

Research on the Current Situation and Trend of Fintech Development and Financial Engineering Talent Demand

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Abstract: The rapid development of modern information technology at the same time, the financial also get the innovation of science and technology development, and promoted the reform of financial supply side, cause financial industry talent demand presents new characteristics, in this paper, the financial development of science and technology and financial engineering talent demand present situation and the trend of further research, and put forward reasonable Suggestions on how to cultivate high quality talent.

Keywords: Fintech development; Financial engineering; Talent demand; The status quo. trend

China's economic growth has entered a stage of high-quality development, and the financial sector needs more financial engineering talents. There are many financial practitioners in China, but few senior financial talents. Although there are many colleges and universities offering financial engineering major, but few colleges and universities have the level and characteristics of the financial engineering major, the school training talents can not meet the new market requirements. ^[1] Research shows that there is a close relationship between financial engineering talent training and talent demand and industry development.

1. Analysis of current situation of financial engineering talents

With the integration of finance and technology, domestic fintech is rapidly developing, which needs more and more financial engineering talents. ^[2] High-quality financial engineering talents can promote the sound and rapid development of the financial industry. Therefore, this topic takes financial institutions as the research object to sort out the information about the current situation of financial talents. Data were obtained by questionnaire survey and field visit.

1.1 The demand questionnaire for financial engineering professionals

In order to have an in-depth understanding of the demand for talents in the financial industry, the questionnaire was designed to ask the following questions: What is the demand for financial engineering professionals in your company? What are the positions most in demand for financial engineering professionals? What is the most shortage of financial engineering talents? What are the positions available for fresh graduates majoring in financial engineering; What qualifications do financial engineering professionals need to obtain? What are your company's requirements for basic and core courses of financial engineering major? What fintech tools financial engineering professionals need to be familiar with; What competencies are required of practitioners; How long is the student's internship with your company? What are the advantages and disadvantages of fresh graduates? What is the starting salary for fresh graduates majoring in financial engineering; What opportunities there are for advancement; What are the specific suggestions for the training of financial engineering professionals?

1.2 Questionnaire analysis

1.2.1 Demand for financial engineering talents

Nearly half of the financial institutions need a lot of financial engineering talent, and less than half of the financial institutions have mediocre demand for talent. Investment analysis, product development and risk management are the three positions most in demand and in short supply for financial engineering professionals, but there are differences in the order. The most needed positions are investment analysis, followed by product development and risk management. The most recent shortage of talent is in product development, followed by investment analysis and risk management. The most suitable positions for financial engineering talent to

enter are financial product manager, data analyst and risk management.

1.2.2 Professional requirements for financial engineering talents

More than 70 percent of financial institutions think they need a securities/fund/banking/futures qualification, and some require CFA and CPA certificates. Most organizations need people who are skilled in Python software, Matlab, and SAAS. Almost all financial institutions agree that talent must be familiar with big data analytics, artificial intelligence and cloud computing. Financial institutions require financial engineering majors to learn basic courses such as finance, statistics and macroeconomics. Major financial institutions attach great importance to the course of financial risk management, investment banking, financial econometrics and so on.

1.2.3 Capability requirements for financial engineering talents

The interview of financial institutions focuses on the talents' professional skills, vocational qualification certificates and internship experience. The financial personnel must have the following skills: interpersonal communication, teamwork and learning ability.

1.2.4 Internship situation of financial engineering talents

Financial institutions believe that financial engineering professionals have the advantages of solid knowledge, convenient management and good working attitude, but lack of hard-working spirit, teamwork ability and hard-working spirit.

1.2.5 Entry salary and promotion status of financial engineering talents

Financial engineering undergraduates start at \$5,000 to \$8,000, and very few financial institutions pay \$8,000 to \$10,000. Jobs with more room for growth are in investment and risk management.

1.3 Problems and opportunities

Through the investigation of the demand for talents of financial institutions, it is found that the talents cultivated by the school cannot meet the demand of the financial market, and the school needs to quickly update the curriculum system and technology. The following problems and opportunities arise in the training of financial engineering talents.

1.3.1 High professional requirements for practitioners

Financial institutions require talents to be proficient in basic courses, especially financial risk management, financial metrology, etc. Therefore, colleges and universities should attach great importance to the teaching of these courses.

1.3.2 Fintech and software skills should be emphasized

Financial institutions generally think python is the first choice, banks like to use SAAS software, securities and fund institutions prefer Matlab software. Financial institutions generally focus on big data, artificial intelligence and cloud computing, requiring talents to master fintech skills, but also to integrate the amount of money with the development of the industry.

1.3.3 There is still much room for improvement in the comprehensive ability of financial engineering talents

Financial engineering professionals must have professional skills, qualifications and internship experience to enter the financial industry. Financial institutions prefer to recruit fresh graduates for their solid theoretical knowledge, but fresh graduates lack professionalism, collaboration and work experience, so universities should focus on cultivating students' ability to work together.

2. Suggestions on training financial engineering talents under the new situation

2.1 The curriculum should be combined with the market demand

At present, many universities do not set up courses related to the development of financial technology, and the teaching focus is on traditional financial theory courses. According to the survey results, most financial institutions want to hire students who are proficient in financial programming software and want students to understand fintech. Therefore, schools should offer courses related to the development of fintech, and add or subtract the original courses appropriately.

2.2 Maintain communication and timely understand the demand for financial engineering talents

There is a lag in the training of financial engineering professionals. A large part of the reason is that it is out of touch with the market and does not communicate and communicate with financial institutions in time.^[3] In view of this situation, the university should invite some experts in the financial industry to come to the university to hold lectures, so that students can learn about the latest financial knowledge and technology. The university should also conduct regular exchanges and cooperation with the financial industry, so that teachers can actively interact with technical personnel in the industry, and fully integrate theoretical knowledge with practical ability.^[4] At the same time, the financial industry and universities should also cooperate closely to jointly study financial issues, so that university teachers can participate in the development of the industry and understand the market needs.

2.3 Increase the depth and intensity of financial software learning

Students majoring in financial engineering should not only lay a good theoretical foundation, but also deeply study financial software. From the beginning of students' enrollment, teachers should make students have access to financial software, establish friendly cooperation with financial institutions, provide students with more advanced equipment, and let students practice opportuni-

ties.^[5] Teachers in colleges and universities should also have full communication and exchange, set up financial software to become a featured class, and the competent departments of education should also encourage teachers to design financial software and start businesses with financial software.

2.4 Increase the content of team training and improve the cooperation ability

Judging from the current situation, many financial engineering practice courses are completed by students independently, and there is no task of group cooperation. There are only some classroom interactions that students can do in collaboration with others. Therefore, teachers should provide more opportunities for students to cooperate and improve their ability to work together. Financial institutions and universities can also set up entrepreneurship and innovation projects to encourage teachers and students to participate in solving existing problems in the industry. The government should also jointly organize financial competitions with financial institutions and schools. Participating in and winning awards can serve as vouchers for students' evaluation and teachers' promotion, mobilize the participation enthusiasm of students and teachers, and improve the academic level of college teachers and students' learning ability.

References:

- [1] Zhang Yuzhao. Research on Training Strategy of Financial Engineering Majors in Finance and Economy Universities under the Background of Fintech [J]. Industry & Technology Forum, 2022, 21(7):2.
- [2] Guan Peng, Huang Qin, Mu LAN. Exploration and Practice of "Financial Data Mining" PBL Teaching Model under the background of artificial intelligence [J]. Journal of Science and Education, 2021(27):3.
- [3] Xiang Yun. Research progress, Hot spots and Prospects of Financial Engineering Talent Training -- Visual Analysis based on CiteSpace [J]. Science and Technology Perspectives, 2021(33):4.
- [4] Jia Qingxian, Ma Xiuming, Wang Li. Research on Innovation of Ideological and Political Education for Financial Engineering Professionals in Universities -- From the perspective of Financial engineering talents training in Guangxi Universities under China-Asean friendship and cooperation [J]. Guangxi Education, 2022(18):4.
- [5] Strengthening the Training of Fintech Talents to Promote the Transformation and Development of Digital Economy -- Interview with Liu Shaobo, Executive Director of South Institute of Advanced Finance of Jinan University [J]. Fintech Era, 2022,30(5):6.