C. Operational supervision

1. Banks

In 2021, the supervisory authorities continued to pay close attention to banks' credit risk in a still uncertain economic context. Supervision also focused on the sustainability of the banks' business model, against the backdrop of low interest rates and structural changes in the sector resulting, in particular, from the digital and environmental transitions.

1.1 Mapping of the bank and investment firm sector

The number of banks governed by Belgian law declined by one in 2021 with the deregistration of Santander Consumer Bank, which was absorbed by the Spanish bank Santander Consumer Finance. The number of branches increased by one: two new European Economic Area (EEA) branches were registered (Santander Consumer Finance and Joh. Berenberg, Gossler & Co KG) and one was deregistered. At the end of 2021, a number of applications for the registration of EEA branches were still being processed.

The number of Belgian investment firms again decreased by three. This time, it only concerned branches of investment firms governed by the law of another EEA member country.

In the euro area, banking supervision is exercised by the SSM, backed by cooperation between the ECB and the national supervisory authorities. The ECB exercises direct supervision over all significant institutions (SIs) and is assisted in that by the national supervisory authorities. The latter continue to exercise direct supervision over less significant institutions (LSIs), though the ECB retains the option of assuming direct supervision over those institutions if that is justified for the consistent application of its supervision standards.

As regards SIs, in 2021, the Bank formed part of eleven Joint Supervisory Teams (JSTs), which – under the direction of the ECB – supervise significant Belgian institutions, whether Belgian banks owned by a Belgian parent company, SSM-relevant Belgium-based subsidiaries of a non-Belgian parent company,

Table C.1

Number of institutions subject to supervision

(end-of-period data)

	2020	2021
Credit institutions	102	102
Under Belgian law	31	30
Branches governed by the law of an EEA member state	46	47
Branches governed by the law of a non-EEA member state	6	6
Financial holding companies	8	8
Financial services groups	4	4
Other financial institutions [1]	7	7
Investment firms	28	25
Under Belgian law	14	14
Branches governed by the law of an EEA member state	13	10
Branches governed by the law of a non-EEA member state	0	0
Financial holding companies	1	1

Source: NBB.

1 Specialist subsidiaries of credit institutions and credit institutions associated with a central institution with which they form a federation.

Table C.2

Belgian banks grouped according to the SSM classification criteria

Significant institutions (SIs)	Less significant institutions (LSIs)
Belgian parent	Vodeno (financial holding company) – Aion
Argenta	Anbang (financial holding company) – Nagelmackers Bank
AXA Bank Belgium	Byblos Bank Europe
Belfius	CPH
Degroof Petercam	Dexia (financial holding company)
KBC Group – KBC Bank, CBC	Crelan – Europabank
Non-Belgian SSM-member parent	Datex (financial holding company) – CKV
BNP Paribas Fortis, bpost bank	Dierickx-Leys
Beobank, Banque Transatlantique Belgium	ENI
ING Belgium	Euroclear (financial holding company) – Euroclear Bank
MeDirect Bank	FinAx (financial holding company) – Delen Private Bank, Bank J. Van Breda
Non-Belgian SSM member parent not governed by the law of an EEA member country	NewB
Bank of New York Mellon	Shizuoka Bank
	United Taiwan Bank
	Van de Put & C°
	vdk bank

Source : NBB.

or banks established in Belgium and owned by a non-Belgian parent company not subject to the law of an EEA member country. Following the absorption of the Belgian Santander Consumer Bank by a Spanish bank belonging to the Santander group and its conversion into a branch, the Bank will no longer take part in the work of the JST in charge of supervising this banking group under the SSM. The number of JSTs involving the Bank was thus reduced to ten at the end of 2021.

Close attention continues to focus on credit risk management within the banks

The group of Belgian LSIs comprises 17 local and/or specialist banks. That number rises to 25 if the Belgian and foreign financial holding companies of less significant institutions are included.

1.2 Supervision priorities

In view of the uncertainty created by the public health crisis regarding the situation of firms, particularly those operating in the sectors affected by compulsory closures, the SSM and the Bank continued to pay close attention to the credit risk situation and the management of credit risk by the banks.

One of the key points for attention concerned assessing credit institutions' ability to detect at an early stage any counterparties whose credit risk has increased significantly on account of the health crisis. This detection exercise is made more difficult by government support measures such as moratoria and public financial support, which in the short term may conceal the real problems that firms may encounter in meeting their credit commitments. In this context, the supervisory authorities conducted a horizontal analysis of credit institutions' practices in order to detect firms whose credit risk has risen significantly and which may no longer be viable, taking account of the ending of the public support measures, as well as classification and provisioning practices such as those specified by the IFRS 9 accounting standard. On that basis, the supervisory authorities sent recommendations to the credit institutions in which such weaknesses were identified.

The second point for attention was to ensure that credit instutions maintain a comfortable capital position, particularly since there is still some uncertainty surrounding the economic recovery, and since termination of the government measures adopted in 2020 may ultimately have repercussions on businesses and households. Thus, credit institutions were subjected to a stress test coordinated by the EBA to assess their ability to withstand a serious deterioration in the economic situation (see box 9). On that basis, recommendations under Pillar 2 (P2G) were issued to participating credit institutions and – where appropriate – to some of their major subsidiaries. Similarly, the supervisory authorities continued to ensure that credit institutions remain cautious regarding their dividend distributions to shareholders and variable remuneration. Since the supervisory authorities lifted the ban on dividend payments at the end of September 2021 (see section B.1.1.2), particular attention focused on the ability of credit institutions to meet the regulatory requirements continuously in the future, following the lifting of that ban.

BOX 9

2021 stress tests by the EBA and the Bank

In 2021, the EBA coordinated its biennial stress test involving 50 of the biggest banks in the European Union (EU), 38 of which – including Belfius and KBC Group – are subject to the ECB's direct supervision. ING Belgium and BNP Paribas Fortis took part in the exercise via their parent institutions.

The aim of the EBA stress test is to give supervisory authorities, banks and market participants a common analytical framework for comparing and assessing the resilience of the big banks in the face of a hypothetical adverse economic shock. The stress test comprises a baseline scenario and an adverse scenario, both over a three-year horizon. The assumptions concerning the macroeconomic variables in the baseline scenario are in line with the December 2020 economic projections published by the ECB. The adverse scenario, designed by the ECB and the ESRB, is based on assumptions reflecting the systemic risks deemed to represent the greatest threats to the stability of the EU banking sector at the start of the stress test in January 2021. Since the stress test's adverse scenario is hypothetical, the estimated impact of that scenario should not be regarded as a prediction of banks' profitability. Furthermore, the results take no account of any response to the shocks by the banks, since the stress test is based on the assumption of a static balance sheet. The stress test does not have any "pass/fail" threshold. It was designed for use as a significant contribution to the Supervisory Review and Evaluation Process (SREP), which forms the basis for determining additional capital requirements specific to each institution.

Two Belgian banks – KBC and Belfius – were put through the EBA stress test. The starting CET1 capital ratios (reported at the end of 2020) stood at 17.6 % for KBC and 16.4 % for Belfius. These values exceeded the average starting value of 14.7 % for the sample of euro area banks. In the adverse scenario, KBC and Belfius proved more resilient than most other euro area banks. In that scenario, KBC exhibited a 351 basis point deterioration in the CET1 capital ratio, while for Belfius that ratio was down by 270 basis points. By way of comparison, the average decline for euro area banks was 497 basis points. The CET1 capital ratios projected for 2023 in the adverse scenario thus came to 14.1 % for KBC and 13.7 % for Belfius, or well above the average ratio of 9.7 % projected for the euro area in 2023.

The starting positions of the two Belgian banks and their performance in the stress test are partly attributable to the continuing impact of the adjustments that those banks have made in recent years, including the strengthening of their solvency position, control of their operational expenditure and the provisioning efforts made during the COVID-19 crisis.

LSIs, which are subject to the Bank's supervision, are also put through a stress test on a regular basis. Since the results of these stress tests form a contribution to the SREP, the Bank decided that these two exercises would be held in the same year. During the year under review, the Bank conducted a stress test on nine LSIs. The scenarios and methodology were aligned with those for the EBA stress test, with the necessary simplifications. The desired proportionality was also ensured in that the LSIs were only asked to provide additional information on their starting position in December 2020, with the Bank taking on the task of producing projections for the years 2021-2023. The stress test results were not published but were discussed with the LSIs and helped to determine the additional capital requirements specific to each institution.

In addition, in view of the low interest rates and structural changes in the sector due to digitalisation, but also the need to adapt to the challenge of climate change, particular attention was devoted to assessing the sustainability of the business model and the banks' ability to respond to these developments. Thus, the impact of the persistently low interest rates on the revenues of Belgian credit institutions was assessed and their strategic plan was analysed to ensure that they were taking the necessary measures and actions (see box 10). On the subject of the impact of climate risk on credit institutions, the ECB conducted an initial examination of the state of preparations in major credit institutions. It showed that the sector saw climate risk as a factor which could have a significant impact on their business in the future, but also that a great deal still needed to be done to grasp and manage this risk properly in accordance with the requirements laid down by the ECB[1]. The credit institutions concerned were informed of the weaknesses discovered and were asked to take corrective measures. In 2022, the ECB will conduct a stress test exercise to assess the impact of climate and environmental risk on the sector.

1 ECB, The state of climate and environmental risk management in the banking sector, 22 November 2021.

BOX 10

Impact of the prolonged low interest rate environment and other factors on the business model of Belgian banks

This year, in its periodic analysis of the business models of credit institutions, the Bank focused on the impact of persistently low interest rates, digitalisation and the coronavirus crisis. This was a two-phase exercise : the first phase involved analysing the sustainability and viability of the banks' business model and the second concerned discussing the findings of that analysis with the most affected banks.

The analysis assessed the institutions on the basis of six tests, three of which concerned the impact of low interest rates. In the first test, the sensitivity of the banks' interest margins and interest income was analysed over the years ahead, on the assumption of continuing low interest rates. A second, more extensive macroprudential test also took account of factors such as the cost-income ratio and the search for yield. A third and final – microprudential – test examined the institutions' financial prospects on the basis of their strategic and financial plans, and their planned mitigating measures and risk appetite. In addition, the potential impact of the coronavirus crisis on the banks' balance sheet and capital buffers was analysed on the basis of two vulnerability assessments. Finally, there was a wide-ranging examination of the banks' activities and investments in regard to FinTech. Their strategic position on that subject was included in the general analysis (see also section D.2.3).

A prolonged environment of low, or even negative, interest rates has an adverse effect on banks' profitability, thus affecting the ability of some banks to build up sufficient capital reserves. The banks' risk profile may also change as a result of their quest for more profitable business, associated with different and potentially higher risks. The banks expect to take mitigating measures to improve their cost-income ratio, to apply negative interest rates to certain types of customer, or to increase the percentage of their total income derived from fees. The digitalisation of the banking sector and the financial world in general also entails substantial investments. In recent years, driven by technological innovations and changing consumer preferences, the financial sector has stepped up its digitalisation and the introduction of new processes, applications or products. The digitalisation initiated by major banks and a number of smaller niche banks has forced banks in general to become more ambitious.

The business model of smaller, less diversified banks seems to be under greater pressure in this context, so that some of those institutions should focus on particular niches, and try to form partnerships or achieve economies of scale.

2. Insurance undertakings

In 2021, the Bank continued to keep a close watch on the repercussions of the COVID-19 pandemic and maintained its increased surveillance of the financial situation of insurers and reinsurers subject to supervision. The financial markets, which have a significant impact on the financial health of businesses, recovered while the technical impact of insurance on most businesses remained limited. Combined with the low interest rate, the health crisis continued to put pressure on life insurance activities, prompting the Bank to impose special measures on a number of undertakings during the year under review. In 2021, attention also focused on outsourcing and record keeping, and on new businesses. In addition, the Bank conducted a relatively large number of horizontal analyses. That work focused in particular on the adequacy of technical life and non-life provisions and on the role of the actuarial function in that sphere, the profitability of the life insurance business, reinsurance and cyber risks (see section D.2.3 on that last subject).

2.1 Mapping of the sector

At the end of 2021, the Bank exerciseed supervision over 72 undertakings, and seven branches of undertakings governed by the law of another EEA member country. In the case of those branches, supervision was confined to verifying compliance with the money-laundering legislation.

In the figures, undertakings active as both insurers and reinsurers are only counted once. Two of the undertakings subject to the Bank's supervision are reinsurers in the strict sense.

The number of Belgian insurance groups subject to the Bank's supervision remained stable, at ten. Seven of these groups only have holdings in Belgian insurance undertakings (national groups), and three of them have holdings in at least one foreign insurance undertaking (international groups). Owing to the entry of new players on the market following Brexit, the Bank was represented in more supervisory authority colleges than previously.

The expectation is that more undertakings will set up business in Belgium in the near future. The Bank has been contacted multiple times by firms intending to begin operating in Belgium.

Table C.3

Number of undertakings subject to supervision

(end-of-period data)

	2020	2021
Active insurance undertakings	64	62
Insurance undertakings in run-off	0	0
Reinsurance undertakings	30	31
of which:		
Undertakings also operating as insurers	28	29
Other [1]	8	8
Total [2]	74	72

Source: NBB.
1 Surety companies and regional public transport companies.
2 The total only takes account once of undertakings active as both insurers and reinsurers.

Table C.4

Belgian insurance groups subject to the Bank's supervision

Belgian national groups	Belgian international groups
Belfius Assurances	Ageas
Cigna Elmwood Holdings	Navigators Holdings (Europe)
Credimo Holding	KBC Assurances
Fédérale Assurance	
Groupe Patronale	
Securex	
PSH	

Source: NBB.

Table C.5

Colleges for insurance undertakings subject to the Bank's supervision

The Bank is the group's supervisory authority	The Bank is one of the supervisory authorities	
Ageas	Allianz	Allianz Benelux
		Euler Hermes
KBC Assurances	AXA	AXA Belgium
		Inter Partner Assistance
Navigators Holdings Europe		Yuzzu Assurances
	Assurances du Crédit Mutuel	Partners Assurances
		NELB
	Munich Re	D.A.S.
		Ergo Insurance
		DKV Belgium
	NN	NN Insurance Belgium
	Baloise Group	Baloise Belgium
		Euromex
	Monument Re	Monument Assurance Belgium
	Athora	Athora Belgium
	Enstar	Alpha Insurance
	QBE	QBE Europe
	MS&AD	MS Amlin Insurance

Source: NBB.

2.2 Supervision priorities

New businesses

In 2021, the Bank approved one new insurance undertaking. This new entrant is an additional player in the international undertakings sector, as its business model involves the use of Managing General Agents to conclude contracts in other countries; this sector has developed in Belgium in the wake of Brexit. Supervision of these international undertakings implies specific supervision priorities, including the continued monitoring of outsourcing, the monitoring of activiities developed in other countries and a minimal presence in Belgium. The Bank paid particular attention to these aspects in 2021. Initial discussions also began in 2021 concerning the approval of new InsurTech undertakings. These initiatives – which also give rise to particular prudential concerns – will continue in 2022.

Outsourcing

For a number of years now, insurers and reinsurers have increasingly resorted to outsourcing, for various reasons: (i) greater efficiency, (ii) access to specific expertise not available in-house, and innovative solutions and/or (iii) a need for flexibility and scalability. With constantly expanding digitalisation of operational processes and interfaces, recently accelerated further by the COVID-19 pandemic, that trend intensified in 2021.

Thus, in 2021, the Bank received twice as many notifications of critical outsourcing as in previous years. They mainly concerned: (i) information technology infrastructures, (ii) document storage, very often via clouds (implementation of Circular NBB_2020_18 on cloud computing and the Bank's Regulation published in the *Moniteur belge/Belgisch Staatsblad* of 11 September 2020 concerning the storage of insurance documents outside the undertaking's registered office), and (iii) underwriting (change relating to the recent presence on the Belgian market of international insurance undertakings whose business model is based on the use of Managing General Agents).

Analysis of these notifications led to identification of new risks, such as an increased risk of concentration (notably in the IT sphere), greater interdependence with new types of company (such as centralised service companies, unregulated companies created increasingly frequently in insurance groups) and heightened risks concerning "vendor lock-in", data loss and compliance. Monitoring outsourcing therefore became a supervision priority for the Bank. Thus, various projects were implemented in 2021 to strengthen that supervision (new forms of reporting, horizontal analysis, detailed analysis of certain types of outsourcing, direct inspection of service providers, etc.). These projects will continue in 2022.

Wider use of outsourcing creates new risks for insurers

During the period under review, outsourcing was a central theme of the inspections conducted in insurance and reinsurance undertakings. During the inspections, there was particular emphasis on the assessment of how the outsourcing was organised in the pre-contract, contract and post-contract phase. Particular attention focused on the adequacy of the internal control system, and especially the methods of selecting and assessing sub-contractors and the involvement of independent oversight functions. In that respect, insurers and reinsurers must ensure that they have efficient, objective tools such as performance indicators permitting proper assessment of the quality of the outsourced services.

In the face of increasingly widespread outsourcing by insurers and reinsurers for critical or important functions such as independent oversight, claims management, underwriting or document storage, firms were also reminded that they remain ultimately responsible for the service ousourced. This means, for instance, that firms must set up the measures necessary to ensure access to relevant data and documents within a reasonable timeframe.

In response to the Bank's request for more substance (significant presence) in the case of an undertaking which the Bank had approved as an insurer in Belgium and which made extensive use of outsourcing, some undertakings suggested the joint employment contract (JEC). This arrangement implies that workers are bound simultaneously be a contract of employment with the Belgian insurer and with another undertaking in Belgium or in another country. It can only be accepted as a way of giving more substance to the insurance undertaking approved in Belgium if these workers are actually employed under the usual employment contract conditions: line of reporting to the management bodies of the Belgian company, effective supervision by that undertaking of the work done, annual appraisal by the bodies of the Belgian

undertaking and the latter's right to terminate the contract of employment at any time if failures are identified, etc.

Non-life insurance technical provisions

During 2021, the Bank brought together all those responsible for actuarial functions on the Belgian market in a virtual workshop on the subject of horizontal supervision of the level of non-life technical provisions (Solvency II standard). This workshop provided an opportunity to explain to the sector how the data submitted via prudential reporting are used for supervision purposes. At this meeting, a questionnaire for the attention of those responsible for the actuarial function was also presented and discussed. It aimed to clarify the nature of some of those data in order to improve the analytical processes in which they are used.

Life insurance

For some years now, life insurance undertakings have conducted their business in an environment featuring persistently low interest rates. In order to cope with the reduction in earnings from fixed-income investment, the interest rate guarantees on life insurance have steadily diminished. The question is whether the two changes mirror one another or whether there is structural downward pressure on the profitability of life insurance.

An initial horizontal analysis showed that the gap between recurring financial income and the average guaranteed rates on life insurance had not narrowed systematically over time : in general, the progressive reduction in the guaranteed interest rates parallels the decline in financial income.

The profitability analysis does not only take account of the financial result. There are other potential profit sources, such as the mortality result (if firms record fewer deaths than expected according to the mortality tables used for pricing) and the cost result (which is the difference between the loadings included in the premiums and the actual costs). The cost result is generally negative (and is usually offset by the financial result), but owing to the constantly rising life expectancy and hence chances of survival at a given age, the mortality result generally represents a key source of profits for life insurance undertakings.

These profitability analyses supplement the horizontal analyses of reported technical provisions which are conducted periodically (under both the Belgian accounting standards and Solvency II).

In regard to the impact of the health crisis on undertakings' profitability via mortality, the vast majority of the deaths occurred in the non-insured age groups. Since death cover usually ends at retirement age, the excess mortality had no negative impact on profitability.

Reinsurance

On reinsurance, the Bank notes the emergence of innovative practices in the reinsurance of life insurance portfolios. Reinsurance is used as a tool to mitigate market risks, particularly the interest rate risk. That could prove attractive for undertakings holding life insurance portfolios with high guaranteed interest rates. While the reinsurance agreement does actually attenuate certain risks, the Bank is aware that these schemes generate other risks, essentially owing to the significant and immediate impact of this type of reinsurance on the solvency capital requirement (SCR) of supervised companies. The work done led the Bank to define a set of internal guidelines and develop supervision tools intended, for example, to limit the connection between the reinsurance agreement and compliance with the regulatory solvency requirements.

The various (non-exhaustive and non-exclusive) measures that may be taken include : (i) limiting the assignment rate (quota share treaty) ; (ii) recommending the establishment of robust collateral arrangements, (iii) insisting that the treaties include deterrent penalties for the reinsurer in the event of unilateral cancellation ; or (iv) asking the undertaking to define, in its risk appetite, an SCR ratio offering additional scope to cover the risk of dependence on the treaty.

BOX 11

2021 stress tests by EIOPA and the Bank

In accordance with the Bank's policy on stress tests for insurance and reinsurance undertakings and groups, the insurance sector is subjected to a stress test at least once a year[1], and that test is aligned, where appropriate, with the European stress test. In 2021, EIOPA conducted a European stress test to assess the impact of an adverse scenario on the participants' capital (solvency margin) and liquidity. Two Belgian insurance groups took part in that European exercise from the capital angle, while three individual undertakings forming part of those two groups took part in the liquidity scenario. In addition, the Bank applied the same capital stress test to a series of individual insurers together making up a significant proportion of the Belgian insurance sector.

The 2021 stress test scenario was devised jointly by EIOPA and the ESRB and reflects the ESRB's assessment of the main risks for the European financial system. Its principal objective was to identify and assess the insurance sector's potential vulnerabilities resulting from a persistently low interest rate environment combined with the possible worsening of the COVID-19 pandemic. That took the form of a series of specifc shocks affecting market risks and insurance risks which had a severe but plausible dual impact on the insurance sector. The reference date for this exercise was 31 December 2020.

The scenario therefore affected both the assets and the liabilities of firms, owing to the combination of an environment with declining risk-free yield curves, shocks in key investment portfolio asset classes, and a bigger- than-expected rise in mortality and claims in certain non-life insurance branches. That scenario does not only form part of the Bank's framework for assessing the macroprudential risks, it also enables identification of any risks that might exist at microprudential level.

The average solvency ratio (SCR ratio) of the 14 Belgian firms taking part in the test was 190 % before application of the shocks, suggesting a comfortable starting position. After taking account of these shocks, the average SCR ratio dropped by 67 percentage points to 123 %. The fall was due mainly to the decline in the value of the investment portfolio, particularly bonds and equities (negative impact of 38 and 31 percentage points respectively on the SCR ratio). That fall was partly attenuated by the compensatory effects relating to certain assets and liabilities on the balance sheet, such as the hedging strategies via derivatives that some insurers use, which reduce the impact of the shocks. For the first time in a stress test, insurers were also able to apply post-shock management measures which had a positive effect of 21 percentage points on the post-stress-test ratio. The results of this stress test at Belgian level were published on the Bank's website[2] and the European results are available on EIOPA's website[3].

Finally, in parallel with the EIOPA stress test, the Bank also developed its own "low-yield" scenario which measures how a continuing decline in the risk-free yield curve would affect the solvency of

1 In 2020, following the outbreak of the COVID-19 pandemic, the Bank concentrated its supervisory and regulatory measures on essential, critical tasks concerning the monitoring of the impact of the COVID-19 pandemic on insurers. So, the national stress test scheduled for 2020 was cancelled.

2 See https://www.nbb.be/en/financial-oversight/prudential-supervision/areas-responsibility/insurance-or-reinsurance-38.

3 See https://www.eiopa.europa.eu/insurance-stress-test-2021_en#Publicationoftheresults.

Belgian insurers. The main aim of that scenario is to identify and assess the insurance sector's potential vulnerabilities resulting from a persistently low interest rate environment. The individual results are taken into account in assessing applications for exemption from creation of the flashing-light provision for interest rate risk.

3. Financial market infrastructures and payment services

The COVID-19 pandemic also affected the financial market infrastructures sector and payment institutions (for an overview, see the Annual Report 2020). This year, the Bank's supervisory activities were concentrated on human resources aspects. The next section goes into this in more detail. An exhaustive account of all the supervision activities concerning financial market infrastructures (FMIs) and payment services appears in the latest Financial Market Infrastructures and Payment Services Report, available on the Bank's website[1]. In the next edition of that Report to be published in June 2022, a thematic article will go into more detail on the Bank's supervision activities concerning digital operational resilience. Another article will examine the risks associated with the growing use of services and products linked to information and communication technology (ICT) provided by third parties. That report will also include a series of articles on the latest developments concerning digital ledger technology (DLT)/blockchain and the European "DLT pilot regime" for the trading and settlement of "tokenised" securities[2]. Finally, several articles will deal with the subjects of crypto-assets and central bank digital currencies from the point of view of the Bank as a supervisory authority and overseer responsible for financial stability.

1 See www.nbb.be/fmi.

2 "Tokenised" securities are the digital representation via DLT of securities which exist outside the blockchain.

3.1 Mapping of the sector

The Bank is responsible for both the oversight and the prudential supervision of institutions in the post-trade sector and payment services. Oversight mainly concerns the security of the financial system, whereas microprudential supervision examines the security of the operators offering these services. In cases where the Bank exercises both oversight and prudential supervision, these two activities can be considered complementary.

The table below presents the systems and institutions subject to the Bank's supervision or oversight. As well as being classified according to the type of services provided, these institutions are also grouped according to: (a) the Bank's role (namely prudential supervision authority, overseer, or both) and (b) the international dimension of the system or institution (the Bank as the sole authority, international cooperation agreement with the Bank as the lead authority, or other role for the Bank).

Table C.6

Mapping of the financial market infrastructures and payment services sector

	International cooperation		The Bank acts as the sole authority
	The Bank acts as lead authority	The Bank participates in the supervision, under the direction of another authority	
Prudential supervision		Custodian bank The Bank of New York Mellon SA/NV (BNYM SA/NV)	Payment service providers (PSP) Payment institutions (PI) Electronic money institutions (ELMI)
Prudential supervision and oversight	Central securities depository (CSD) Euroclear Belgium International central securities depository (ICSD) Euroclear Bank SA/NV Supporting institution Euroclear SA/NV	Central counterparties (CCP) LCH Ltd (UK), ICE Clear Europe (UK) LCH SA (FR), Eurex Clearing AG (DE), EuroCCP (NL), Keler CCP (HU), CC&G (IT)	Payment processor and payment institution Worldline SA/NV
Oversight	Critical service provider SWIFT	Other infrastructure TARGET2-Securities (T2S)[1]	CSD NBB-SSS
	Payment system Mastercard Clearing Management System[2]	Payment system TARGET2 (T2)[1] CLS	Card payment schemes Bancontact[1] Mastercard Europe[1] Maestro[1]
			Payment processors Mastercard Europe equensWorldline
			Payment system Centre for Exchange and Clearing (CEC)[1]

Post-trade infrastructure	Securities clearing	Payments	Payment systems
	Securities settlement		Payment institutions and electronic money institutions
	Custody of securities		Payment processors
Other infrastructures	T2S		Card payment schemes
	SWIFT		

Source: NBB.
1 Peer review in Eurosystem/ESCB.
2 The NBB and the ECB act jointly as lead overseers (authorities responsible for oversight).

Table C.7

Number of payment institutions and electronic money institutions subject to supervision

(end-of-period data)

	2020	2021
Payment institutions	38	39
Under Belgian law	33	34
Limited status institutions [1]	0	0
Foreign EEA branches	5	5
Electronic money institutions	8	7
Under Belgian law	7	6
Limited status institutions [2]	0	0
Foreign EEA branches	1	1

Source: NBB.

1 Limited status institutions are registered as having limited status in accordance with Article 82 of the Law of 11 March 2018 and are subject to a limited regime.

2 Limited status electronic money institutions are registered as limited status electronic money institutions in accordance with Article 200 of the Law of 11 March 2018 and subject to a limited regime.

Belgium has 46 payment institutions and electronic money institutions, including European branches.

During the year under review, the Bank was again frequently approached by new applicants offering a large number of new business models. That implies that the number of institutions could increase next year.

3.2 Supervision priorities

One of the Bank's main supervision activities in 2021 consisted in implementing the requirements relating to rules on strong customer authentication (SCA) and common and secure communication (CSC) between payment service providers (open banking) on the Belgian market.

As described in more detail in chapter D on digitalisation, in 2021, the Bank also pursued its operational activities and its strategic activities concerning cyber risks and IT risks. In that connection, a number of inspections were conducted in market infrastructures and payment institutions, a number of payment institutions were asked to complete a questionnaire on IT risks, and there was more frequent monitoring of institutions' activities. Regarding policy, the work of the EU Council's working group on the European Commission's proposal for a Digital Operational Resilience Act particularly merits a mention.

In 2021, the Bank also set up the National Retail Payments Committee (NRPC) and continued to analyse the impact of the CRD5 on the Euroclear group.

In addition, the Bank acting jointly with the ECB took the lead of a group of Eurosystem central banks which prepared the enhanced oversight regime for Mastercard Europe.

Finally, this section also examines in more detail the effects of the COVID-19 pandemic on the ability of financial market infrastructures to attract and retain skilled staff.

Strong customer authentication and open banking

The Bank kept a close eye on the migration plan which progressed step by step towards full compliance with strong customer authentication for all card transactions, leading in May 2021 to the complete and successful implementation of SCA for online card payments.

With a view to the successful integration of the open banking environment required by law, a number of obstacles in the institutions' interfaces were pinpointed and the Bank took the necessary measures to enforce the law in the event of the market failing to remove these last obstacles.

Particular attention was also devoted to the requirements concerning the custody of funds received by payment service providers from payment service users, giving rise to expansion of the periodic reporting permitting horizontal analyses.

Focus on cyber resilience

The pandemic had the effect of speeding up digitalisation, particularly via the rapid pace at which firms had to make the necessary adjustments to their processes and systems in order to introduce or expand remote working. Less well-intentioned players, such as hackers and organised criminal groups, also seized this opportunity. That situation increases the relevance of the Bank's TIBER-BE (Threat Intelligence-Based Ethical Red Teaming Belgium) programme, in which controlled cyber attacks are carried out with the institutions. The starting point for these tests comprises scenarios devised on the basis of information on real, relevant threats obtained from the sector. The first cycle of tests will conclude at the beginning of 2022, and the positive response by the sector prompted the launch of a new cycle with an increased number of institutions concerned. Analysis of the implications of the Digital Operation Resilience Act (DORA) in the Threat-Led Penetration Testing (TLPT) also began in 2021. For more information on TIBER-BE and DORA, see chapter D below.

National Retail Payments Committee

In 2021, the Bank set up the NRPC whose activities focused on the following 4 areas via *ad-hoc* sub-groups:

a) Instant payments: Three years after their introduction in Belgium, instant payments represent only a minor percentage of transfers. The sub-group aims to understand the reasons for this limited usage and to examine measures that might encourage their adoption.
b) Central bank digital currency (CBDC): The sub-group aims to inform, consult and – if the Eurosystem decides to analyse the digital euro in greater depth and/or develop prototypes – to involve the various stakeholders in analysing the needs.
c) Cash: The sub-group assessed access to cash in Belgium with the aid of a model developed by the Bank. It took account of both the current situation and the outlook for the future.
d) Coins: This sub-group, chaired by the Treasury (FPS Finance), examines questions relating to the use of coins, in particular changes in the use of 1 and 2 cent coins following the introduction of rounding off.

Impact of CRD5

At the level of the Euroclear group, the analysis of corporate governance continued – particularly regarding the role of the financial holding company which has decision-making power within the group. Since the Belgian Law of 11 July 2021 transposed the fifth EU Capital Requirements Directive (CRD5) into the Belgian Banking Law, which provides for approval of the financial holding company with decision-making power in a banking group such as Euroclear, this analysis was necessary to understand which entity formed the group's decision-making centre and which entities were responsible for implementing such decisions.

Mastercard Europe

In 2021, the Bank in conjunction with the ECB took the lead of a group of Eurosystem central banks which prepared the enhanced oversight regime for Mastercard Europe. This enhanced regime follows the Eurosystem's May 2020 designation of Mastercard Europe as a systemically important payment system (SIPS). Analysis of the increased requirements began in May 2021 and is expected to be completed in mid-2022. In the meantime, the Bank of England has also recognised Mastercard Europe as a systemically important payment system for the British market. Discussions began between the Bank of England, the ECB and the NBB to determine whether a partnership should be set up for the exchange of information and, if so, in what form.

COVID-19 and its impact on the ability to attract and retain staff

During the various phases of the COVID-19 pandemic, the Bank took heed of the measures which the FMIs adopted to organise their activities so as to give priority to their workers' health without compromising the operational continuity of their critical services.

FMIs are already considering how they will organise their activities after the pandemic. In that regard, they have to take account of a number of risks relating, in particular, to the challenge of attracting and retaining skilled staff: those risks require careful management.

Organisation of the FMIs' work during the pandemic

Working from home became the norm in FMIs, too. In some cases, however, they opted to continue carrying out certain critical activities on site. That was the case, for example, regarding the management and monitoring of the data centres for which it was important, from the point of view of risk management, for control to continue to be based in a particularly secure environment. It was also considered that, in order to ensure operational continuity, work on critical systems could be carried out more quickly and with less impact on users if the team responsible continued to work on site. For these staff, the usual protection measures were applied: they were divided into two groups, present in alternate weeks, and had to respect the distancing rules and the obligation to wear a mask.

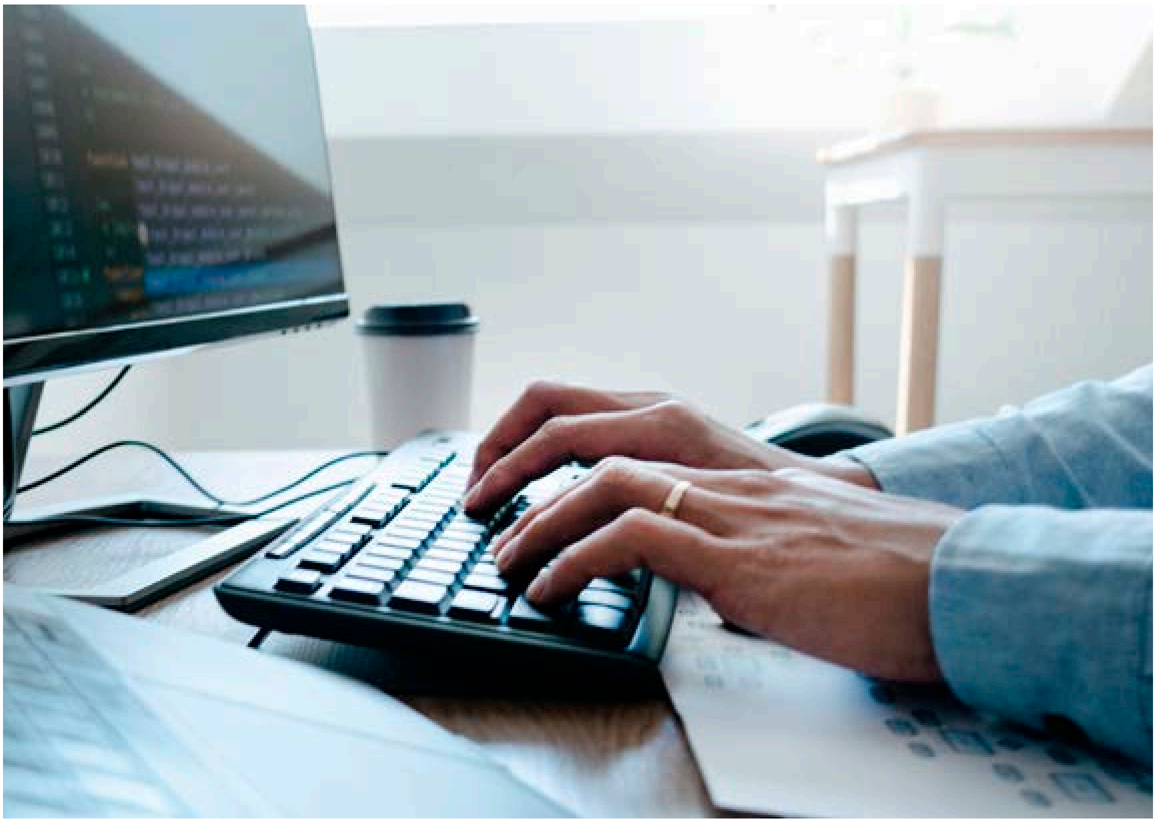
Monitoring of the rates of sick absence showed that they remained at the same fairly low level in FMIs and that, in most cases, they were actually slightly down against the figures for previous periods.

Challenges for the organisation of the work

Protracted working from home entailed significant adjustments in workers' behaviour. While that led to increased productivity, it also caused workers to suffer greater stress, some of them experienced motivation problems, and there was an increased risk of burn-out. Another point for attention concerned attracting new workers (from recruitment to talent development) and offering them the chance to expand their knowledge – including as regards the corporate culture – by means of informal networks within the organisation.

During the phase of the pandemic when restrictions could be eased and mandatory remote working could be gradually reduced, most FMIs continued to offer their workers the option of voluntary attendance at the workplace, either on one or more days a week or every day. This was conditional upon not exceeding the maximum presence in the office so that the health measures imposed by the government or by the FMI itself could be respected. During this phase, some staff were very reluctant to return to the office. They were not so concerned about safety in the workplace but more about the supposed risks of travelling between home and the office if they had to use public transport. It will be a major challenge for FMIs to meet the expectations of (some) staff regarding the health risks, on the one hand, while also regaining the advantages of physical presence (brainstorming, informal contact, innovation and collaboration, better understanding of non-verbal communication).

FMIs are already thinking about how they can maintain a hybrid form of working in the future (combining remote working with work in the office). Options for consideration involve, on the one hand, rearranging offices to take advantage of physical presence mainly for the exchange of ideas, and on the other hand, offering workers more flexibility (e.g. if they do not have a suitable environment for working from home). It is still too soon to make a



definitive statement on exactly how this new form of working will be maintained, but it is clear that a shift has occurred.

Fiercer competition for recruiting digital profiles

When the health measures were (temporarily) eased in the second half of 2021 and business resumed, there was an increase in economic activity, leading to a labour market revival and a rise in job offers. In addition, the compulsory switch to working from home due to restrictions relating to COVID-19 speeded up digitalisation in almost every sector of the economy. That boosted demand for digital profiles in all sectors, while most of the staff recruited by FMIs have such a profile.

Owing to accelerating digitalisation in practically all sectors, FMIs are struggling to recruit and retain IT specialists

A significant, potential risk for FMIs is therefore that on an overheated jobs market for digital profiles – which are in any case already in fairly short supply in Belgium – it may become harder to recruit and retain IT specialists. FMIs are therefore already considering how they can maintain an attractive working environment for their staff, including after the pandemic, and how they can respond to staff expectations concerning the organisation of the work and the balance between office-based and remote working. It could become increasing difficult to attract IT specialists prepared to work with “legacy” IT systems if there are job opportunities in growth sectors which make greater use of more modern information technologies and are regarded as more attractive. FMIs are aware of this challenge, and that explains, for instance, why they introduced “Agile” working methods, which generally lead to greater satisfaction and greater involvement of IT workers. An alternative solution for FMIs consists in opting for diversification in the tapped talent pools, such as geographical diversification involving work with teams of IT experts in locations other than the current main centres of activity.