finally, DNB performed a horizontal exercise inspired by the Silicon Valley Bank (SVB) case. DNB tested the resilience of the banking system and supervisory frameworks against some symptoms of the SVB case. Besides analyzing the results related to banks in the sample, DNB also upgraded its analytical toolkits.

J. Enforcement

80. DNB/AFM have implemented procedures to ensure consistency and transparency of enforcement action. Enforcement activities are framed by the AFM-DNB Enforcement policy which introduces essential principles and is available online.[68] Also, administrative sanctions are published, enhancing transparency (predictability of public authority) and ensuring the consistency of decision-making. DNB and the AFM are sufficiently agile in taking enforcement action, spanning across a variety of formal and informal enforcement measures (including moral suasion).

81. Furthermore, DNB/AFM updated the internal processes marking good governance – avoiding inaction and emphasizing the objectivity of enforcement action. Internally, the enforcement process is well organized, supporting the cooperation of examiners and lawyers at all stages. Also, both authorities implemented measures supporting efficiency and preventing the long processing of individual cases. Decisions to start an informal or formal enforcement process are taken by the division director responsible for LSI Supervision and the division director of the Intervention and Enforcement department. The decision can also be taken by the Executive Director of DNB who is responsible for banking supervision. The level at which the decision is taken is dependent upon a specific decision and the risk category to which a particular bank is classified. DNB therefore uses a matrix of supervisory power. Final draft decisions to impose a penalty and/or administrative fine are always submitted, via the division director of the Legal Services Division, for the approval of the director of DNB who is responsible for banking supervision. Before taking a final decision, the interested party (typically a bank) can raise an objection, which is independently assessed. Finally, the offender may appeal the decision at the District Court in Rotterdam. Lodging a writ of objection, appeal or higher appeal does not have suspensive force except in the case a provisional relief, granted by a judge.

[67] EBA's Additional Liquidity Monitoring Metrics.

[68] The DNB has a dedicated website for Enforcement: Enforcement (dnb.nl).

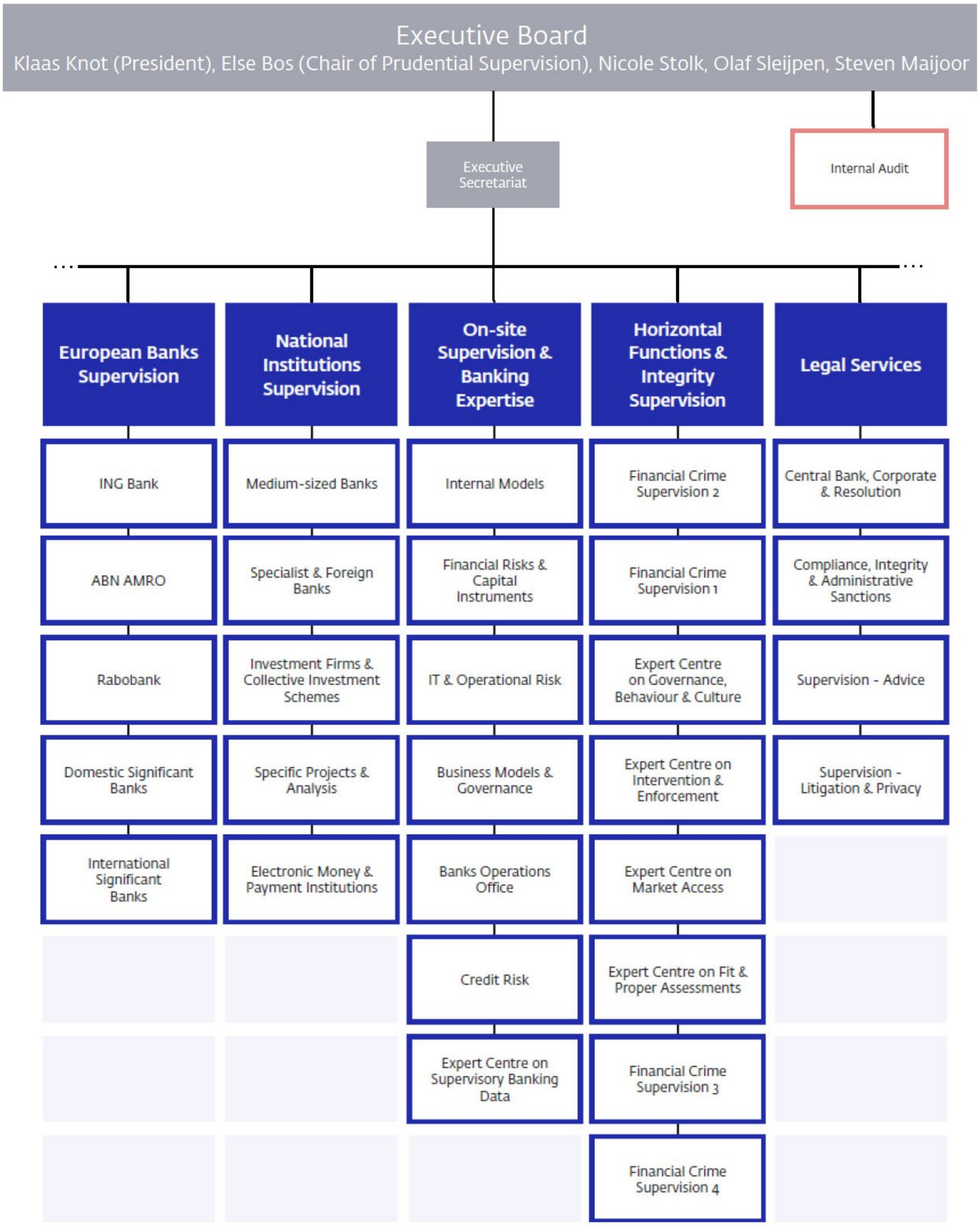
Appendix I. Actions Taken by the Authorities to Address 2017 Recommendations

2016 Recommendation[1]	Actions Taken
1. Enhance the powers of DNB (on LSIs and in consistency with the overall SSM approach) to introduce technical regulations in accordance with national and EU legislations.	**Addressed.** DNB and the AFM combine different approaches to achieve a sufficient level of detail and consistency of the regulatory framework, including facilitating direct references to the EU guidelines.
2. Exclude DNB from the Wet normering topinkomens/Law on Standards for Remuneration for Senior Officials in the Public and Semi-Public Sector (WNT-3) (salary cap) proposed by the MoF, and give it with greater autonomy in setting its supervisory budget.	**Not relevant/Partly addressed.** The initiative to introduce the Wet normering topinkomens/Law on Standards for Remuneration for Senior Officials in the Public and Semi-Public Sector (WNT-3) was not submitted to Parliament. The budgetary independence hasn't been increased and the FSAP has further discussed this area.
3. Implement a more active supervisory role in assessing loan classification.	**Addressed (LSI supervision).** Since the last FSAP, DNB has enhanced its supervisory program which includes the focus on implementation of the frameworks discussed in relation to recommendation 9.
4. Encourage a more active role of the SB of Dutch banks by ongoing engagement with the SB.	**Addressed (LSI supervision).** DNB demonstrated on practical examples engagements with supervisory boards, including concrete benefits of such engagements. The area has been further elaborated by this FSAP.

[1] In the context of the 2017 Netherlands FSAP, prior to the 2018 Euro Area FSAP and understandings with the ECB on the coverage of national versus EA FSAPs, several of these recommendations are addressed primarily to the SSM on SIs.

2017 Recommendation	Actions Taken
5. Strengthen supervisory practices for internal ongoing model monitoring (Internal Ratings-based (IRB) and the Advanced Measurement Approach (AMA)).	**Addressed (LSI supervision).** DNB has explained its thorough approach in assessments of models, while benefiting from its broad experience. This was further evidenced by feedback from DNB counterparts.
6. Place more emphasis on confirming that operational risk management systems are effectively implemented.	**Addressed (LSI supervision).** DNB has implemented a number of different approaches to assess operational risk management systems while using a variety of tools, including onsite examinations.
7. Clarify the expectations for prior notification for material outsourcing arrangements.	**Addressed (LSI supervision).** The EU framework on outsourcing has been updated. With its implementation, DNB enhanced technical solutions to transfer notifications. Additionally, it intensified its supervisory activity in the field.
8. Prioritize work on data aggregation to raise standards.	**Addressed (LSI supervision).** The work has been prioritized and banks' practices have been put under ongoing scrutiny by supervision. However, challenges on side of banks prevail due to the complexity of related issues, which include legacy systems and increasing demands on data.
9. Implement harmonized definition of default and forborne loans.	**Addressed (LSI supervision).** DNB implanted harmonized definition of default and forborne loans. Additionally, it benefited from the EU/ECB initiatives in the area (the ECB regulation has been followed also for LSIs). Specifically, DNB implemented CRR Article 47a and CRR Article 47b, which describe the definition of non-performing loans and forborne loans respectively, and article 178 CRR, which describes the definition of default. DNB is also compliant with the EBA guidelines on the definition of default as of 2019. Finally, DNB follows the 2017 ECB Guidance to Banks on the Treatment of NPLs which includes, but is not limited to, the classification of loans.
10. Undertake a cross-sectoral review (including sampling loan files) of credit underwriting standards of mortgages originated for the banking, insurance, and pension sectors.	**Addressed (LSI supervision).** DNB has undertaken a broad spectrum of activities while also building on the support provided by the AFM frameworks.

Appendix II. Organizational Chart of DNB Banking Supervision



Appendix III. Structure of the Dutch Banking System

SI	Type of business model
ING Groep N.V.	G-SIB
Coöperatieve Rabobank U.A.	Universal Bank
ABN AMRO Bank N.V.	Universal Bank
De Volksbank N.V.	Retail Lender
BNG Bank N.V.	Development / Promotional Lender
Nederlandse Waterschapsbank N.V.	Development / Promotional Lender

LSI	Type of business model
Commonwealth Bank of Australia (Europe) N.V.	Corporate-oriented banks
Mizuho Bank Europe N.V.	Corporate-oriented banks
MUFG Bank (Europe) N.V.	Corporate-oriented banks
MUFG Securities (Europe) N.V.	Corporate-oriented banks
NatWest Markets N.V.	Corporate-oriented banks
Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.	Corporate-oriented banks
Anadolubank Nederland N.V.	Corporate-oriented banks
Credit Europe Bank N.V.	Corporate-oriented banks
DHB Bank N.V.	Corporate-oriented banks
Yapi Kredi Bank Nederland N.V.	Corporate-oriented banks
Norinchukin Bank Europe N.V.	Corporate-oriented banks
NIBC Bank N.V.	Universal bank
Triodos Bank N.V.	Universal bank
Van Lanschot Kempen N.V.	Universal bank
BinckBank N.V.	Other specialised banks
Citco Bank Nederland N.V.	Other specialised banks
Adyen N.V.	Other specialised banks
bunq B.V.	Retail-oriented banks
Bank Ten Cate & Cie. N.V.	Retail-oriented banks
Brand New Day Bank N.V.	Retail-oriented banks
Achmea Bank N.V.	Retail-oriented banks
Aegon Bank N.V.	Retail-oriented banks
Nationale-Nederlanden Bank N.V.	Retail-oriented banks

Appendix IV. Overview of Key Regulations Adopted Since 2017

EU Major Legislative Initiatives

- CRR II (2019/876): implements binding Net Stable Funding Ratio (NSFR) & Leverage Ratio, with changes linked to Basel fundamental review of the trading book (FRTB), Standardized Approach for Counterparty Credit Risk (SA CCR), total loss absorbing capacity (TLAC) and a revised Pillar 2.
- CRD V (2019/878): requirements in relation to IPU, financial holding companies, systemic risk buffer and Pillar 2 Requirements & Guidance.
- COVID-19 "quick fix" (2020/873): modified implementation timelines for certain aspects of CRR II, along with additional flexibilities (e.g., extended IFRS transitional arrangements).
- PSDII (2015/2366): aims to payments more secure in Europe, boost innovation and open up payment markets to new nonbank entrants.
- BRRD II (2019/879): further strengthens the recovery and resolution regime as regards the loss-absorbing and recapitalization capacity of credit institutions and investment firms.
- Securitization (2017/2401; 2017/2402): amended capital requirements for securitization exposures.
- Covered Bonds (Directive 2019/2162): sets our requirements for national covered bond frameworks and the credit institutions operating within same.
- NPL Backstop (2019/630): introduced new minimum loss coverage provisioning requirements for exposures, originated after the Regulation and which subsequently turn non-performing.
- A legislative proposal of CRD VI and CRR III (a provisional agreement among Council presidency and the European Parliament): the intended finalization of the implementation of the globally agreed Basel III regulatory reforms.[1]

EBA Major Regulations

- Guidelines on loan origination and monitoring[2] which specify the internal governance arrangements for granting and monitoring of credit facilities throughout their lifecycle.
- Guidelines on the application of the definition of default[3] prescribing additional criteria for the identification of non-performing and distressed credit, which includes aspects such as the days past due criterion for default identification or indications of unlikeliness to pay.
- Guidelines on management of non-performing and forborne exposures.[4]
- Report on Management and Supervision of ESG Risks for Credit Institutions and Investment firms.[5]

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[1] Banking sector: Provisional agreement reached on the implementation of Basel III reforms - Consilium (europa.eu). (June 2023).

[2] EBA GL 2020 06 Final Report on GL on loan origination and monitoring.pdf (europa.eu) (May 2020).

[3] EBA in Guidelines on the application of the definition of default (September 2016).

[4] Final Guidelines on management of non-performing and forborne exposures (October 2018)

[5] Report on Management and Supervision of ESG Risks for Credit Institutions and Investment firms (June 2021)

- Implementing Technical Standards on Prudential Disclosures on ESG risks[1] which put forward tables, templates and associated instructions that specify the requirement to disclose prudential information on environmental, social and governance (ESG) risks, including transition and physical risk.

ECB Relevant Guidance

- Guidance to banks on NPLs published in March 2017, whereby the ECB expects banks to set internal coverage thresholds for NPLs, depending on their risk profile.[2]

- The Addendum to the ECB Guidance to banks on non-performing loans published in March 2018, which clarifies the ECB's supervisory expectations for prudential provisioning of new NPEs (i.e., exposures classified as non-performing according to the EBA's definition, from 1 April 2018 onwards).[3] Where banks fell short of these expectations after a phase-in period the SSM could impose a deduction to CET1 capital under Pillar 2.

- Supervisory expectations for provisioning of NPE stock (i.e., exposures classified as NPE on 31 March 2018), with the starting point of 2/7 years vintage buckets for unsecured/secured NPEs, subject to supervisory coverage recommendations and phase-in paths.[4]

- ECB Guide to Internal Models which aims of ensuring a common and consistent approach to matters related to internal models.[5]

- ECB Guide on Climate-related and Environmental Risks outlining the ECB's understanding of the safe and prudent management of climate-related and environmental risks under the current prudential framework; it describes how the ECB expects institutions to consider climate-related and environmental risks – as drivers of existing categories of risk – when formulating and implementing their business strategy and governance and risk management frameworks.[6]

- ECB report on good practices for climate stress testing which provides banks with examples and suggestions on how to improve their climate stress testing capabilities.[7]

[1] EBA draft ITS on Pillar 3 disclosures on ESG risks (January 2022)

[2] Guidance to banks on non-performing loans (March 2017).

[3] Addendum to the ECB Guidance to banks on non-performing loans: supervisory expectations for prudential provisioning of non-performing exposures (March 2018).

[4] ECB press release – "ECB announces further steps in supervisory approach to stock of NPLs" (July 2018).

[5] ECB guide to internal models (October 2019).

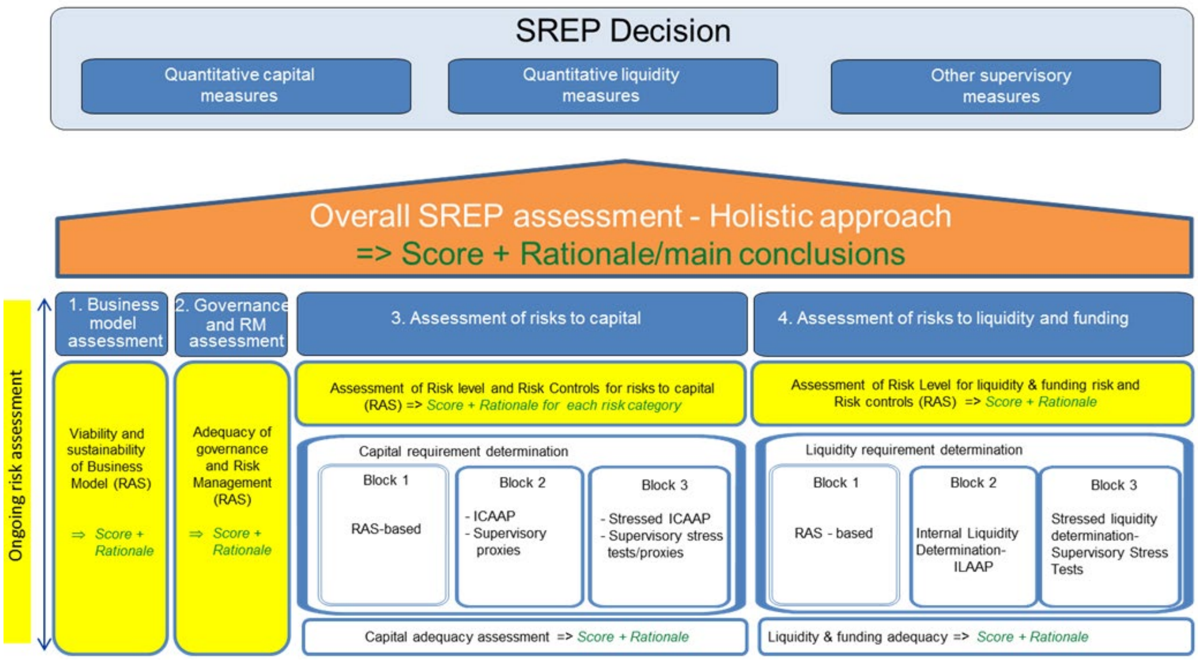
[6] Guide on climate-related and environmental risks (November 2020).

[7] ECB report on good practices for climate stress testing (December 2022).

Appendix V. Overview of the SSM Supervisory Review Process

1. The SREP methodology relies on quantitative and qualitative assessments, overlaid with supervisors' expert judgement, to derive SREP decisions that are tailored to a bank's specific risk profile.

Structure of SREP



Source: ECB

2. The methodology is built on four elements, which can be tailored for the specific situation of each institution:

- *Business model assessment* – including an assessment of business model viability and sustainability.
- *Internal governance and risk management assessment* – assesses group structure, internal governance framework, risk management framework, internal control environment and risk infrastructure.
- *Capital assessment* - includes a risk-by-risk assessment of risks to capital i.e., credit risk, market risk, operational risk and Interest Rate Risk in Banking Book (IRRBB). This assessment also includes an Internal Capital Adequacy Assessment Process (ICAAP) outcome, encompassing ICAAP governance, capital planning, scenario design and stress testing, internal controls, independent reviews and ICAAP documentation, data and infrastructure, risk capture, management and aggregation.

- *Liquidity assessment* – includes a risk-by-risk assessment of risks to liquidity and funding, i.e., short-term liquidity, long-term funding sustainability and Internal Liquidity Adequacy Assessment Process (ILAAP) reliability assessment, encompassing ILAAP governance, funding strategy and liquidity planning, scenario design, stress testing and contingency funding plan, internal controls, independent reviews and ILAAP documentation, data and infrastructure, risk capture, management and aggregation.

3. Consideration is also given to developments in the sector and the wider economic environment that may impact the longer-term risk profiles of the banks. This is achieved through quarterly risk analysis packs (analytical reports of supervision), financial stability reviews, quarterly bulletins, internal 'policy bites' information sessions, SSM priorities, and SSM horizontal assessments. Frequency of engagement with each LSI is based on the risk profile of the bank, business model changes, and the nature, scale, and complexity of the institution.

Appendix VI. Overall Legal Environment for Mortgage Lending

- The government sets affordability norms based on the repayment scheme of a 30-year annuity mortgage. These affordability norms cap the share of Income at the time of origination that can be used for mortgage payments based on: 1) the income of the borrower(s); 2) the household composition; 3) the pension status; and 4) interest rates. The calculation is based on actual mortgage interest rates and redemptions for a 30-year annuity mortgage, with a 5 percent minimum rate for mortgages with a contractual interest rate term shorter than 10 years. The norms are stricter for customers that opt for a (partially) newly originated IO mortgage and therefore don't qualify for mortgage interest tax deductibility (see next bullet).
- Tax deductibility is restricted to annuity or linear mortgages that are fully repaid in up to 30 years. Deduction of mortgage interest from income tax is at a rate of 37 percent, which is relatively high by international standards. Since 2013, it has become impossible to get mortgage interest deduction for new IO mortgages, which has reduced their attractiveness. There is a grandfathering tax regime for loan amounts that already existed before January 2013, irrespective of the amortization type. Also in this case, the maximum period of interest deductibility a borrower can get for a loan is 30 years, which results in the grandfathering regime expiring in 2042.
- In a similar vein, the NHG guarantee is only available for fully amortizing loans. NHG is a guarantee provided to the mortgage lender by a government-backed foundation and can be applied for by borrowers for loans up to EUR 435,000. NHG coverage for IO mortgage parts is only possible for loans that already existed per 31 December 2012. In that case a 50 percent LTV IO cap applies. The major cause why providers fall back to NHG is: the determination of relationships within households, which is idiosyncratic.
- Smooth repossession of collateral and a creditor-friendly legal framework influences the probability of default. In particular the following features create strong incentives to repay the loan:
    - The mortgage holder has full recourse to both the assets and income of the borrower.
    - The mortgage holder can repossess property without a court order: lenders can repossess and sell properties by public auction without a court order, which is not possible in most other EU countries, and in a short time frame (redemption period of 2 months).
    - Mortgage holders receive special protection in case of bankruptcy: they can exercise their mortgage rights as secured creditors (separatist) in the same way as they could have done if the bankruptcy had not taken place.
- There is typically a contractual right for the institution to recall the loan in case of a contractual breach of the obligor, a material deterioration of the collateral, or forms of bankruptcy of an obligor. It is also market practice that the institution has a contractual right

to reevaluate the collateral, and request for additional (periodical) principal redemption in case the collateral value has decreased.

- Notary necessary for sale of property: the sale of (pledged) residential property is only legally valid if done through a notary. Transfer of funds takes place through a secured third-party account of the notary, whereby the notary will always first repay the mortgage holders.
- Sale of the pledged collateral: there is typically a contractual option in Dutch mortgages to sell the pledged collateral without prepayment penalties to redeem the loan.