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FOR INFORMATION

SM/20/108

July 16, 2020

To: Members of the Executive Board

From: The Secretary

Subject: **Denmark—Publication of Financial Sector Assessment Program Documentation—Technical Note on Insurance Regulation and Supervision**

Board Action:	Executive Directors' **information**
Additional Information:	Completed in connection with the Financial Sector Assessment Program
Publication:	Yes, after Thursday, July 23, 2020
Questions:	Mr. Elekdag, MCM (ext. 34835)

INTERNATIONAL MONETARY FUND

DENMARK

FINANCIAL SECTOR ASSESSMENT PROGRAM

July 15, 2020

TECHNICAL NOTE

INSURANCE REGULATION AND 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 in Denmark. 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

AML/CFT	Anti-Money Laundering and Combating the Financing of Terrorism
BSCR	Basic Solvency Capital Requirement
CDD	Customer Due Diligence
DFSA	Danish Financial Supervisory Authority
DN	Danmarks Nationalbank
D-SII	Domestic Systemically Important Insurer
EIOPA	European Insurance and Occupational Pensions Authority
FBA	Financial Business Act
FPS	Freedom to Provide Services
FSAP	Financial Sector Assessment Program
IAIS	International Association of Insurance Supervisors
ICP	Insurance Core Principle
IFRS	International Financial Reporting Standards
IORP	Institution of Occupational Retirement Provision
LTG	Long-Term Guarantee
MCR	Minimum Capital Requirement
MIBFA	Ministry of Industry, Business and Financial Affairs
MoU	Memorandum of Understanding
ORSA	Own Risk and Solvency Assessment
QRT	Quantitative Reporting Template
SCR	Solvency Capital Requirement
SFCR	Solvency and Financial Condition Report
VA	Volatility Adjustment

EXECUTIVE SUMMARY

Denmark's insurance sector is highly developed with a particularly high penetration and density in the life sector. Traditionally, work-related life insurance and pension savings are offered as a combined package, and life insurance companies dominate the market for mandatory pension schemes for employees. The high penetration explains the overall size of the insurance sector, which exceeds those of peers from other Nordic countries and various other EU member states. Assets managed by the insurance industry amounted to 146 percent of the GDP at end-2018, compared to 72 percent for the EU average.

Profitability in the life sector is challenged by low interest rates, but solvency rates are stable. Profitability has been maintained with positive returns on equity in both life and non-life insurance throughout 2009-2018. Non-life insurance is characterized by favorable underwriting results and relatively low expense ratios. In life insurance, high guaranteed interest rates in life insurance policies continue to impede profitability, given a large (though constantly declining) legacy portfolio of contracts with high guarantees. Until 2017, positive investment income has contributed to positive returns, but market value losses in the equity portfolio and stagnating bond prices temporarily reduced profitability in 2018. Solvency ratios have been broadly stable since the Solvency II implementation, hovering around 280 percent in both life and non-life, well above the regulatory threshold of 100 percent.

The Danish Financial Supervisory Authority (DFSA) has noted a shift in life insurers' business models during recent years due to the development of new unguaranteed market-return products. Low interest rates and longer life expectancies have put pressure on life insurance and pension products with guarantees due to higher technical provisions required in order to ensure that companies are able to meet their guarantees. Investment opportunities of life insurers and pension funds are limited to investment products with lower risk and thereby also lower expected returns. Lower risk eases the pressure on solvency, but eventually, lower expected returns make it difficult for insurers to generate returns on savings that are sufficient to meet their guarantees.

The Solvency II implementation in 2016 has raised the overall level of observance with the Insurance Core Principles and improved the risk culture in the sector. Having introduced a fairly market-consistent valuation of asset and liabilities already in the early 2000s, Danish insurers have established advanced asset-liability management compared to peer countries. Consequently, no life insurer has to use any of the transitional measures. Technical work is still needed to introduce stochastic modelling of technical provisions in the life sector, after the DFSA had assessed the currently used deterministic modeling as being inconsistent with the Solvency II Directive.

The DFSA is an integrated financial regulator. Resources in its Insurance Supervision Department have increased since the last FSAP, but still rank below EU peers on a number of comparative statistics. Furthermore, the staff is rather junior and turnover rates are relatively high. It is therefore important to increase overall staff levels and establish policies to retain qualified staff. Issues related to the DFSA's mandate and independence are addressed in the companion Technical Note on Banking Regulation and Supervision.

Increasing the number of on-site inspections, together with completing a solid risk assessment framework are recommended as priority actions to the DFSA—also supervision of cross-border business should be strengthened. Following up on a recommendation from the 2014 FSAP, the number of on-site inspections in the life sector has slightly increased, while in the non-life sector the DFSA falls short of meeting its desired inspection cycle. The nascent risk assessment for individual companies need to be amended by including non-financial risks, in particular governance risks, also building on a regular institutionalized supervisory dialogue with the major insurers' key control functions. Two smaller non-life insurers, heavily engaged in cross-border business, failed since 2017, related to an insufficient level of reserves and an incorrect assessment of assets. A new supervisory standard is being developed which addresses previous gaps in licensing and supervisory reporting.

Table 1. Denmark: Main Recommendations on Insurance Regulation and Supervision				
#	**Recommendations and Responsible Authorities**	**Addressee**	**Timing***	**Priority****
1	Expand the risk assessment framework to include more non-financial risks, in particular those related to governance and internal controls (¶59, 70)	DFSA	ST	H
2	Expand supervisory resources of the DFSA's Insurance Supervision Department (¶65)	DFSA, MIBFA	ST	H
3	Increase the frequency of on-site inspections (¶66)	DFSA	ST	H
4	Establish a regular dialogue with companies' key function holders to facilitate an assessment of their effectiveness (¶70)	DFSA	ST	H
5	Continue efforts in analyzing the implications of the switch towards more market-return products (¶31)	DFSA	C	H
6	Submit detailed findings and orders resulting from on-site inspections to companies without any undue delay (¶67)	DFSA	I	M
7	Initiate on-site inspections on AML/CFT matters in insurance undertakings and intermediaries (¶76)	DFSA	I	M
8	Complete the process of signing the IAIS MMoU (¶86)	DFSA	I	M
9	When deciding on an industry-wide roll-out of IFRS 17, carefully consider the resource implications for smaller undertakings and potential operational risks (¶26)	DFSA	I	M
10	Close regulatory loopholes for insurance intermediaries (¶41)	MIBFA	ST	M
11	Step up supervision of insurance intermediaries and allocate sufficient resources to this task (¶42)	DFSA	ST	M
12	Implement the intensified framework for supervision of cross-border business and allocate sufficient resources to it (¶85)	DFSA	ST	M
13	Develop a stress testing framework which ideally combine both a top-down and a bottom-up perspective (¶92)	DFSA	ST	M
14	Require at least the annual QRTs to be audited, and to require audit assurance process for the systems and procedures used to complete the QRTs and SFCRs (¶64)	DFSA	MT	M
15	Continue facilitating the insurance sector's move toward stochastic modelling of technical provisions and challenge companies' models (¶24)	DFSA	C	M
16	Review the current methodology of the volatility adjustment and consider technical refinements of the covered bond index (¶25)	DFSA	ST	L

* C = Continuous; I = Immediate (within one year); ST = Short Term (within 1-3 years); MT = Medium Term (within 3-5 years).

** H = High; M = Medium; L = Low.

INTRODUCTION[1]

1. **This technical note analyzes the key aspects of the regulatory and supervisory regime for insurance companies in Denmark.** The analysis is part of the 2020 Financial Sector Assessment Program (FSAP) and based on the regulatory framework in place and the supervisory practices employed as of November 2019. This note is based on a review of regulations, market analyses, and meetings with the Danish authorities. The FSAP team also met with representatives from insurers, industry associations, and other private bodies.

2. **The note does not include a detailed assessment of observance of the Insurance Core Principles.** This technical note refers to the Insurance Core Principles (ICPs) issued by the International Association of Insurance Supervisors (IAIS) in October 2011, as revised most recently in November 2018. The ICPs selected for review are broadly those with macrofinancial relevance and with material regulatory changes. They include the ICPs on solvency requirements (valuation and capital adequacy), risk management (including investments), business conduct and integrity (including insurance fraud and anti-money laundering and combating the financing of terrorism), supervisory approach (including supervisory authority[2], supervisory review, and macroprudential surveillance), as well as group supervision and cross-border cooperation. In respect to the 14 ICPs analyzed in the note, the authorities provided a full self-assessment, supported by examples of actual supervisory practices and assessments. The most recent detailed assessment, conducted on the basis of the 2011 version of the ICPs (as amended in 2013), was carried out in 2014.

3. **The note further updates on recent developments and the structure of the Danish insurance sector.** The sector is large and well developed, but is also undergoing some consolidation. This trend is driven, inter alia, by the continuing low interest rate environment which poses a major challenge for the life insurance sector. A separate technical note summarizes the results of the stress tests carried out on the insurance sector and elaborates more on current market risk sensitivities.

4. **The FSAP mission team is grateful to the authorities and private sector participants for their excellent cooperation.** The note draws on extensive discussions in Denmark. Meetings were held with the Danish Financial Supervisory Authority (DFSA), Danmarks Nationalbank (DN), and a selection of insurance companies, industry and professional bodies. The author is grateful to the authorities and private sector participants for their cooperation. The work benefitted greatly from their readiness to discuss issues and share information.

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[1] The main author of this note is Timo Broszeit, independent expert on insurance regulation. Jay Purcell (LEG) provided input on AML/CFT.

[2] The DFSA is an integrated financial regulator and issues related to its mandate and independence are addressed in the companion Technical Note on Banking Regulation and Supervision.

INSURANCE MARKET STRUCTURE[3]

5. Denmark's insurance sector is highly developed with a particularly high penetration and density in the life sector (Table 2). Traditionally, work-related life insurance and pension savings are offered as a combined package. Life insurance companies dominate the market for mandatory pension schemes for employees, where major products are traditional life annuities with guaranteed interest rates as well as market-return products, but also some dedicated pension funds exist. Denmark's life insurance penetration rate (premiums to GDP) of 7.6 percent is therefore amongst the highest in the world and well above the average for advanced markets (4.7 percent). Life insurance density (premiums per capita) reached US$4,590 in 2018. In the non-life sector, insurance penetration (2.8 percent) falls short of the average for advanced markets (3.5 percent), while insurance density (US$1,699) is slightly above the average.

Table 2. Denmark: Insurance Penetration and Density

Life insurance penetration (premiums to GDP) in Denmark is amongst the highest in the world.

		Insurance Penetration (2018, in percent of GDP)	Insurance Density (2018, US$ per capita)
Life	Denmark	7.6	4,590
	EU	4.4	1,592
	Advanced markets	4.3	2,042
Non-Life	Denmark	2.8	1,699
	EU	2.9	1,063
	Advanced markets	3.5	1,694

Source: Swiss Re Sigma.

6. The high penetration explains the overall size of the insurance sector, which exceeds those of peers from other Nordic countries and various other EU member states (Figure 1a). Assets managed by the insurance industry amounted to 146 percent of the GDP at end-2018 (compared to 72 percent for the EU average), which is an increase of 17 percentage points since 2013.

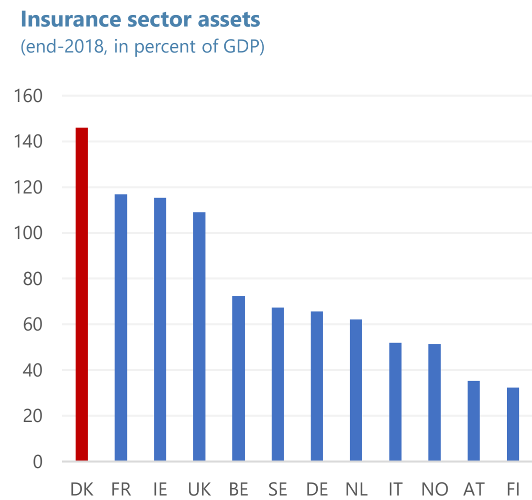
7. The number of licensed insurance companies has declined substantially since 2013 (Figure 1b). Market consolidation is driven by the low interest rate environment which weighs on profits; additionally companies aim to improve cost effectiveness amid rising regulatory costs. At the end of 2013, a total of 115 insurance companies were operating in Denmark. This number has declined to 97 companies in 2018, of which 31 were life insurers and 66 non-life insurers. Despite a decline of ten companies in non-life, the consolidation involved mostly smaller companies, contrary to the life sector where also larger insurers were involved in the consolidation process. Still a few

[3] A discussion of risks and vulnerabilities in the insurance sector is included in the Technical Note on Insurance Stress Testing.

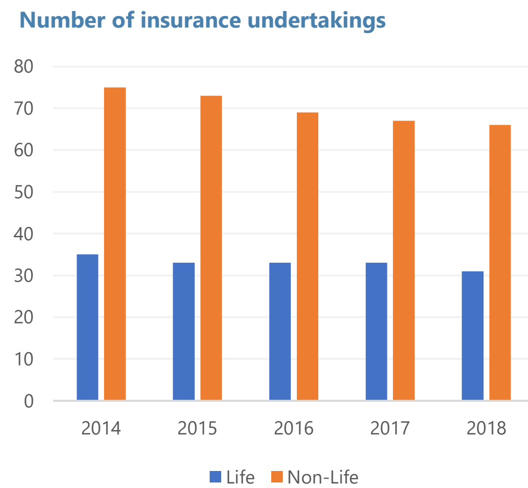
new entrants have been recorded over the last five years, including one life insurer in 2016 and a total of seven non-life insurers. A large number of foreign branches is active in Denmark, albeit declining too (39 at end-2017 compared to 49 at end-2013).

Figure 1. Denmark: Size of the Insurance Sector

Given the accumulation of pension fund assets in the life insurance sector, the industry's assets are significantly larger than in most EU/EEA peer countries.



Both in the life and the non-life sector, the number of companies is declining, but still rather high.



Source: IMF staff calculations based on DFSA, EIOPA, Eurostat.

8. **The concentration in the life insurance sector is moderately high.** The three largest life insurance groups account for a market share of 37 percent in terms of assets and the largest ten groups for 73 percent. Concentration in the non-life sector is considerably higher—57 and 88 percent of the market share is held by the three and ten largest companies, respectively.

9. **The DFSA is the home supervisor of seventeen insurance groups and one financial conglomerate as defined in the EU Financial Conglomerates Directive.** Most insurance groups are domestically focused with limited cross-border activities—only a few groups have established subsidiaries and branches outside Denmark. Danske Bank is a bank-dominated conglomerate with insurance subsidiaries. It is active in various jurisdictions of the EU/EEA and the supervisory authorities from Finland, Norway, Sweden and the United Kingdom are members of the supervisory college.

10. **In Denmark, most insurance intermediation is done through direct sales and tied agents, but insurance brokers are also part of the distribution network.** Most insurance products are distributed by agents who act for the insurers as their principals. Their number has more than doubled from 566 in 2014 to 1,173 in 2018, mostly driven by more comprehensive

licensing requirements introduced by the Insurance Distribution Directive[4] in 2018. Similarly, the number of brokers which act for the clients increased from 80 to 111 in the same period.

11. Market-return products, including unit-linked life insurance, are increasingly crowding out traditional policies (Table 3). Premiums in traditional forms of life insurance (with bonus) have consistently declined since 2010 and amount to only 29 percent or DKK 51.9 billion of the total gross premiums written in 2018. Unit-linked policies without guaranteed minimum return, which account for most of the market-return products, on the other hand, have increased in demand (due to reselection offers and the prolonged low interest rate environment) and account for over 67 percent of the gross premiums written in 2018. Non-life premiums have stagnated in real terms from 2014 to 2018. The most important lines of business comprise property and motor insurance with 35 and 30 percent of premiums, respectively. More than 99 percent in life business is retained by the primary insurers, while retention rates in non-life lines are at around 90 percent.

Table 3. Denmark: Premium Income

Life insurance contracts in Denmark are predominantly occupational pension schemes, hence they are concluded between the employer and the insurer. Individual life business accounts for only 7 percent of premiums.

DKK millions	**Life insurance contracts outside employment**	**Life insurance contracts as part of employment**	**Group Life**
1. Regular premiums	6,025	99,925	9,398
2. Single premiums	6,599	58,085	0
Total (1+2)	**12,624**	**158,010**	**9,398**
of which			
Life insurance contracts with bonus	4,632	40,626	6,595
Life insurance contracts without bonus	1,516	1,030	2,051
Unit-linked contracts with guaranteed minimum return	209	1,725	0
Unit-linked contracts without guaranteed minimum return	6,216	114,629	753

DKK millions, direct business	**Non-life insurance**
Property	25,921
Motor	21,687
Sickness and accident	14,029
Workers Compensation	3,475
Liability	3,177
Marine, Aviation and Transport	1,413
Other	3,351
Total	**73,053**

Source: DFSA.

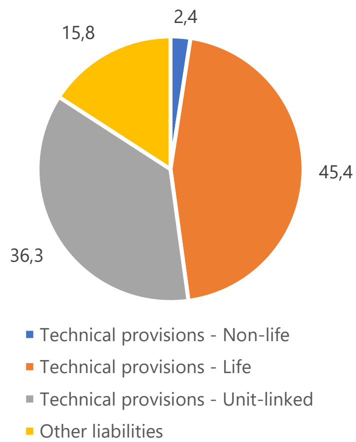
[4] Directive (EU) 2016/97 of the European Parliament and of the Council of 20 January 2016 on Insurance Distribution.

12. The structure of insurance liabilities reflects the shift from traditional life insurance policies to market-return products (Figure 2). For the whole insurance sector, technical provisions account for 84 percent of total liabilities. These technical provisions split further into traditional (with profit) life insurance provisions (45 percent of total liabilities) and unit-linked provisions (36 percent). Within just four years, the amount of unit-linked provisions has increased by 58 percent while insurance liabilities in total rose by only 4 percent. Non-life technical provisions with their much shorter duration account only for less than 3 percent of total liabilities.

Figure 2. Denmark: Insurance Liabilities

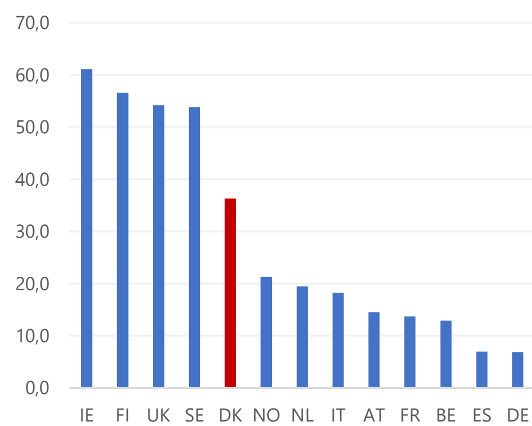
Technical provisions for traditional life insurance business account for 45 percent of the sector's liabilities, while technical provisions for unit-linked business accounts for another 36 percent.

Insurance liabilities
(2019 Q3, in percent)



Compared with European peers, the share of unit-linked business is relatively high, among the larger markets only topped by Ireland, Finland, the UK and Sweden.

Share of unit-linked liabilities
(2019 Q3, in percent of total liabilities)



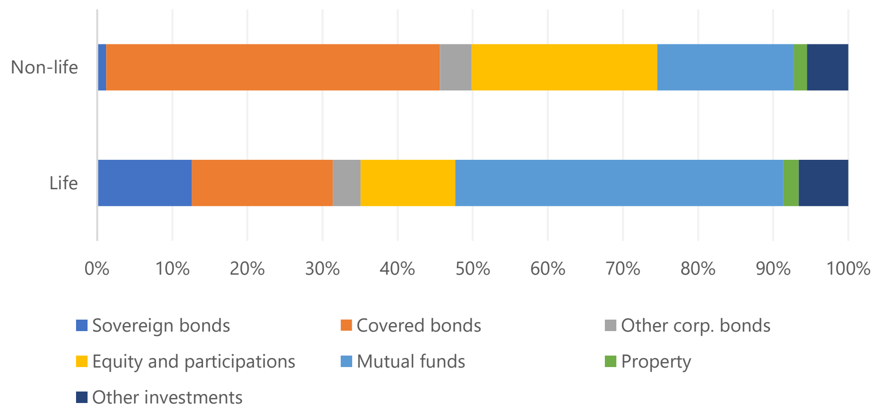
Source: DFSA, EIOPA.

13. The asset allocation of Danish life insurers is characterized by relatively large holdings in domestic covered bonds (Figure 3). Taking into account the large amount of assets covering unit-linked policies (35 percent of the total) mutual funds are naturally the largest asset class. A Danish particularity, however, is the concentrated exposure towards covered bonds, accounting for 19 percent of life insurers' investments and even 44 percent in the non-life sector—of these, 93 percent are issued by Danish banks. Additionally, life and non-life companies invest 13 percent and 25 percent in equity (incl. participations), respectively. In the life sector, foreign-denominated assets have a significant share in the asset allocation—besides 65 percent in Danish kroner, 16 percent are denominated in Euro, and 13 percent in US dollar. This is roughly reflected in the country breakdown of investments where for the whole industry Denmark ranks first with 63 percent, followed by the United States and Germany with 11 and 5 percent.

Figure 3. Denmark: Insurance Asset Allocation

Investments of Danish insurers are characterized by large holdings in covered bonds as well as in equity and participations. The high share of investments in mutual funds reflects the proportion of unit-linked business.

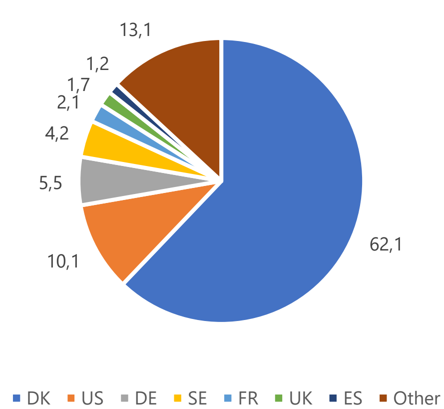
Asset allocation
(2019 Q3, only investment assets, in percent)



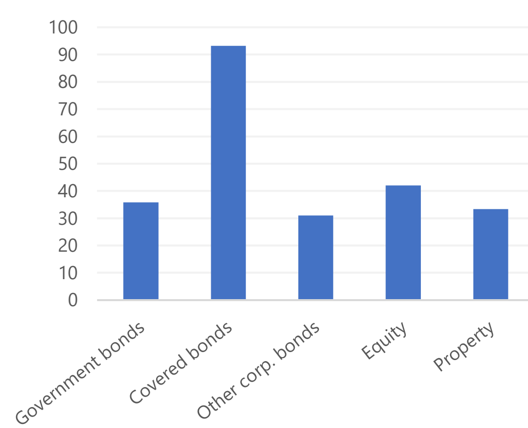
Almost two thirds of all bond and equity exposures are domestic, another 10 and 5 percent are U.S. and German securities; the rest of the world amounts to 22 percent.

Covered bond exposures are substantially biased towards domestic issuers—93 percent are issued by domestic banks and mortgage companies.

Country allocation
(2019 Q3, only bonds and equity, in percent)



Home bias in investments
(2019 Q3, in percent)



Source: IMF staff calculations based on DFSA and EIOPA data.

14. Profitability has been maintained with positive returns on equity in both life and non-life insurance throughout 2009 to 2018 (Figure 4a). Non-life insurance is characterized by favorable underwriting results and relatively low expense ratios. In life insurance, high guaranteed interest rates in life insurance policies continue to impede profitability, given a large (though constantly declining) legacy portfolio of contracts with guarantees of more than 3 percent—these contracts still account for 23 percent of all life technical provisions, down from 33 percent in 2013.

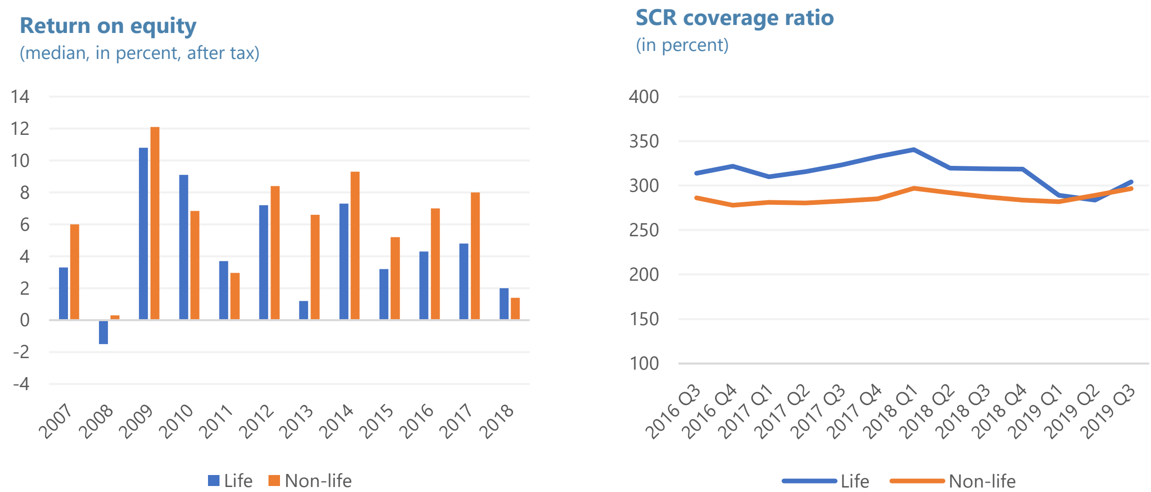
Until 2017, positive investment income, mainly driven by rising stock markets and falling bond spreads, has contributed to positive returns. Market value losses in the equity portfolio and stagnating bond prices temporarily reduced profitability in 2018 resulting in a rather low median return on equity of 2.0 and 1.4 percent in the life and non-life sector, respectively.

15. **Solvency ratios have been broadly stable since the Solvency II implementation, but react highly sensitive to technical changes in the valuation regime** (Figure 4b). The coverage of the solvency capital requirement (SCR) hovers around 280 percent in both life and non-life, well above the regulatory threshold at 100 percent. 90 percent of the life and non-life companies had an SCR coverage of at least 184 and 149 percent, respectively, in September 2019. The most recent drop in the first quarter of 2019 is driven by a change in the calculation method for the volatility adjustment (VA) which ultimately decreased discount rates used in the calculation of technical provisions (see also Figure 5 in the next section).

Figure 4. Denmark: Profitability and Solvency

Profitability in life and non-life has been declining since 2011, mirroring lower interest rates.

Life and non-life companies hold on average almost three times the capital which is required by regulation.



Source: IMF staff calculations based on DFSA data.

INSURANCE REGULATION

16. **With the implementation of Solvency II[5] in 2016, prudential insurance regulation in the EU/EEA was harmonized.** Solvency II created an economic valuation regime for assets and liabilities, a risk-based solvency framework, enhanced risk management practices as well as more transparency through public disclosures. In addition to these prudential requirements, new EU regulations were adopted to improve business conduct and policyholder protection. A common EU

[5] Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the Taking-up and Pursuit of the Business of Insurance and Reinsurance.

framework for insurance regulation and a harmonization of insurance guarantee schemes are however still pending.[6]

A. Solvency II Implementation

17. Solvency II has been implemented in full in Denmark and in some areas even before the EU implementation date. Since the initial implementation in 2014 there have been several bills amending the Financial Business Act (FBA) to transpose the Solvency II Directive and related Technical Standards into national law. In Summer 2019, the European Commission considered Solvency II in Denmark being correctly transposed while sending letters of formal notice to five member states for not having done so.

18. Out of the 97 Danish insurers, 82 fall within the scope of Solvency II. Not all insurance undertakings are subject to Solvency II, mostly due to small size—these companies are typically also excluded from certain other regulatory requirements, e.g., on governance and internal controls.

Valuation of Assets and Liabilities

19. The valuation of assets and liabilities is an economic valuation which reflects the risk-adjusted present values of their cash flows. Valuation for general accounting purpose follows the DFSA's Executive Order on Financial Reports for Insurance Companies and Multi-Employer Occupational Pension Funds. The valuation principles for assets under the accounting and the solvency framework are generally similar, so that balance sheet totals are fairly aligned.

20. Until 2017, companies have also been able to use similar valuation techniques for technical provisions in life insurance, both for accounting and solvency purposes. The Danish accounting regime relied on deterministic cash flow modeling for guaranteed benefits which was considered to be in line with Solvency II principles. A review by the DFSA, performed in connection with a European Commission transposition check, however found this approach to be inappropriate and urged for changes. As a consequence, the DFSA has published guidelines on the valuation of life insurance liabilities. These guidelines, which were consulted upon with the Danish Actuarial Society and the Danish Insurance Association, suggest a cash flow modelling for all future payments and the use of valuation techniques which are commensurate with the insurance obligations. As such fundamental changes to the actuarial models are challenging, the DFSA expects life insurers to be compliant by end-2022. As a first step, all life insurance undertakings had to perform a gap analysis after the guidelines were published. Subsequently, the DFSA has issued orders to 25 life insurers requiring them to ensure compliance with the valuation regulations by end-2022 at the latest.

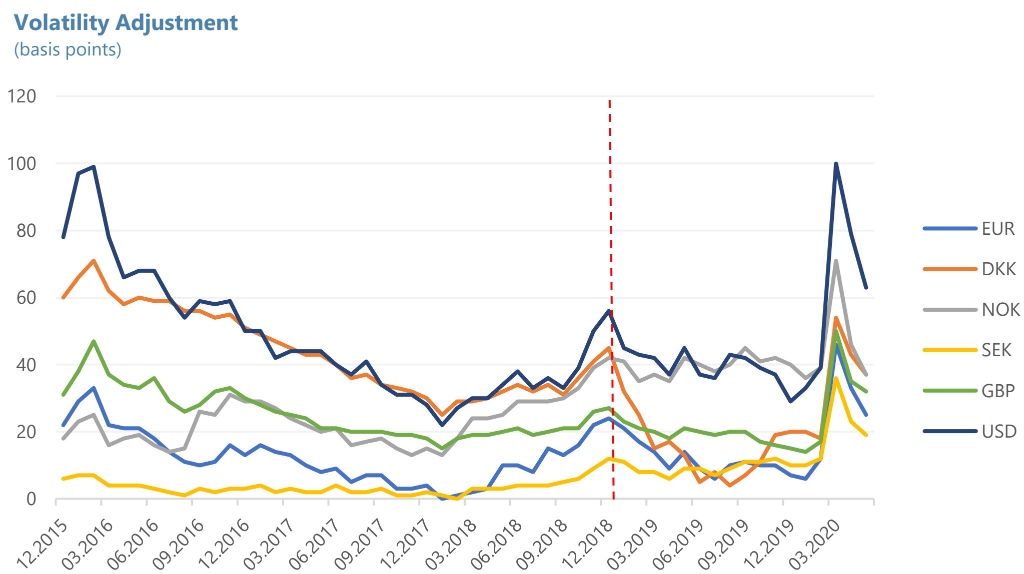
21. Danish insurers make less use of long-term guarantee (LTG) measures and transitionals than companies in other European markets. No Danish insurer uses the transitional measures for

[6] See the Euro Area FSAP Technical Note on Insurance, Investment Firm, and Macroprudential Oversight, Country Report No. 18/230.

technical provisions or for the risk-free rate. Among the measures of the so-called LTG package, only the volatility adjustment (VA) is used. The VA is an important mechanism in the Solvency II framework to counterbalance excessive volatility of bond yields—it is added to the risk-free term structure which is used to discount future cash flows in the calculation of technical provisions. Its effect on the valuation of technical provisions is rather minor, reducing those by 0.4 percent as of end-2018, but the solvency position is affected considerably. Eligible own funds would be 3.7 percent lower without the VA, and the solvency capital requirement (SCR) higher by 22.3 percent. As a result, the average SCR coverage ratio without the VA would be 244 percent instead of 310. However, it needs to be noted that the VA at end-2018 was at a rather high level with a value of 45 basis points (Figure 5).

Figure 5. Denmark: Long-Term Guarantee Measures

In the first three years of the Solvency II regime, the Danish VA used to be considerably higher than its EUR counterpart. Following the change in the calculation methodology, the Danish VA has converged towards the EUR VA. The spike in March 2020 is driven by the market turbulences caused by the outbreak of the Covid-19 pandemic.



Source: EIOPA.

22. Technical features of the discounting methods in Solvency II have changed substantially in early 2019, leading to higher technical provisions and hence a lower solvency coverage. The European Insurance and Occupational Pensions Authority (EIOPA), which calculates the VA on a monthly basis for all EU/EEA currencies, has introduced a new methodology in January 2019, aiming for a better reflection of Danish covered bond yields. As a result, the VA in January was 13 basis points lower than in December 2018, driving up the value of insurance liabilities and reducing the available capital. For some life insurance companies, the new methodology resulted in SCR ratios dropping by more than 30 percentage points. While this drop is per se not an immediate supervisory concern, but merely a result of the new methodology, market participants mentioned technical flaws in the construction of the covered bond index, used as input for the VA calculation, which should be fixed.[7]

23. While local GAAP has not changed as a result of the Solvency II implementation, the DFSA is considering whether GAAP should be changed in line with the upcoming International Financial Reporting Standard (IFRS) 17, a new global standard for the valuation of insurance liabilities. In 2019, only five Danish insurers prepared their accounts based on IFRS. For those companies, the implementation of IFRS 17 (scheduled for 2023[8]) will be mandatory, and preparatory work has already started. While the valuation principles of Solvency II and IFRS are very similar, substantial work is needed to meet the requirements regarding the granularity of IFRS 17 calculations.

Analysis and Recommendations:

24. The DFSA should further continue facilitating the insurance sector's move toward stochastic modelling of technical provisions and challenge companies' models. Given the complexities of stochastic modeling, companies have some degree of freedom in specifying their models. It is important that the DFSA enhances its actuarial resources to challenge the models in order to mitigate provisioning risks and associated risks for policyholders and financial stability alike.

25. The DFSA should consider technical refinements of the covered bond index which is used as an important input in the VA calculation. The covered bond index contains some technical flaws which unduly complicate risk management practices. A review of the index should take into account market practitioners' views and aim for a robust calculation method.

26. When deciding on an industry-wide roll-out of IFRS 17, the DFSA should carefully consider the resource implications for smaller undertakings and potential operational risks. As only five insurance groups are currently subject to IFRS, concerns about an unlevel playing-field as a result of the regulatory costs of an IFRS 17 implementation appear valid. A roll-out of IFRS 17 to other major insurance companies or to the whole market should foresee sufficiently long implementation deadlines, especially for smaller undertakings where the necessary skills are scarce and need to be built up.

Investments

27. Life insurance companies are required to fully cover their technical provisions with investment assets at all times. The FBA section 167 (1) prescribes that "[l]ife insurance companies

[7] Concerns are mostly related to the small number of index components in the covered bond index, the rebalancing frequency (currently only quarterly), and the time of rebalancing (market participants mentioned a preference for a rebalancing at the end of the month instead of the beginning). In its current design, the VA is seen as being correlated with the risk-free interest rate which would be hard to justify theoretically. The correlation arises from larger early repayments on mortgage loans when interest rates decline.

[8] At the time of the FSAP mission, the effective date for IFRS 17 was January 2022. In March 2020, the International Accounting Standards Board decided to postpone the effective date by one year to January 2023.

and multi-employer occupational pension funds […] shall have a group of assets, the total value of which at all times corresponds to the value of the total insurance provisions. To ensure the presence of sufficient assets, the insurance companies shall keep a register that includes a record of 1) assets, the total value of which at all times corresponds to the value of the undertaking's total insurance provisions, and 2) the value of financial contracts that reduce the risk that assets pursuant to no. 1 do not cover the insurance liabilities.” According to the FBA section 167 (3), the assets shall exclusively serve for the fulfilment of liabilities to policyholders. As such all these assets shall be unencumbered. The DFSA checks the registered assets on quarterly basis. Furthermore, according to the Executive Order on Registration of Assets in Direct-Business Insurance Companies, Multi-employer occupational pension funds, Company Pension Funds and Branches in Denmark of Foreign Direct-Business Insurance Companies, auditors are required to at least once a year perform a non-notified review of the registered assets covering technical provisions. For non-life insurance companies, insurance claims take precedence over other claims against a non-life insurer with regard to the insurer’s entire assets. Claims arising from a winding-up procedure are, however, served prior to insurance claims according to FBA section 234a.

28. The prudent-person principle requires insurers to only invest in assets for which the insurer is able to identify, measure, monitor, manage, control, and report the associated risks appropriately. The legal requirements regarding insurers’ investment activities are summarized in the FBA, sections 70, 71, 158 and 167. Section 158 is an implementation of the prudent person principle as well as the freedom of investment as set out in the Solvency II Directive. The DFSA’s Executive Order on Management and Control of Insurance Companies sets out more detailed requirements with regard to insurers’ investment policies, procedures, and good governance.

29. The DFSA has released guidance on alternative investments and sound investment processes in light of the prudent-person principle, which elaborates on the existing regulation, and explains the DFSA’s expectations towards insurers’ investment activities, processes, and management of investments. The DFSA has set up a unit of four full-time equivalents that analyzes alternative investments of insurers. After having conducted thematic on-site inspections regarding infrastructure investments recently, the current focus of reviews is on credit investments.

30. As a response to persistently low interest rates, several life insurers have moved from traditional insurance products to asset management-type products, which reduces their exposure to interest rate risk and shifts market risks—and to some extent biometric risks including longevity—to policyholders. In an attempt to yield a competitive performance, insurance companies might invest in riskier assets, thereby also exposing themselves to liquidity risks for which a robust regulatory framework is not yet in place. Box 1 sets out the DFSA’s initiative to develop a supervisory approach which appropriately addresses the risk profile of such market-return products.

Box 1. Denmark: Market-Return Products

The DFSA has noted a shift in life insurers' business models during recent years due to the development of new unguaranteed market-return products. Low interest rates and longer life expectancies have put pressure on life insurance and pension products with guarantees due to higher technical provisions required in order to ensure that companies are able to meet their guarantees. Investment opportunities of life insurers and pension funds are limited to investment products with lower risk and thereby also lower expected returns. Lower risk eases the pressure on solvency, but eventually, lower expected returns make it difficult for insurers to generate returns on savings that are sufficient to meet their guarantees.

Life insurance and pension products with lower or even no guarantees are a direct consequence of the low interest rate environment. Introducing such products has created more freedom of investment, which increases the chance of achieving better returns on savings, and thereby larger pension payments to customers. In 2012, the Minister for Business and Growth agreed with the industry to support this development. According to this agreement, life insurers and pension companies should continuously reduce their range of products with nominal interest rate guarantees. One way of achieving this is to make it easier for customers to reselect and move their savings to unguaranteed products, including market-return products. This development has resulted in more unguaranteed products where policyholders bear the investment risks and typically also to some extent biometric risks including longevity.

Up until now the regulatory framework has focused on products that involve guarantees, and the DFSA has experienced difficulties in fitting the new types of products into its supervisory approach, applying existing regulation on them, and generally in ensuring a proper protection of policyholders. Based on these experiences, the DFSA published a discussion paper ("Pensions when the guarantees disappear") in February 2017 and requested comments on whether new regulation was needed to specifically protect policyholders with unguaranteed life insurance products. The DFSA noted that insurers take higher risks when investing funds in market-return products on behalf of customers. Ultimately, customers might face lower pension payments, if these investments fail to reap the returns expected. Therefore, the DFSA has initiated the debate to make supervision and to some extent regulation fit to the new trends and market conditions.

In 2019, the DFSA initiated a market investigation of the whole sector's unguaranteed market-return products, where life insurers and multi-employer occupational pension funds had to report extensive information about the characteristics and the design of each of their unguaranteed market-return products (especially features related to the pay-out phase), and the underlying investment strategy as well as risk management practices.

The work on this specific area is still ongoing and DSFA tries to involve both the industry and politicians in the considerations on how to secure policyholder protection. Once finished with the analysis the DFSA is supposed to hand over the findings to the Ministry of Industry, Business and Financial Affairs (MIBFA) in order to continue the debate on the need for a rethinking of the regulation on relevant matters. Consequently, the requirement for insurers to invest in a manner that is appropriate to the nature of their liabilities, product characteristics, and product design is something the DFSA maintains its ongoing focus on.

Source: DFSA.

Analysis and Recommendations:

31. The DFSA should continue its efforts in analyzing the implications of the switch towards more market-return products. Sales practices (including conversion offers) as well as investment risks and biometric risks need to be fully understood by policyholders. Likewise, the DFSA needs to establish a solid understanding of prevailing risk management practices in the insurance sector.

Capital Adequacy

32. An insurance undertaking's own funds must cover the solvency capital requirement calculated by the company at all times according to FBA section 126c. The solvency capital requirement is calculated using either the standard formula or an internal model authorized by the DFSA. Should the risk profile of an insurance company deviate substantially from the prerequisites on which the standard formula is based, the DFSA may require the undertaking to use an authorized internal model to calculate the solvency capital requirement for the relevant risk modules.

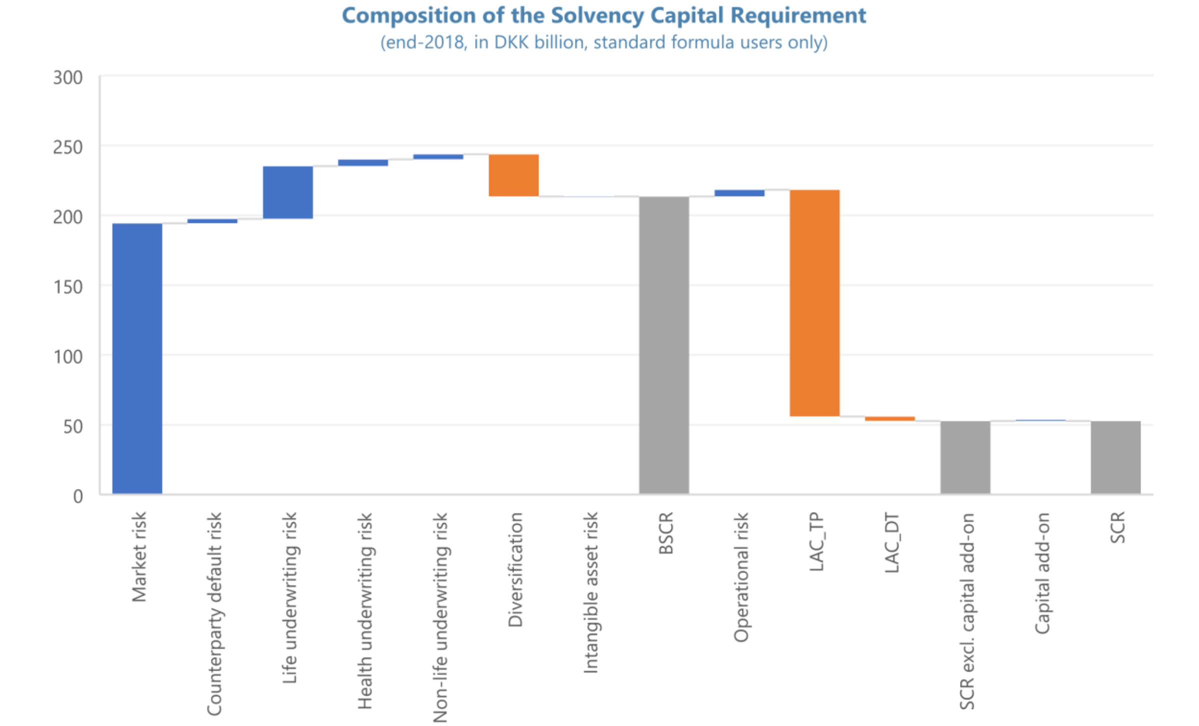
33. The solvency capital requirement of Danish insurers contains a sizable amount of loss-absorbing capacity. The major component of the Basic Solvency Capital Requirement (BSCR) of Danish insurers is the capital charge for market risks which amounts to 91 percent of the BSCR before diversification. Amongst all the other risk modules, only life underwriting risks contribute another sizable portion (18 percent). With the dominance of these two risks, the diversification is accordingly only limited (-14 percent). The loss-absorbing capacity of technical provisions reduces the BSCR considerably by 76 percent.

34. In 2019, the DFSA has prescribed capital add-ons for the first time. Both cases were motivated by shortcomings in the governance systems which the DFSA has detected during on-site inspections. In one case, the capital add-on amounted to more than 20 percent of the previously required capital. One of the companies appealed against the DFSA's decision—the final outcome is still pending.

35. As of end-2018, eight insurers used a partial internal model, and two companies had developed a full internal model. The two full internal model users are part of a large non-life group, with combined premium volume of around 20 percent of the Danish non-life insurance sector. Among the partial internal model users, which account for 43 percent of the sector's total assets, there are five life insurers which use the model to derive their capital requirement for longevity risk. Additionally, three non-life insurers use an internal model to calculate the capital charge for underwriting risks in either all lines of business or a majority thereof.

Figure 6. Denmark: Composition of the Solvency Capital Requirement

Market risks are by far the most material component of the Basic Solvency Capital Requirement, of which most are effectively borne by policholders through the loss-absorbing capacity of technical provisions.



Source: DFSA.

B. Conduct of Business and Consumer Protection

36. The DFSA's mandate includes prudential and market conduct supervision with policyholder protection being a primary objective. The last FSAP had recommended to explicitly include policyholder protection in the FBA as a primary objective of the DFSA. This has been adopted as of January 2016 through an amendment of section 344 (2), where an explicit reference is now included.

37. Undertakings which distribute insurance products are obliged not to use unfair contract terms or misleading business practices. The DFSA's Executive Order on Good Business Practices for Insurance Distributors transposes the consumer protection requirements of the Insurance Distribution Directive as well as additional national requirements both before the contract is entered and during the life of contract. The Executive Order on Professional Requirements for Insurance Companies and Insurance Intermediaries contains requirements for insurance distribution in order to ensure that sales agents have the necessary skills and knowledge to fulfill the legal consumer protection requirements. The skills must be documented by a basic test before the person can act on its own and reconfirmed by a follow-up test every third year.

38. Insurance undertakings must have written procedures for all substantial areas of their business according to the FBA section 71. This includes an obligation to have written procedures to ensure the fair treatment of customers and compliance with the Executive Order on Good Business Practices for Insurance Distributors.

39. For independent insurance intermediaries, there is no equivalent regulation obliging them to set up written policies and procedures to ensure compliance with the regulation concerning their business. The Insurance Distribution Act does not include specific requirements regarding internal controls or compliance. An intermediary who claims to be independent can only represent the customer in order to avoid conflicts of interest according to art. 16 of the Insurance Distribution Act. Furthermore, an intermediary may not receive remuneration or other forms of financial compensation from an insurance undertaking, and staff cannot be shared between independent and tied intermediaries.

40. There is a variety of mechanisms for consumer protection including a Complaints Board and an Ombudsperson. The Insurance Complaints Board is a private complaints board authorized by the MIBFA to adjudicate on complaints from private customers against an insurance company relating to the law of property and resulting obligations. The board also considers all complaints concerning motor insurance. In addition, the Consumer Ombudsman, an independent authority supervising compliance of all sectors of the economy with the Marketing Practices Act, has jurisdiction over insurance. The Ombudsman may investigate specific complaints against an insurance company and issues of public importance relating to marketing activities, and may bring civil or criminal actions on behalf of complainants.

Analysis and Recommendations:

41. The FSAP recommends regulatory loopholes for insurance intermediaries being closed. Specifically, the need for written policies and procedures as well as internal control functions should be established, at least for larger intermediaries.

42. The DFSA should step up its supervision of insurance intermediaries and allocate sufficient resources to this task. As already observed in the last FSAP, the supervision of intermediaries suffers from low resources, in common with market conduct regulation. While the DFSA was allocated resources to cope with the (one-off) registration of intermediaries under the Insurance Distribution Directive, for ongoing risk-based supervision more staff is needed.

C. Crisis Management and Insurance Resolution

43. The DFSA has a written procedure regarding early intervention and crisis management. The procedure is supplemented by a crisis manual, which describes different scenarios and policy actions, e.g. the case of inadequate capital. The DFSA will in that case demand a recovery plan from the company and follow the company closely—typically requesting reporting on a monthly or depending on the type of crisis even on a daily basis. Regarding a breach of the SCR or the minimum capital requirement (MCR), the FBA prescribes specific procedures and timelines.

44. The DFSA has the power to order corrective actions under various conditions. These include cases in which:

- an insurance undertaking is not complying with the provisions of the FBA; or
- the insurer's funds allocated for coverage of technical provisions are inadequate; or
- the insurer's financial position has deteriorated to such a degree that the interests of the insured parties are at risk.

In those cases, the DFSA shall order that the company takes the steps necessary within a time limit.

45. Resolution of solvent non-life insurance undertakings is affected through liquidation while insolvent undertakings will be wound up by a trustee. Liquidators will be appointed to carry out the liquidation. Insurance undertakings in liquidation are still subject to supervision by the DFSA, and the DFSA will oversee the liquidation of the undertaking. Insolvent non-life insurance undertakings will be wound-up by a trustee appointed by the bankruptcy court. The bankruptcy court will also oversee the work of the trustee. The DFSA receives any information that the trustee sends to the bankruptcy court about the affairs of the estate.

46. When the liquidation of a non-life insurance undertaking has been initiated by the DFSA, the DFSA will consult with the liquidators on how to deal with the portfolio of existing insurance contracts. Depending on the circumstances, it can be appropriate to attempt to transfer the portfolio of insurance contracts fully or partly to one or more insurance undertakings, or the undertaking could attempt to terminate its portfolio of insurance contracts in another way. If it is deemed appropriate to seek the transfer of the portfolio of insurance contracts, but no insurance undertaking is willing to take over the portfolio, the undertaking under liquidation must continue until all insurance obligations have run off. The DFSA will continue supervising the undertaking until the transfer of insurance contracts has been fully completed or the undertaking has been dissolved.

47. For life insurance undertakings, the DFSA has the power to place the undertaking under administration in certain situations, e.g. when the undertaking does not implement the measures ordered by the DFSA and it is deemed that the omission could cause risk for the insured parties. When a life insurance undertaking is placed under administration, a bridge institution is created to which the undertaking's portfolio of insurance contracts and assets used to cover the technical provisions related hereto are transferred. After the portfolio is transferred to the bridge institution, the undertaking's remaining assets and liabilities not related to the insurance contracts are subject to traditional insolvency proceedings.

48. In case an insurance undertaking in liquidation has cross-border activities, the DFSA may activate the EIOPA Decision on the Collaboration of the Insurance Supervisory Authorities and set up an EIOPA platform, where information can be exchanged between relevant supervisory authorities. This could be relevant, e.g., when assessing the possibility of a portfolio transfer of insurance contracts written outside Denmark.

Box 2. Denmark: Recent Insurance Failures

Two Danish non-life insurers have failed recently, Alpha and Qudos, both with a comparable business model which relied on cross-border business. Alpha Insurance A/S (Alpha) was a Danish-based insurer that operated under the EU's Freedom to Provide Services (FPS) in France, Germany, Greece, Ireland, Italy, Norway, Spain and the United Kingdom mostly selling non-life products like motor, workers compensation, construction, legal expenses, general liability policies to approximately 1.4 million policyholders. Qudos Insurance A/S (Qudos) was a Danish-based insurance group operating mainly in Denmark, France, Germany, Greece, Ireland, Italy, Norway and the United Kingdom providing mostly motor, property, general liability, income protection policies to around 400,000 policyholders.

The bankruptcies in these two companies demonstrated the need to consider new approaches to the supervision of FPS business. At the time of the mission, the DFSA was preparing a report on the reasons for the failures of the companies including recommendations on the supervision of the FPS business model. For both companies, the DFSA has identified a number of underlying root causes for their failures:

- Lack of understanding in the companies of risks in host countries, especially the long-tailed business, leading to insufficient technical provisions;
- Heavy reliance on outsourcing of underwriting and claims handling, and on agents' own view on the risk profile of the products;
- Insufficient staff resources, resulting in insufficient control mechanisms that led to lack of control with the agents;
- Too optimistic management assumptions on several issues (technical provisions, solvency capital requirement calculation, valuation of assets), which overstated the financial position.

Meanwhile, the DFSA has already intensified its supervision of the FPS business model. Another non-life insurer with an FPS business model was inspected during the spring of 2019 and received a capital add-on order due to an insufficient governance framework. The DFSA also initiated an inspection in a smaller company, that had expressed a wish to expand its business geographically by way of FPS. The dialogue with the company showed that the company had not prepared its entry to the foreign market sufficiently, and the company dropped its plan after the on-site inspection.

Source: DFSA.

49. Compensation for loss in case of a failed insurer is available to non-life policyholders. The Guarantee Fund for Non-Life Insurance Companies is established and administered as a private, self-governing body by the Danish Insurance Association, under DFSA supervision. It covers eligible policyholders in respect of claims outstanding and premiums paid prior to a bankruptcy order being issued. Premium cover is subject to an excess of DKK 1,000 per policy, but there is no maximum on compensation payable for either claims or premiums. Non-life insurance companies are required to make regular contributions to the Fund, and the entrance fee is DKK 100,000. The amount payable to the Fund is set by the DFSA on an annual basis—however, the annual fee was suspended from 2009 to 2018. In 2019, Fund members are paying DKK 40 per policy written or renewed in 2019. The minimum capital of the Fund is set at DKK 300 million and the Fund may also borrow, subject to a state guarantee. As of end-2018, the Fund's equity capital was negative with DKK 742 million which is mainly due to the recent bankruptcies of Alpha Insurance A/S and Qudos Insurance A/S, both in 2018.

50. There is currently no guarantee scheme for life insurance. The authorities take the view that insolvency law—in particular the register of assets covering technical provisions—provides adequate protection to policyholders.[9]

INSURANCE SUPERVISION

51. According to the FBA section 344 (1), the Danish FSA shall supervise compliance with the Financial Business Act and rules issued pursuant to this Act. Furthermore, the Danish FSA is also mandated to supervise compliance with a multitude of EU regulations governing financial undertakings, including regulations issued pursuant to Solvency II. While the last FSAP has criticized that the DFSA lacks an explicit mandate to protect policyholders, the FBA section 344 (2) has been amended, effective since January 2016, to remedy this shortcoming.

52. The DFSA takes a risk-based approach to supervision and also examines the viability of the business model according to the FBA section 344 (2). The DFSA uses both off-site monitoring and on-site inspections to evaluate insurers. It receives on a regular basis data and qualitative reports, e.g. the Solvency II Quarterly Reporting Templates (QRTs), the Own Risk and Solvency Assessment (ORSA), and the Regular Supervisory Reporting, all of which support supervisory activities. According to the FBA sections 346 and 347, the DFSA has the authority and power to perform off-site monitoring and on-site inspections of insurers, and to require insurers to provide additional information necessary for supervision. Based on the FBA section 347 (5), the DFSA has the power to perform inspections at outsourcing companies as well.

A. Supervisory Review

Reporting

53. Reporting requirements were to a large degree newly introduced with the implementation of Solvency II in 2016. Examples of submitted data include:

- Income statement and balance sheet;
- Detailed list of assets; additionally, life insurers have to submit every quarter documentation that they have sufficient assets to cover their technical provisions (registered assets);
- Calculation of the solvency capital requirement and information on available own funds;
- Technical provisions and projection of future cash flows.
- Annual longevity analysis from life insurers.

54. Since the introduction of the QRTs there has been ongoing work to improve data quality. The DFSA performs quality checks on submitted data and sometimes requires corrections if

[9] In this context, refer to the 2018 Euro Area FSAP which recommended a more harmonized approach towards insurance guarantee schemes. See the Technical Note on Insurance, Investment Firm, and Macroprudential Oversight, IMF Country Report No. 18/230.

the submitted data in the first place was wrong. While the external auditor has to sign the annual financial statements according to the FBA, he does not audit the QRTs or the Solvency and Financial Condition Report.

55. Regular quantitative reporting is complemented by ad-hoc reporting. According to the FBA section 75, any financial undertaking shall immediately inform the DFSA of matters which are of material significance to its operations. The Executive Order on Outsourcing of Activities of Significant Importance determines that insurers have to report new outsourcing contracts on critical outsourcing in due time before entering an agreement. Any changes in the fit and proper status for board members, executive management and key function holders must be reported to the DFSA according to the FBA section 64.

Supervisory Review

56. The DFSA has an internal risk assessment for each insurance company, which is updated at least every year, where considerations about each undertaking's business model, governance, investments, solvency, risk management, and actuarial matters are stored and continuously updated. The qualitative risk assessments of each of these aforementioned areas results in an internal rating for every insurer. The internal rating is supplemented by a technical rating, which is based on quantitative measurements. Based on the internal risk assessments, the DFSA implements proportionality and a risk-based approach to its supervision. Thus, more resources are allocated to larger undertakings with more probable or impactful risks. Procedures for off-site supervision are described in the Guidelines for Off-site Supervision.

57. The DFSA uses business intelligence to analyze underlying trends in assets, capital position, and key performance indicators based on QRTs. Every quarter the DFSA analyzes the solvency and financial position of an insurer. For non-life insurers, the quarterly review is based on twelve (purely quantitative) criteria[10] as documented in Procedure for the Quarterly Solvency Surveillance. Outliers have to be explained either through analysis or through dialogue with the relevant companies. As a supplement to the key figures there are several sensitivity and scenario calculations. According to the Executive Order on Sensitivity Analysis for Group 1 Insurers, the DFSA collects and analyzes on a quarterly basis, each insurance undertaking's sensitivities towards a wide range of risk metrics, covering both market related risks and insurance related risks. If the solvency becomes critical in any of the scenarios the insurer is monitored closer going forward. The business intelligence tool is under development and is expected to cover more of the QRTs in the future, especially the liabilities side and technical provisions.

58. Besides the established procedures on risk assessments, planning of supervisory activities, and analyses of reporting data, the DFSA uses different channels for an ongoing dialogue with the insurers. Occasionally, the DFSA requests further information from companies

[10] SCR ratio, MCR ratio, absolute MCR ratio, SCR divided by gross written premiums, gross combined ratio, net combined ratio, growth in gross written premiums, growth in gross earned premiums, change in reinsurance result, receivables, change in premium provisions, change in claims provisions.

on a specific matter which could be triggered by policyholder complaints, media reports, or reporting through the DFSA's whistleblower system. DFSA also meets with the insurers outside more formal supervisory inspections, e.g. the DFSA meets with the largest insurers once a year which gives management a possibility to discuss market trends and other relevant matters.

Analysis and Recommendations:

59. The risk assessment framework should be expanded to include more non-financial risks, in particular those related to governance and internal controls. Clear guidance to DFSA staff is needed in this context to determine under which circumstances a risk should be considered high, medium or low. The two recent capital add-on decisions provide good case studies for such a guidance.

B. On-Site Inspections

60. The frequency of on-site inspections depends on the size and riskiness of an insurer. Procedures used in deciding the frequency of on-site inspections are documented in the DFSA's Guidelines for Preparing Inspections. Planning of supervisory activities, including on-site inspections, is done on a yearly basis. The first step in preparing an on-site inspection is to use all available submitted data from the insurers in order to identify relevant areas for the on-site inspection. It is a central part of the on-site inspection to review the insurer's business model, underwriting policy, governance structure, financial strength, outsourcing and treatment of policyholders. Procedures for on-site inspections are set out in the Guidelines for Executing Inspections.

61. The DFSA follows a transparent approach in publishing the main findings and orders issued as part of an on-site inspection. According to the FBA and internal guidelines for finishing inspections, the DFSA facilitates a meeting with the insurer—first with senior management, then with the board of directors—where the conclusions from the inspection are presented together with the actions the insurer is ordered to take. The insurer receives a detailed report with the actions, though this report is usually finalized only some months after the inspection. Upon receipt of the report, the insurer has to publish a statement prepared by the DFSA on the supervisory findings. Orders are to be handled by the company within a given deadline, and documentation on the actions taken needs to be submitted to the DFSA.

62. Especially since the introduction of Solvency II, the DFSA has conducted more thematic inspections in the life and pension fund sector covering either all or a few relevant undertakings, cutting down the number of full and comprehensive inspections. In 2017, the DFSA undertook a thematic inspection on alternative investments in infrastructure covering eight life insurers, and in 2019 a fact-finding examination on market-return products was conducted. Furthermore, the DFSA is about to finalize a thematic inspection on illiquid credit investments.

63. Both in the life and the non-life sector, the DFSA strives for on-site inspections at least every five years. During 2016/17, the inspection plan was thinned out due to extensive work on the implementation of Solvency II, particular on the non-life side, where also a high turn-over of experienced staff and two bankruptcies weighed on resources. This has led to a significantly lower frequency in the last three years, and the share of inspected non-life companies was only 13, 7, and 11 percent for 2016/17, 2017/18 and 2018/19, respectively. In the life and pension fund sector, 30, 23, and 20 percent of companies were inspected in these three years. For life insurers and pension funds, the focus during this time has shifted largely to thematic inspections.

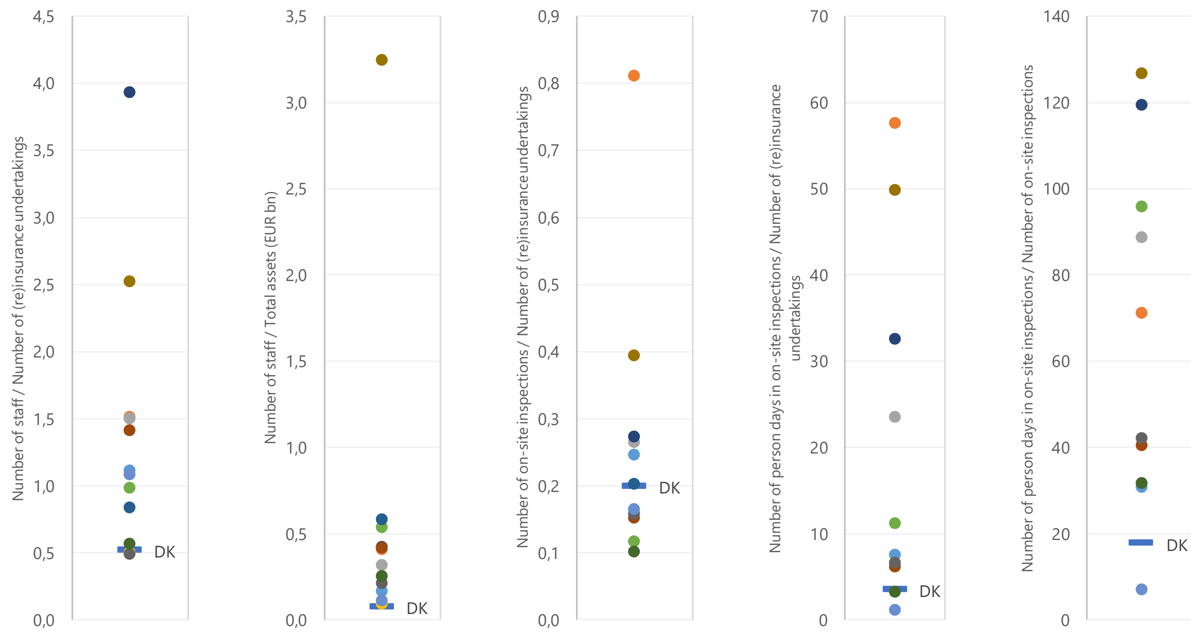
Box 3. Denmark: Resources in Insurance Supervision

Insurance supervision within the DFSA is divided into three divisions according to the type of entity: General Insurance and Reinsurance Division, Life Assurance Division, and Pension Funds Division. The three insurance divisions comprise 50 employees which is an increase of about a quarter since the last FSAP. Insurance supervision is primarily performed by the relevant division but can, if necessary, be supported by dedicated experts from other divisions, e.g., on governance and remuneration by the Operational Risk Division. Furthermore, the DFSA utilizes in-house expertise on anti-money laundering and combating the financing of terrorism (AML/CFT) supervision in the AML Division, on business conduct in the Consumer Protection Division, and accounting and auditors in the Financial Reporting Division.

Compared to its European peers, the DFSA is on the low side of resources considering the size of the sector and the number of supervised entities—additionally, staff tends to be rather junior. Supervisory disclosures show that for each licensed insurance undertaking and each EUR billion in total assets of the insurance sector there are only 0.52 and 0.08 staff, respectively, well below the average of EU peers (Figure 7). Since more than 50 percent of DFSA's insurance supervisors have less than three years of supervisory experience, its training program, strong documentation and succession planning become vital to ensure that supervisory experience and knowledge are maintained.

The frequency and length of the DFSA's on-site inspections tends to be on the lower end compared to peers. Already the last FSAP in 2014 had recommended to equip the DFSA with adequate supervisory resources to shorten the inspection cycle. Compared with European peers, the number of on-site inspections per insurance company is only slightly below the average. However, the amount of resources measured in person days per inspection stands out as unusually low—per inspection only 17.8 person days were spent on-site. While these numbers are not perfectly comparable, as the DFSA aims at preparing a large share of its on-site inspections already ahead of the actual visit, the data indicates some room for increased resources being spent on inspections. See also Appendix II for more details.

Figure 7. Denmark: Supervisory Resources Compared to European Peers



Notes: Graphs include 2016 data for France, the Netherlands, and the United Kingdom, and 2017 data for Austria, Belgium, Denmark, Germany, Ireland, Italy, Norway, Poland, Spain, and Sweden.

Source: IMF staff calculations based on National Supervisory Authorities.

Analysis and Recommendations:

64. It is recommended to require at least the annual QRTs to be audited, and to require audit assurance process for the systems and procedures used to complete the QRTs and SFCRs. QRTs are still showing deficiencies in terms of quality of the reported data which complicates the use for analytical purposes and the expansion of the DFSA's business intelligence tool. While short reporting deadlines imposed by Solvency II make auditing requirements appear impractical for quarterly filings, at least annual QRTs and the underlying systems and processes should be subject to an external audit.[11]

65. The supervisory resources of the DFSA's Insurance Supervision Department are stretched and should hence be expanded. With an overall staff level below European peers, the DFSA should further increase the number of insurance supervisors and specifically target mid-career staff. In particular, recruiting should include staff with actuarial, audit and accounting skills, as well as staff for the supervision of intermediaries according to the Insurance Distribution Directive. Higher retention of qualified staff should be aimed for as a matter of urgency. To mitigate the impact of high turnover and key person risks, knowledge management should be further expanded.

[11] The accompanying Technical Note on Financial Stability and Stress Testing of the Banking, Insurance, and Non-Financial Corporate Sectors includes a further recommendation related to the quality of supervisory reporting data, suggesting that authorities should consider administrative fines for repeated misreporting.

66. The frequency of on-site inspections should be increased, at least re-establishing the cycle aimed for after the last FSAP. After having dealt with the implementation of Solvency II and the two defaults of non-life companies, supervisory activities should now re-focus on conducting more on-site inspections. The planning of the inspection cycle should take into account the size, nature and current risk profile of individual institutions, and allow for a sufficient number of full and comprehensive on-site inspections besides thematic inspections.

67. Detailed findings and orders resulting from on-site inspections should be submitted to companies without any undue delay. After an on-site inspection, it sometimes takes the DFSA several months until the insurance undertaking is provided with the detailed findings of the inspection and the orders to remedy shortcomings. To increase the effectiveness of supervisory measures, such delays should be avoided.

C. Corporate Governance and Internal Controls

68. Solvency II has led to an improvement in insurers' governance structure and internal control functions. The last FSAP found that the DFSA did not yet require all insurers to have internal control functions responsible for risk, compliance and internal audit, while only for life companies there was a requirement for specific actuarial capacity. With the implementation of Solvency II in 2016, there is now a requirement to have at least four key functions (compliance, audit, risk and actuarial) as laid out in the DFSA's Executive Order on Governance. The suitability requirements for key function holders are described in the FBA, section 64 (5). However, the requirement to set up the key functions is not applicable to insurance undertakings which are not subject to Solvency II.

69. The DFSA follows a proactive approach with regard to corporate governance, especially for newly licensed insurers. Particular focus of attention in recent inspections was given to board structures, investment management policies and outsourcing. A higher level of scrutiny regarding the governance structure is also applied by the DFSA when an insurer applies for an internal model or requests approval for a model change. In 2019, two companies with severe shortcomings in their governance system were ordered to hold a capital add-on. The assessment of governance structures and internal control functions is generally performed during regular on-site inspections, but a regular formal dialogue between the DFSA with key function holders is not established. Furthermore, a systematic process is lacking how findings on deficiencies in the governance or the internal control functions feed into the individual risk score for each company.

Analysis and Recommendations:

70. The DFSA should establish a regular dialogue with companies' key function holders to facilitate an assessment of their effectiveness. With less frequent on-site inspections, of which many being only thematic examinations, the DFSA should deepen its insights into companies' governance structure and the effectiveness of internal control functions, also outside the regular inspection cycle. Such a dialogue should be based in its intensity on size and risk scores of insurance undertakings, and its findings should feed into the risk assessment of individual undertakings.

D. Countering Fraud in Insurance

71. The DFSA takes no measures at present to assess fraud risk or to require insurers and intermediaries to take effective measures to address those risks. An exception is the requirement for insurers to monitor transactions or relationships, including those with intermediaries, that are not in line with policies on good practices.

72. The last FSAP advised authorities to make changes to the legislative framework to empower the DFSA to issue enforceable rules requiring insurers and intermediaries to report insurance frauds. It was furthermore recommended that the DFSA should have a supervisory process in place to review fraud-related reports received from insurance companies and broker intermediaries. The DFSA, however, still considers fraud prevention to be the sole responsibility of insurers and intermediaries and has not introduced any regulatory or supervisory requirements. Similarly, market participants have not hinted at any shortcomings with the current approach.

Analysis and Recommendations:

73. While deviating from the best practices in the ICPs, insurance fraud is not considered to be a concern by market participants. It is nevertheless recommended that the DFSA maintains a dialogue with the insurance industry on insurance fraud, and monitors trends as well as operational risk management practices across insurers. For this purpose, also a regular exchange with judicial authorities should be established.

E. Anti-Money Laundering and Combating the Financing of Terrorism

74. Life insurers, occupational pension funds, and insurance intermediaries are subject to AML/CFT requirements. The Act on Measures to Prevent Money Laundering and Financing of Terrorism applies to life insurance companies, multi-employer occupational pension funds, and insurance intermediaries, when they act in respect of life insurance or other investment-related insurance activities, cf. sections 1(1) no. 4 and 7, respectively. Insurers and intermediaries are therefore subject to statutory requirements related to suspicious transaction reporting, customer due diligence (CDD)—including for regular customers, occasional customers, transactions for a third party, and the transfer of funds—as well as on policies, procedures, and training. Act No. 651 (2017) strengthened these requirements, particularly with respect to CDD, although it remains for the Danish authorities to obligate insurers to identify, and verify the identity of, the beneficial owners of life insurance beneficiaries when conducting enhanced due diligence. The institutions listed above are subject to supervision by the DFSA's AML Division.

75. The risk of money laundering in the life insurance and pension fund sector is considered low by the authorities, resulting thus far in very limited supervisory activities. The State Prosecutor for Serious Economic and International Crime (SPSEIC) conducted a national risk assessment in 2018, analyzing ML/TF risks in the financial and non-financial sectors. With regard to the life insurance and pension fund sector, the SPSEIC finds it very unlikely that money laundering is a significant risk due to the predominance of employer-based contracts. Even considering the size of the sector (see paragraph 5, above), life insurance and pension funds are also considered areas of relatively low ML/TF risk by the DFSA, which has not given high priority to carrying out on-site inspections of insurance undertakings, pension funds, or intermediaries as result. However, the DFSA plans to start AML/CFT inspections of all types of life insurance companies as a preventative measure and as a test of the low-risk assessment of the industry; of the 40-45 AML/CFT inspections planned for 2020, two-to-three could be conducted in the insurance sector. The selection of insurers to inspect will follow the risk-based approach via a new, data-driven risk assessment model that is still in development, where overall company size, share of individual savings business, and deficiencies in corporate governance are identified as among the main risk factors.

Analysis and Recommendations:

76. The FSAP recommends initiating risk-based AML/CFT on-site inspections of insurance undertakings and intermediaries. While ML/TF risks in the insurance sector are assessed to be relatively low, on-site inspections, as and where appropriate, could both raise awareness among insurers and provide DFSA staff with insight as to potential new methods of circumventing AML/CFT requirements in other parts of the financial sector. In particular, insurance undertakings which are active in the (small) field of individual life insurance and insurance intermediaries distributing such policies should be subject to a relatively high level of scrutiny.

F. Consolidated Supervision and Supervision of Cross-Border Business

77. Insurance supervision is conducted at the solo and the consolidated group level in line with the Solvency II Directive. Detailed group supervision requirements are laid out, e.g., in FBA sections 70 and 71 (group corporate governance), sections 170 and 175 b-e (capital at the group level), and sections 176 and 177 (consolidation). The DFSA conducts on-site inspections examining the compliance with these requirements, including inspections at holding companies which cover topics like group governance, risk concentration and intra-group transactions.

78. The framework for intra-group transactions (IGTs) is harmonized across sectors. The DFSA's Executive Order no. 904 of 2004 (amended in 2017 by Executive Order no. 1736) requires that IGTs shall be entered into on the basis of written agreements and on market-based terms and conditions—where there is no actual market, reasoned estimates shall be applied. IGTs may be entered into on a cost-coverage basis only to the extent that such transactions pertain to common group tasks or common administrative functions. An insurance undertaking's board of directors shall adopt written general guidelines regarding IGTs. Insurers are required to report on a regular basis and at least annually any significant risk concentration at the level of the group as well as all significant IGTs to the DFSA—the QRTs provide a format for this reporting.

79. The DFSA is an active member of EU supervisory colleges and has implemented relevant guidelines in respect of its role as group and host supervisor and for crisis preparedness. Most of the operations of Danish insurance companies are within the EU. There are no barriers to the exchange of information with relevant domestic and international authorities and the DFSA exchanges information readily where required, including in the recent episodes of insurance failures.

80. The DFSA is the lead supervisor for one insurance group (Danica) for which a supervisory college has been set up, and participates as a host authority in various other colleges. Other members of the Danica college are Norway and EIOPA. Physical meetings take place annually. Danica is a subsidiary of Danske Bank and, as such, there is a cooperation between the two colleges. Furthermore, the DFSA actively participates in the colleges of RSA with the UK Prudential Regulation Authority as the lead supervisor, and of Sampo, led by the Finnish Supervisory Authority. Other supervisory colleges in which the DFSA participates, despite rather minor operations of these foreign groups in Denmark, include Gjensidige and Munich Re. Finally, the DFSA has signed a cooperation agreement with the supervisory authorities in Norway and Sweden regarding exchange of information concerning the supervision of Tryg Forsikring—no formal college has been established, as the undertaking does not have subsidiaries located in the host countries.

81. The DFSA also uses other less institutionalized frameworks for supervisory cooperation. Where cross-border operations within the EEA are not conducted via subsidiaries or branches, but instead under the Freedom to Provide Services, the DFSA participates in and also has initiated collaboration platforms, according to the annex of the EIOPA Decision on the Collaboration of the Insurance Supervisory Authorities. Where cross-border operations are outside the EEA, e.g. in Switzerland or the Faroe Islands, the DFSA may, based on FBA sections 37 and 38, lay down more detailed regulations regarding services rendered from countries outside the EEA, with which the EU has not entered into any specific agreements for the financial sector.

82. Sharing confidential information with other supervisory authorities is possible for the DFSA. According to the FBA Section 354 (6), the DFSA may share confidential information with financial supervisory authorities in other EEA Member States provided that the supervisory authorities need the information to perform their duties. FBA Section 354 (12) specifies that outside the EEA, confidential information may only be divulged to financial supervisory authorities:

- on the basis of an international co-operation agreement, and
- provided that the recipients of the information are, at a minimum, subject to a statutory duty of confidentiality corresponding to the duty of confidentiality of the DFSA, and that the supervisory authorities require the information to perform their duties.

83. Regarding the sharing of confidential information with financial supervisory authorities outside the EEA, the DFSA signs bilateral Memoranda of Understanding (MoUs) when needed. For example, the DFSA signed bilateral MoUs with the supervisory authorities in Gibraltar and New Zealand during the crisis management of Alpha Insurance (see Box 3) to ensure proper and timely information exchange. The DFSA has not yet signed the IAIS Multilateral MoU, however an application to join is being prepared.

84. For EEA insurance groups the college arrangement includes procedures for crisis management. An emergency plan for a group is prepared in line with the EIOPA Guidelines on Preparation for and Management of a Financial Crisis. For cooperation in case of a crisis the DFSA liaises with EIOPA to establish contact with all relevant supervisory authorities.

Analysis and Recommendations:

85. It is recommended that the DFSA quickly implements its intensified framework for the supervision of cross-border business and allocates sufficient resources to it. The failure of two insurance companies whose business model was predominantly targeted to cross-border services has unveiled considerable shortcomings in the supervisory framework. Additional scrutiny during the licensing process of FPS-oriented business models should focus in particular on governance, (cross-border) outsourcing arrangements and contingency planning.

86. The process of signing the IAIS Multilateral MoU should be completed in due time.

G. Macroprudential Surveillance

87. Twice a year, the DFSA produces an internal risk assessment of the insurance market, considering macroeconomic and macrofinancial factors. This assessment also includes a bottom-up analysis of the risks identified in the internal risk assessments of individual insurers. The risk assessment consists of a risk dashboard, a written report, and a risk matrix which summarizes the main risks observed in the insurance market along with each risk's level and trend. The written report concludes with a set of actions the DFSA currently has taken, or intends to deploy, with the purpose of mitigating any identified risks.

88. Insights from other national authorities such as the Systemic Risk Council and the DN are also incorporated in macroprudential surveillance. The DFSA has set up its own Systemic Risk Forum, which meets on a quarterly basis to discuss cross-sector risks. Furthermore, information from international authorities, such as EIOPA and the European Systemic Risk Board (ESRB), is utilized in order to identify, monitor and analyze international trends and developments in insurance.

89. The DFSA participates in the biannual EIOPA stress tests, both for the insurance and the pension fund sector. In the 2018 EIOPA insurance stress test, two Danish insurance groups were included in the EU-wide sample of 42 groups in total. The 2016 EIOPA stress test, which was conducted for 236 solo entities, included 12 Danish insurers. While the DFSA on a quarterly basis collects data on sensitivities towards market risks and insurance-related risks[12], it does not conduct sector-wide stress test based on macrofinancial scenarios beyond those organized by EIOPA.

[12] Predefined sensitivity tests include market risks such as interest rate, equity, and property risk, as well as foreign exchange risk and credit spread risk on i) domestic sovereign and covered bonds, ii) foreign sovereign bonds, and iii) other bonds. Other risks such as counterparty risk, lapse risk, and longevity risk are also included.

90. The DFSA publishes detailed aggregated market data on its website, including key performance indicators of individual undertakings, and also the DN has extended its coverage of the insurance sector since the last FSAP. While the DN's Financial Stability Reports in 2017/18 still focused solely on the role of the insurance and pension fund sector as investors in domestic financial markets, e.g. in mortgage bonds or in the repo market, a topical analysis published in November 2019 focused on liquidity risks arising from insurers' derivative transactions.

91. The DFSA has not designated any insurance company as a domestic systemically important insurer (D-SII). While larger companies would typically fall under a higher level of supervisory intensity from a microprudential point of view, no macroprudential measures are currently being employed.

Analysis and Recommendations:

92. The DFSA should develop a stress testing framework which ideally would combine both a top-down (in cooperation with DN) and a bottom-up perspective. As the EIOPA stress tests cover only a limited sample of Danish insurers, and also sometimes switch between the group and the solo perspective, their use for domestic macroprudential surveillance is limited. Running additional national stress tests in years when no EIOPA stress test is conducted, or amending the EIOPA sample for domestic purposes could deepen the analytical insights. The adverse scenario for domestic stress tests should be based on a current risk outlook and include all macrofinancially relevant risk factors.

Appendix I. Financial Soundness Indicators of the Insurance Sector (In percent)

	2014	2015	2016	2017	2018	2019-Q3
Capital adequacy						
Assets / liabilities	109.0	...	110.4	110.4	109.9	108.6
SCR coverage ratio (Solvency II)	...	...	304	290	296	279
MCR coverage ratio (Solvency II)	...	...	780	744	772	730
Solvency coverage ratio (Solvency I)	165	179	...	...	...	...
Unrestricted Tier 1 capital / eligible own funds	...	...	...	...	94.9	94.8
Tier 3 capital / eligible own funds	...	...	...	...	0.3	0.3
Profitability						
Growth in gross written premiums - life	...	6.2	15.6	10.4	5.9	2.9
Growth in gross written premiums - non-life	...	0.6	-0.9	1.4	1.3	4.2
Loss ratio (net paid claims / net premiums) - non-life	60.6	61.9	64.0	63.0	66.5	...
Combined ratio (loss ratio plus expense ratio) - non-life, median	92.6	95.9	96.0	94.9	92.6	...
Return on equity - life	9.1	3.6	7.6	5.9	-5.0	...
Return on equity - non-life	14.0	10.1	14.9	14.8	9.3	...
Asset quality						
Bonds / total investments excl. unit-linked	...	...	36.3	37.7	38.7	34.3
Stocks / total investments excl. unit-linked	...	...	5.0	5.5	4.9	4.6
Return on average interest rate product - life, median	...	...	7.5	5.8	-0.6	...
Liquidity						
Liquid assets / total investments excl. unit-linked /1	...	...	67.6	70.4	71.3	67.1
Reinsurance						
Risk retention ratio (net premium / gross premium) - life	...	...	99.7	99.7	99.8	99.9
Risk retention ratio (net premium / gross premium) - non-life	92.1	91.2	90.2	90.4	90.0	91.7

Notes: /1 Liquid assets include bonds, equity, cash and deposits, and investment funds.

Source: IMF staff calculations based on DFSA, EIOPA, Danish Insurance Association.

Appendix II. Supervisory Resources in the Insurance Sector

	Number of staff / Number of (re)insurance undertakings	Number of staff / Total assets (EUR bn)	Number of on-site inspections / Number of (re)insurance undertakings	Number of person days in on-site inspections / Number of (re)insurance undertakings	Number of person days in on-site inspections / Number of on-site inspections	Authority	Scope of supervisory authority (integrated vs. single-sector; prudential and/or conduct supervision)
Denmark	0.52	0.08	0.20	3.6	17.8	Danish Financial Supervisory Authority	integrated, prudential and conduct
Austria	1.51	0.41	0.81	57.6	71.1	Austrian Financial Market Authority	integrated, prudential and conduct
Belgium	1.50	0.32	0.26	23.5	88.7	National Bank of Belgium	integrated, only prudential
France*	0.50	0.09	0.16	N/A	N/A	Autorité Controle Prudentiel et Résolution	integrated, only prudential
Germany	1.11	0.16	0.25	7.6	30.7	Federal Financial Supervisory Authority	integrated, prudential and conduct
Ireland	0.98	0.54	0.12	11.2	95.9	Central Bank of Ireland	integrated, prudential and conduct
Italy	3.93	0.42	0.27	32.6	119.4	Istituto per la Vigilanza sulle assicurazioni	single-sector, prudential and conduct
Netherlands*	1.41	0.42	0.15	6.2	40.4	De Nederlandsche Bank	integrated, only prudential
Norway	0.49	0.21	0.16	6.6	42.0	Finanstilsynet	integrated, prudential and conduct
Poland	2.52	3.25	0.39	49.8	126.7	Komisja Nadzoru Finansowego	integrated, prudential and conduct
Spain	0.83	0.58	0.20	N/A	N/A	Dirección General de Seguros y Fondos de Pensiones	single-sector, prudential and conduct
Sweden	0.57	0.25	0.10	3.2	31.7	Finansinspektionen	integrated, prudential and conduct
United Kingdom*	1.08	0.11	0.16	1.2	7.0	Prudential Regulation Authority	integrated, only prudential

Notes: * 2016 data for France, the Netherlands, and the United Kingdom; 2017 data for all other countries.

Source: IMF staff calculations based on National Supervisory Authorities.