Skills and competences in the Nordic financial sector

Joint report Finance Finland, Finance Norway, FA Denmark

AUGUST 2019
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1. Introduction

The Nordic financial sectors have much in common. Technology has advanced in the same ways, and the economic environment, challenges of ageing, and customer behaviour are largely similar. Work in the sector is transforming at a rapid pace in all the Nordic countries, and new and continuing training is required of all employees. This report looks into the types of skills that will be required in the Nordic financial sectors in the near future.

Change has always been a part of working life in the financial sector, but it has been especially rapid in the recent years. As a result, maintaining competence is a bigger challenge than ever.

The financial sectors in the Nordic countries employ approximately 200,000 people. They share similar challenges and opportunities in their work as the operating environment is transformed by digitalisation, robotics and AI. The euro area also generates new regulation as well as new risks to manage.

Each year, the financial sector employer associations convene to discuss matters of common concern. In 2018 they saw the changing skill requirements as the main driver of change and decided to study which types of skills are most demanded in the future. Studies identifying the most important skills were then conducted in Finland, Denmark and Norway.

This report presents at the beginning a short statistical summary on financial sector employees, followed by country-specific reports on the studies on skill requirements. Descriptions on each country’s educational systems are included as an appendix.
2. Key figures for employees and education in the Nordic financial sector

The Nordic banking sector employs around 123,000 people, more than twice as much as the insurance sector that employs 56,000 people.

Chart 2.1: Number of employees in 2018

<table>
<thead>
<tr>
<th></th>
<th>Norway</th>
<th>Denmark</th>
<th>Sweden</th>
<th>Finland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banksector</td>
<td>27,460</td>
<td>36,911</td>
<td>38,203</td>
<td>29,410</td>
</tr>
<tr>
<td>Insurance</td>
<td>10,995</td>
<td>21,523</td>
<td>9,985</td>
<td>14,417</td>
</tr>
<tr>
<td>Total</td>
<td>45,695</td>
<td>59,726</td>
<td>36,232</td>
<td></td>
</tr>
</tbody>
</table>

1. In Denmark incl. also some IT-companies.

Around half of the employees have some sort of higher education. In the Swedish banking sector and Norwegian financial sector, the share is 60 percent or more.

Chart 2.2: Level of education in 2018

<table>
<thead>
<tr>
<th></th>
<th>Finland</th>
<th>Sweden (banks)</th>
<th>Sweden (insurance)</th>
<th>Denmark</th>
<th>Norway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>9%</td>
<td>14%</td>
<td>15%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Secondary or vocational education</td>
<td>44%</td>
<td>37%</td>
<td>45%</td>
<td>45%</td>
<td>29%</td>
</tr>
<tr>
<td>Shorter higher education</td>
<td>28%</td>
<td>20%</td>
<td>31%</td>
<td>31%</td>
<td>44%</td>
</tr>
<tr>
<td>Long higher education (incl. PhD)</td>
<td>26%</td>
<td>32%</td>
<td>22%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>Both short and long higher education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Economics, business and administration are the most common educations in the Norwegian, Finnish, Danish financial sector and Swedish banking sector among higher educated employees. In Finland and Denmark around 1/5 of the employees have science and technical science education. Norway has the lowest share of science and technical science education, and the Swedish insurance sector has the highest. Swedish banking sector lack data on science and technical educations among the employees.

Chart 2.3: Field of education

<table>
<thead>
<tr>
<th>Field of education*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics, business and administration</td>
</tr>
<tr>
<td>Other social science and humanities</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td><strong>Finland</strong></td>
</tr>
<tr>
<td><strong>Sweden (Banks)</strong></td>
</tr>
<tr>
<td><strong>Sweden (Insurance)</strong></td>
</tr>
<tr>
<td><strong>Denmark</strong></td>
</tr>
<tr>
<td><strong>Norway</strong></td>
</tr>
</tbody>
</table>

*Employees with a long higher education (incl. PhD)

3. Comparable Nordic surveys

The surveys being reviewed in this report were carried out separately in Denmark, Finland and Norway. They are not completely identical but very similar, and the results can be compared. The starting point for the comparable surveys has been a Finnish question on top-five skills as well as previous Danish and Norwegian surveys on competencies and recruitment challenges.

About the surveys

All three surveys have been carried out within the last year. All surveys have had a question on top-five skills. The surveys from Denmark and Norway included additional questions on the demand for competencies which are presented in this report.
Overview of the three surveys:

Denmark
- Six questions (top-five skills, overall trends, changing disciplines, fulfilment of competence needs, recruitment challenges and digitalisation trends).
- Completed in March 2019.
- 111 replies of 143 (78%)
- Respondents in the companies: HR
- 57 banks, 5 mortgage companies, 18 insurance companies, 6 pension companies, 9 IT-companies, 16 other financial companies

Finland
- One question on top-five skills.
- Completed in September 2018.
- 296 replies from financial companies. The survey was sent to educational institutions, employees and Finance Finland member companies. A total of 760 persons responded, although this report includes only the respondents from FFI member companies, totalling 296.
- Questionnaire were shared via an open link through HR-managers
- 192 answers from banking, 95 from insurance, 9 other financial companies

Norway
- Seven questions (top-five skills, overall trends, changing disciplines, fulfilment of competence needs, recruitment challenges, digitalisation trends and unmet need for new skills).
- Completed in April 2019
- 114 replies of 182 (63%)
- Respondents in the companies: HR
- 83 banks, 24 insurance companies, 10 other financial companies
4. Top 5 skills

Personal qualities and skills are often valued as high as professional knowledge and competencies. The respondents in the companies were asked to pick out the 5 most important skills and personal qualities for the employees from a list. In the Finish and Danish surveys, the respondents could choose the 5 top skills from a list of 36 different alternative skills.

Table 4.1: 36 alternative skills in Danish and Finnish surveys

<table>
<thead>
<tr>
<th>Ability to manage personal well-being</th>
<th>Digital skills</th>
<th>Product skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to set and pursue goals</td>
<td>Empathy</td>
<td>Professional self-improvement</td>
</tr>
<tr>
<td>Ability to utilize technology</td>
<td>Improving work environment</td>
<td>Recognizing own strengths</td>
</tr>
<tr>
<td>Ability to work under pressure</td>
<td>International skills</td>
<td>Responsibility</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Languages</td>
<td>Sales skills</td>
</tr>
<tr>
<td>Analytical thinking</td>
<td>Leadership</td>
<td>Self-direction</td>
</tr>
<tr>
<td>Business skills</td>
<td>Media skills</td>
<td>Service skills</td>
</tr>
<tr>
<td>Creativity</td>
<td>Negotiation skills</td>
<td>Social networking</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>Open-mindedness</td>
<td>Social skills</td>
</tr>
<tr>
<td>Cultural knowledge</td>
<td>Problem solving</td>
<td>Understanding global economy</td>
</tr>
<tr>
<td>Customer experience skills</td>
<td>Process management</td>
<td>Understanding law and regulation</td>
</tr>
<tr>
<td>Decision-making skills</td>
<td>Processing and utilizing data</td>
<td>Understanding markets</td>
</tr>
</tbody>
</table>

In the Norwegian survey, the respondents could choose from 17 different alternative skills. The alternatives were partly combining the alternatives from the Finnish and Danish surveys, together with some additional skills from former surveys carried out in Norway (Kompetansesjekken 2016 and 2018).

Table 4.2: 17 alternative skills in Norwegian survey

| Adaptability and professional self-improvement | Good judgment and makes ethical considerations |
| Analytical, processing and utilizing data      | Innovation and creativity |
| Communication- and media skills               | Interdisciplinary expertise with insight into several disciplines |
| Critical thinking                             | International skills and understanding global economy |
| Customer experience, service and sales skills | Languages and cultural knowledge |
| Decision-making skills and ability to set and pursue goals | Market and business skills |
| Digital skills and ability to utilize new technology | Networking skills |
| Empathy and improving work environment        | Self-directing and ability to work under pressure |
|                                             | Social skills and team worker |
Chart 4.1: Ranking of different skills in the Nordic countries

The charts show the percentage of respondents listing the particular skill as one of the top five most important skills for employees.
Note. Result of the following question: Enter the 5 most important skills and personal qualities among the employees from the list.
Top 5 skills

<table>
<thead>
<tr>
<th></th>
<th>DENMARK</th>
<th>FINLAND</th>
<th>NORWAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customer experience skills</td>
<td>Adaptability</td>
<td>Adaptability and professional</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>self-improvement</td>
</tr>
<tr>
<td>2</td>
<td>Social skills (including good</td>
<td>Professional self-</td>
<td>Digital skills and ability to</td>
</tr>
<tr>
<td></td>
<td>collaboration skills)</td>
<td>improvement</td>
<td>utilize new technology</td>
</tr>
<tr>
<td>3</td>
<td>Adaptability</td>
<td>Social skills</td>
<td>Customer experience, service</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>and sales skills</td>
</tr>
<tr>
<td>4</td>
<td>Responsibility</td>
<td>Self-direction</td>
<td>Social skills and team worker</td>
</tr>
<tr>
<td>5</td>
<td>Business skills</td>
<td>Digital skills</td>
<td>Self-directing and ability to</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>work under pressure</td>
</tr>
</tbody>
</table>

Summing up common features and differences:

- The Danish financial sector considers customer experience skills the most important.
- Norwegian and Finnish financial sector considers adaptability and professional self-improvement most important.
- Finland and Norway also rate digital skills among the top five, compared to 7th most important in Denmark.
- All three countries value social skills as the top five.
- Language, international and cultural skills are rated as less important skills in all three surveys.

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1 Caution should be exercised when comparing between countries and companies. The answers reflect trends in the companies and countries. They also reflect the pool of employees the companies currently have and external influence from regulation and society.
5. Overall trends and their consequences

The industry is faced with several trends that change the competence needs. Of 5 selected overall trends the companies were asked to assess their consequences for the competence need for the next 2-3 years:

- Digitalisation of business and society
- Political regulation in general and the financial sector in particular
- Changed customer needs / preferences for self-service and availability 24/7
- The customers’ and society’s requirements for professional knowledge and high quality in individual consulting
- The sectors social responsibility

Chart 5.1: OVERALL TRENDS AND THEIR CONSEQUENCES

Note. Result of the following question: "What consequences will the following overall trends have for the company’s general competence needs in the next 2-3 years?"
- Digitalisation is the trend most companies (83%) find to require a higher level of competence than the current.
- Sectoral social responsibility is the trend most companies (54%) perceive to be covered by the current competence level.
- The 3 other development trends will require higher competences in 51-58% of the companies.

<table>
<thead>
<tr>
<th>DENMARK</th>
<th>NORWAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Digitalisation is the trend most companies (83%) find to require a higher level of competence than the current.</td>
<td>- Digitalisation of business and society is the trend most companies (86%) find to require a higher level of competence than the current.</td>
</tr>
<tr>
<td>- Sectoral social responsibility is the trend most companies (54%) perceive to be covered by the current competence level.</td>
<td>- The sectors social responsibility is the trend most companies (74%) perceive to be covered by the current competence level.</td>
</tr>
<tr>
<td>- The 3 other development trends will require higher competences in 51-58% of the companies.</td>
<td>- The consequences of the other 3 development trends are almost at the same level and will lead to increased competence needs in around 60% of the companies.</td>
</tr>
</tbody>
</table>

**Summing up common features and differences**

- In both Denmark and Norway digitalisation is the trend most financial companies (more than 80% in both countries) find to require higher competences in the future.

- And the sectors social responsibility is in both countries the trend most companies perceive to be covered by the current competence level. There is however a larger part of the Danish companies than Norwegian companies who also find this trend to demand higher competences.

- None of the selected overall trends reduces the competence requirements according to any of neither the Danish nor the Norwegian financial companies.
6. Different areas of expertise’s importance

To be able to dig into the different kinds of competence need, the disciplines in the sector are divided into ten different areas of expertise. The companies were asked how the importance of the following areas of expertise were expected to change for the next 2-3 years.

Table 6.1: Areas of expertise in the financial sector

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Finance: Financial and economic management, budgeting, accounting, auditing etc.</td>
</tr>
<tr>
<td>2</td>
<td>Business development: Strategy, product and service development, digitalisation and innovation</td>
</tr>
<tr>
<td>3</td>
<td>Customer care: Sales, customer service, follow-up of customers and credit assessments</td>
</tr>
<tr>
<td>4</td>
<td>Communication: Marketing, Brand, Some, Advertising, Investor dialogue</td>
</tr>
<tr>
<td>5</td>
<td>Sustainability, climate risk and social responsibility</td>
</tr>
<tr>
<td>6</td>
<td>Analysis: Statistics, mathematics, big data, databases</td>
</tr>
<tr>
<td>7</td>
<td>Technology: Programming and IT development, IT operations as well as IT security and cybercrime</td>
</tr>
<tr>
<td>8</td>
<td>Compliance: Internal Control, GDPR and Risk Management</td>
</tr>
<tr>
<td>9</td>
<td>HR: Personnel management, recruitment, employer branding and employee development</td>
</tr>
<tr>
<td>10</td>
<td>Administration: Staff functions, purchasing and support</td>
</tr>
</tbody>
</table>

Today most people are employed within the areas of finance and customer care.
Chart 6.1: Expected change in importance of the following areas of expertise

**Denmark**

- Finance and Economics: Financial and economic matters
- Business development: Strategy, product development
- Customer service: Sales, customer service
- Communication: Marketing, branding
- CSR: Sustainability and social responsibility
- Data analysis: Statistics, mathematics, big data
- Computer technology: Programming and IT
- Control functions: Compliance and risk
- HR: Staff management and employee relations
- Administration: Staff functions

**Norway**

1) Finance: Financial and economic matters
2) Business development: Strategy, product development
3) Customer care: Sales, customer service
4) Communication: Marketing, Brand, SoMe
5) CSR: Sustainability, climate risk, and social responsibility
6) Data Analysis: Statistics, mathematics, big data
7) Technology: Programming and IT
8) Compliance: Legal issues, Internal Control
9) HR: People management, recruitment
10) Administration: Staff functions, purchasing
Denmark

- Expect increasing importance for Business development (95%), Technology (86%) and Compliance (82%).
- Except unchanged importance for Administration (68%), Communication (59%), HR (55%) and Finance (53%)
- Expect less importance Administration (11%) and Finance (5%).

Norway

- Expect increasing importance for Business development (75%), Compliance (62%) and Technology (59%). Compliance is more important in smaller companies and Technology more important in bigger companies.
- Except unchanged importance for Administration (79%), Finance (77%) and HR (61%)
- Expect less importance Administration (16%), customer care (6%) and Finance (6%).

Summing up common features and differences

- Increasing importance for Business development, Technology and Compliance
- The same pattern of competence needs in both countries, but the share of companies expecting changes in importance of the different areas of expertise is higher in Denmark than in Norway.
- A smaller share of companies expects less importance for Administration and Finance

7. How to fulfil competence needs

The companies can meet the competence needs in different ways:

1. Develop current employees
2. Hire consultants / freelancers
3. Outsourcing tasks
4. Recruit new employees

On the ten different areas of expertise the companies were asked to indicate how they meet the competence needs. If they use multiple strategies, they should indicate the most important one.
Chart 7.1: Companies’ fulfilment of competence needs in different disciplines

<table>
<thead>
<tr>
<th>Disciplines</th>
<th>Denmark</th>
<th>Norway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance and Economics: Financial and economic</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
<tr>
<td>Business development: Strategy, planning, etc...</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
<tr>
<td>Customer service: Sales, customer service, etc...</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
<tr>
<td>Communication: Marketing, branding, etc...</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
<tr>
<td>CSR: Sustainability and social responsibility</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
<tr>
<td>Data analysis: Statistics, mathematics, etc...</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
<tr>
<td>Computer technology: Programming and IT...</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
<tr>
<td>Control functions: Compliance and risk...</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
<tr>
<td>HR: Staff management and employee relations, etc.</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
<tr>
<td>Administration: Staff functions</td>
<td><img src="chart1.png" alt="Bar chart" /></td>
<td><img src="chart2.png" alt="Bar chart" /></td>
</tr>
</tbody>
</table>

- **Denmark**
  - Finance and Economics: Financial and economic
  - Business development: Strategy, planning, etc...
  - Customer service: Sales, customer service, etc...
  - Communication: Marketing, branding, etc...
  - CSR: Sustainability and social responsibility
  - Data analysis: Statistics, mathematics, etc...
  - Computer technology: Programming and IT...
  - Control functions: Compliance and risk...
  - HR: Staff management and employee relations, etc.
  - Administration: Staff functions

- **Norway**
  - 1) Finance: Financial and economic
  - 2) Business development: Strategy, planning, etc...
  - 3) Customer service: Sales, customer service, etc...
  - 4) Communication: Marketing, branding, etc...
  - 5) CSR: Sustainability, climate risk and social responsibility
  - 6) Data Analysis: Statistics, mathematics, etc...
  - 7) Technology: Programming and IT...
  - 8) Compliance: Legal issues, Internal controls
  - 9) HR: People management, recruitment, etc...
  - 10) Administration: Staff functions

**Notes:**
- Raises the level of competence for current employees
- Hire consultants/free lancers
- Outsourcing tasks
- Recruits new employees
- Don’t know/not relevant/equally important
− The single most frequently used strategy to fulfil the competence needs is within all disciplines to raise the competence level among the current employees.
− Within “Computer technology” and “Data analysis” outsourcing is more used than within other disciplines.
− Recruitment of new employees as a strategy to fulfil the competence needs is mostly used within “Business development”, “Data analysis”, “Data technology” and “Control functions”.
− Consultants and freelancers are mostly used within “Communication”.

− For general areas of expertise (communication, administration, HR) and for business-specific areas of expertise (finance, business development, customer care), the companies mainly want to develop their own employees to fill competence needs.
− The companies obtain expertise externally by outsourcing, consultants or recruiting new employees to fill the gap in technology competences (analysis and technology).

Summing up common features and differences

The strategies used to fulfil the competence needs are very much alike in Denmark and Norway. Raising the level of competence for current employees is the single most used strategy within almost all disciplines. It is however less used within technology and data analysis, where outsourcing and other ways of obtaining expertise externally dominate.

8. Recruitment challenges

Some types of employees or labour are scarce. This causes companies to have problems recruiting or retaining employees in certain positions. In addition, there may be positions that become unoccupied because the competence does not exist in the labour market. The companies were asked what types of labour that is difficult to recruit/retain? Are there any you are particularly lacking?
Chart 8.1: Labour difficult to recruit, retain or actual lacking

Denmark

- IT system developers and programmers: 41% difficult to retain/recruit, 13% actual lacking
- Compliance and internal control employees: 40% difficult to retain/recruit, 8% actual lacking
- Business Advisors: 33% difficult to retain/recruit, 10% actual lacking
- Managers and middle managers: 25% difficult to retain/recruit, 5% actual lacking
- Specialists within eg investment, credit, etc.: 21% difficult to retain/recruit, 3% actual lacking
- Private customer Advisors: 17% difficult to retain/recruit, 5% actual lacking
- Analysts and statisticians: 17% difficult to retain/recruit, 4% actual lacking
- Product and business developers: 17% difficult to retain/recruit, 3% actual lacking
- IT operations and support staff: 13% difficult to retain/recruit, 4% actual lacking
- Actuaries: 10% difficult to retain/recruit, 2% actual lacking
- Accounting and other administrative staff: 8% difficult to retain/recruit, 3% actual lacking
- Others: 7% difficult to retain/recruit, 5% actual lacking
- Pension Advisors: 6% difficult to retain/recruit, 9% actual lacking
- Sellers / Key Account Managers: 5% difficult to retain/recruit, 6% actual lacking
- Dealers/Brokers: 4% difficult to retain/recruit, 3% actual lacking
- Advisors in customer and call centers: 3% difficult to retain/recruit, 8% actual lacking
- Cashiers, Service Assistants and Document...: 1% difficult to retain/recruit, 2% actual lacking
- Insurance policy and injury staff as well as...: 1% difficult to retain/recruit, 2% actual lacking
- HR professionals: 1% difficult to retain/recruit, 0% actual lacking
- Underwriters: 1% difficult to retain/recruit, 0% actual lacking
- Marketing and communication staff: 0% difficult to retain/recruit, 0% actual lacking
Denmark

- More than 41% of the companies find IT system developers and programmers difficult to recruit/retain, and 40% respectively 33% of the companies, indicate that it is difficult to recruit/retain employees within "compliance and internal control" and "business advisors".

- The challenge of recruiting and retaining only results in actual shortage of employees in a smaller proportion of companies. The type of employees, as most companies need, are also "IT system developers and programmers" (13%) followed by "business advisors" (10%) and "compliance and internal control staff" (8%).

- As in previous surveys in recent years, it is mainly IT employees and compliance staff, but also business advisors, managers and various specialists are found challenging by more than 20% of the companies.

Norway

- 29% of the companies find IT system developers and programmers difficult to recruit/retain, and 23% respectively 21% of the companies, indicate that it is difficult to recruit/retain employees within "compliance and internal control" and "analysts, mathematics and statisticians". Bigger companies tend to emphasize shortage of IT-personnel and business developers more than small companies.

- The challenge of recruiting and retaining only results in actual shortage of employees in a smaller proportion of companies. The type of employees, as most companies are lacking, are specialists in sustainability and climate risk (7%).
Summing up common features

- The competence needs identified by the survey are reflected in recruitment challenges. IT developers, compliance staff, business developers and analysts are difficult to obtain or keep.

9. Digitalisation trends

Within the digitalisation area the companies have priorities which trends they think will have the greatest impact on the need for competence for the next 2-3 years.

The questions were not formulated completely the same, and the Norwegian survey did not have “Data and cyber security” as an explicit option, but the results are still comparable.

Chart 9.1: Digitalisation trends

| Digital business development and digital service development (mobile dialogue and payment, apps, chat and self-service, user understanding and user behavior) | 39% | 26% | 16% | 12% | 7% |
| Automation (development and implementation of software robots and digital and/or physical processes that happen by themselves) | 31% | 31% | 22% | 15% | 2% |
| Big Data Analyzes and Artificial Intelligence (data warehouse, databases and analyzes of large datasets using AI and machine learning) | 14% | 28% | 17% | 23% | 19% |
| Data and cyber security | 13% | 0% | 23% | 18% | 40% |
| Internet of things and cloud storage (everything is online, everything gets sensors, all data available online 24-7) | 5% | 9% | 22% | 32% | 32% |

Note. Result of the question “Which of the following digitalisation areas will have the greatest impact on the competence need in your company for the next 2-3 years? Priorities from 1 to 5, where 1 is most important”.

PAGE 19
Note. Result of the question “To what extent do you find that the following digitalisation areas will be important for the company in the next 2-3 years?”

**Norway**

<table>
<thead>
<tr>
<th>Area</th>
<th>Very little</th>
<th>To a small degree</th>
<th>Neither</th>
<th>Largely</th>
<th>To a very large degree</th>
<th>Don’t know / not relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) The Internet of Things and cloud storage (everything connects to the web, everything gets sensors, all data is available online all the time)</td>
<td>6%</td>
<td>15%</td>
<td>45%</td>
<td>31%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>2) Automation (development and implementation of software robots and digital and / or physical processes that go by themselves)</td>
<td>7%</td>
<td>8%</td>
<td>38%</td>
<td>44%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>3) Data analysis and artificial intelligence (data warehouses, databases and analyzes of large datasets using artificial intelligence and machine learning)</td>
<td>5%</td>
<td>14%</td>
<td>38%</td>
<td>38%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>4) Digital business development and digital service development (mobile dialogue and payment, apps, chat and self-service, user understanding and user behavior)</td>
<td>6%</td>
<td>38%</td>
<td>51%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>5) Other (blockchain, crypto currency, virtual reality, quantum computing or others)</td>
<td>17%</td>
<td>36%</td>
<td>21%</td>
<td>8%</td>
<td>13%</td>
<td>13%</td>
</tr>
</tbody>
</table>

**DENMARK**

- “Digital business development” is the area most companies expect to be most important
- “Automation” is a close runner-up.
- The same priority applies for all types of financial companies.

**NORWAY**

- “Digital business development” is the area most companies expect to be most important
- “Automation” a close runner-up

**Summing up common features and differences**

In both countries Digital business development and Automation are the digitalisation areas most companies within the financial sector find to be most important.
10. Conclusions from the common Nordic surveys

The results were interesting and confirmed the importance of new learning. They were similar between countries for the most part, but also included some notable differences. Every country has considered the ongoing change in work and each person’s own responsibility for developing their own competences.

Recognizing flexibility, digital skills and strengthening competence were high-ranking categories in Finland and Norway. Denmark had strongest skills in customer relationships.

Social skills ranked among the top five categories in all countries. In Finland and Denmark, it even reached above technological skills, whereas in Norway it was the other way around.

The Norwegian and Danish surveys also included questions on other aspects of the competence demand. To summarise:

- In both Denmark and Norway, digitalisation is the most important trend in terms of companies’ future skill requirements (more than 80 % of responses).

- Respondents were asked about expected change in importance of specific areas of expertise. Highest-ranking answers were business development, technology and compliance.

- The surveys also included a section concerning companies’ strategies to fulfil the competence needs. The strategies are very much alike in Denmark and Norway. Raising the level of competence for current employees is the single most used strategy within almost all disciplines. It is however less used within data technology and data analysis, where outsourcing and other ways of obtaining expertise externally are dominant.
Significance of the study and future measures

This is the first joint Nordic report on future skill requirements in the financial sector. The results are interesting and have the potential to help both financial sector organisations and educational institutions.

Employees and their competences are key factors of success now and in the future. Many financial sector corporations operate in several Nordic countries as their own financial group or through a network of partners. These results can therefore help them understand their employees and their requirements in different countries.

Developing competence is a continuous process. The working group therefore recommends conducting similar surveys after a few years have passed.
Appendix – Educations systems

DENMARK

The ground pillar of the Danish education system below is the primary and lower secondary education (Folkeskolen) which takes the students to level 2 EQF. Figure 1 below shows the Danish Education System from level 3 and up.

Public and private education
As seen in figure 1 the Danish education system, that typically feeds into the financial sector, is split in public and private education. A challenge with Danish education data is that it only includes public education – not private. Since the financial sector in Denmark has a long tradition of private education and private education from EQF level 5 and up are not registered in official education data, caution must be taken when making conclusions based on education levels.

The Financial sector in Denmark has two private education centres; The Financial Sector’s Education Centre (FU) and The Insurance Academy (FOAK). They deliver relevant, high quality training for employees based on direct demand from the sector.

Full time and combination studies (while working)
Within the public education system, the distinction is between full time (light blue boxes) and combination studies (dark blue boxes). The dark blue, combination education usually take place while employed and will often be a mix of time in the company (2/3) and time in the classroom (1/3). Traditionally the financial sector has taken in employees through the combination education; vocational upper secondary education in finance. However, this pattern has been changing and the sector has seen a shift towards recruiting new employees with Bachelor og MSc degrees from the full-time education system.

After a period of political priority toward more students in full time education (the academic route) new policies are introduced to increase the number of students with vocational upper secondary education.

Flexibility in the Danish education system
However, a shift towards vocational training depends on increasing flexibility in the Danish education system so students can move from full time to vocational studies and vice versa. The arrows in figure 1 shows where the transition is direct and where individual assessment is needed for a transfer to take place. In addition, policies are moving from a incentives that prioritise high EQF as quick as possibly to more opportunities to take breaks and gain work experience.

Acknowledgement of completed private education
Flexibility in the Danish education system also means acknowledgement of private education when employees wish to study in the public system. This process started
earlier in 2019 and the first private education institutions will send in their application in the autumn of 2019.

Figure 1 The Danish Education System

FINLAND

The Finnish education system starts with compulsory basic education, after which individuals can opt for general or vocational upper secondary education. Upper secondary education can be followed by higher education at a university or polytechnic or even both.

There are several different ways to specialize into financial services. The sector employs skilled professionals from many different backgrounds. The Vocational Qualification in Business and Administration is the most direct training program to the sector.
Financial sector qualifications

The most essential financial sector degrees include the Vocational Qualification in Business Administration (2–3 years), Bachelor of Business Administration (3 years), and Master of Science in Economics and Business Administration (5 years). People aiming for the financial sector often include a wide range of economic studies in their degrees, combining finance, investment, and insurance.

Education programmes are continuously developed further to respond to the changing needs of working life and the economy. The sector seeks to influence curriculums and study materials through national and international cooperation.

The financial sector also offers its own qualifications that are not included under the official nation-wide framework enacted by the Finnish National Board of Education. These additional qualifications include the following:

- Insurance Examination (VTS) and
- Advanced Insurance Examination (YVTS),
- General Securities Qualification (APV1) and
- Investment Advisor Qualification (APV2),
- Certified European Financial Analyst (CEFA) and
- Certified Financial Analyst (CFA), and
- Certified International Investment Analyst (CIIA).

The most typical job descriptions in the financial sector are service advisor, analyst, claims handler, economist, insurance advisor, bank manager and pension advisor. The sector is not restricted to those with financial qualifications, however: it also employs many IT specialists, Masters of Science in Technology, and Masters of Law, among
others. Employee competence is highly valued and continually developed further with training.

The full range of job descriptions is described on a recently launched career website, Finanssialalle.fi (for now only in Finnish), which also lists all the open positions in the sector.

**NORWAY**

*Figure 3 The Norwegian Education System*

![Diagram showing the Norwegian Education System](image)

Source: edufile.info
The general public education system in Norway is quite similar to the other Nordic countries, see figure 3.

- PRIMARY AND LOWER SECONDARY EDUCATION covers education for children aged 6 to 15 and grades 1 to 10.
- UPPER SECONDARY EDUCATION normally provides three years of general education or four years of vocational training after the 10-year compulsory education. The norm for apprenticeship training is two years of vocational training in upper secondary education followed by one or two years of practical training in industry.
- TERTIARY VOCATIONAL PROGRAMMES are post-secondary but are not defined as higher education. The duration is a minimum of six months and a maximum of two years.
- HIGHER EDUCATION Higher education is based on general admission, normally completed secondary education. The main structure is a 3+2+3 model; a three-year bachelor’s degree, two-year master’s degree and three-year doctoral program.

Bachelor’s and master’s degree in business and administration has been the most common education into the financial sector. The sector is now recruiting more broadly, and more employees educated in STEM (science, technology, engineering, mathematics).

In the 1970-1980, the Bank Academy and Insurance Academy were private colleges for banking, finance and insurance education. Employees had a collective bargaining right to further education at the Academies. In 1994, the schools were merged into BI Norwegian School of Management and the education programs was closed as unique programs for bank and insurance employees.

The financial sector also offers its own authorizations that are not included under the public education system. The Finance Industry Authorisation schemes (FinAut) is a national scheme, which aims to safeguard the finance industries authorisation and accreditation schemes. The aim is to enhance the quality of advice given to customers.