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## SYSTEMS OF FINANCIAL ANALYSTS TRAINING

A review of different systems of financial analysts training which exist in European countries and the United States of America is proposed. MBA diploma and professional qualification such as Chartered Financial Analyst designation (CFA) in the United States of America, or Certified International Investment Analyst designation (CIIA) in Europe and Asia, are required for financial analysts to get certain level within a firm. We consider in details qualification levels that are offered by the most famous institutions such as Faculty of Actuaries and Institute of Actuaries (UK), Chartered Financial Analyst Institute (USA), Association of Certified International Investment Analysts, Association of Corporate Treasurers (UK). In Ukraine an equivalent international qualification can be obtained in the Training Center for Actuaries and Financial Analysts .

### 1. INTRODUCTION

Financial analysts, also called securities analysts and investment analysts, work for banks, insurance companies, mutual and pension funds, securities firms, and other businesses, helping these companies or their clients make investment decisions.

Financial analysts often assess the firm's:

1. *Profitability* – its ability to earn income and sustain growth in both short-term and long-term. A company's degree of profitability is usually based on the income statement, which reports on the company's results of operations.
2. *Solvency* – its ability to pay its obligation to debtors and other third parties in the long-term.

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Invited lecture.

2000 *Mathematics Subject Classifications*. 97B40, 91B99.

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3. *Liquidity* – its ability to maintain positive cash flow, while satisfying immediate obligations. Both 2 and 3 are based on the company’s balance sheet, which indicates the financial condition of a business as of a given point in time.
4. *Stability* – the firm’s ability to remain in business in the long run, without having to sustain significant losses in the conduct of its business. Assessing a company’s stability requires the use of both the income statement and the balance sheet, as well as other financial and non-financial indicators.

## 2. EDUCATION

It is often required for analysts to earn an MBA or a professional qualification such as Chartered Financial Analyst designation (CFA) in the USA, or Certified International Investment Analyst designation (CIIA) in Europe and Asia, to advance beyond a certain level within a firm. Alternatively, analysts may earn a Master of Science in Finance (MSF).

### 2.1. Faculty of Actuaries and Institute of Actuaries (UK) [1]

Qualification by the Faculty consists of a combination of exams and courses. The exams are split into four stages:

- Core Technical stage (CT);
- Core Applications stage (CA);
- Specialist Technical stage (ST);
- Specialist Applications stage (SA).

In addition to exams and courses, it is required that the candidate has spent at least three years working as an actuary, and be of 23 years of age, for him or her to qualify as a “Fellow of the (Institute/Faculty) of Actuaries”.

In the *Core Technical* stage there are nine subjects:

- CT1 Financial Mathematics;
- CT2 Finance and Financial Reporting;
- CT3 Probability and Mathematical Statistics;
- CT4 Models;
- CT5 Contingencies;
- CT6 Statistical Methods;
- CT7 Economics;
- CT8 Financial Economics;
- CT9 Business Awareness Module.

Each of CT1–CT8 is examined by one paper of three hours duration. CT9 Business Awareness Module involves a 2-day residential course, with pre-course study and a post-course test, that has been designed to help people joining the Actuarial Profession understand: the business environment they will be working in, including the related challenges; how to tackle business related problems; their professional responsibilities; the need to

equip themselves for lifelong learning. The module consists of internet-based study, attendance at a two day course and internet-based assessment.

The *Core Applications* section consists of two exams (CA11 Assets; CA12 Liabilities and asset-liability management) and a modeling course, CA2, that focus on the application of concepts learned, especially to insurance companies. This includes the communications model, CA3, which tests the candidate on their ability to communicate complex actuarial concepts to others. Upon successful completion of both the CT and CA subjects a candidate is said to be an Associate of the (Institute/ Faculty) of Actuaries.

The *Specialist Technical* section represents the first time the candidate has a choice of which exams to take. The candidate chooses two from the various actuarial specialist subjects:

- ST1 Health and Care Specialist Technical;
- ST2 Life Insurance Specialist Technical;
- ST3 General Insurance Specialist Technical;
- ST4 Pensions and other Benefits Specialist Technical;
- ST5 Finance and Investment Specialist Technical A;
- ST6 Finance and Investment Specialist Technical B.

The *Specialist Applications* section allows the candidate to choose one area for which they take the SA paper and attain full Fellowship:

- SA0 Research Dissertation Specialist Applications;
- SA1 Health and Care Specialist Applications;
- SA2 Life Insurance Specialist Applications;
- SA3 General Insurance Specialist Applications;
- SA4 Pensions and other Benefits Specialist Applications;
- SA5 Finance Specialist Applications;
- SA6 Investment Specialist Applications.

The *Diploma in Actuarial Techniques* will be sent directly to students completing all of the Core Technical stage subjects: CT1, CT2, CT3, CT4, CT5, CT6, CT7, CT8 and CT9.

The *Certificate in Finance and Investment* is a joint certificate and will be sent to all students of the Faculty and Institute of Actuaries who complete or are exempted from CT1, CT2, CT4, CT7, CT8, CT9 and CA1.

## 2.2. Chartered Financial Analyst Institute (USA) [2]

Chartered Financial Analyst (CFA) is a professional designation offered by the CFA Institute to financial analysts who complete a series of three examinations and work for at least four years in the investment decision making process. CFA charterholders are also obliged to adhere to a strict Code of Ethics and Standards governing their professional conduct.

The CFA designation is a qualification for people engaged in the financial and investment sector.

The basic requirements for participation in the CFA program include

holding or being in the final year of a four-year university degree (or international equivalent) or having four years of qualified, professional work experience in an investment decision-making process. The program focuses on portfolio management and financial analysis, and provides a generalist knowledge of other areas of finance.

The *Level I* study program emphasizes tools and inputs and includes an introduction to asset valuation and portfolio management techniques.

The *Level II* study program emphasizes asset valuation and includes applications of the tools and inputs (including economics, financial statement analysis, and quantitative methods) in asset valuation.

The *Level III* study program emphasizes portfolio management and includes strategies for applying the tools, inputs, and asset valuation models in managing equity, fixed income, and derivative investments for individuals and institutions.

All three exams are administered on paper, on a single day; the Level I exam is administered twice a year. The Level II and III exams are administered once a year. Each exam consists of two three-hour sessions. Both Level I and Level II are entirely multiple choice, while Level III consists of a session of short-answer questions and a session that is multiple choice.

The curriculum for the CFA program includes:

- Ethics and Professional Standards;
- Quantitative Methods;
- Economics;
- Financial Statement Analysis;
- Corporate Finance Analysis of Investments;
- Portfolio Management and Analysis.

### **2.3. Association of Certified International Investment Analysts [3]**

Certified International Investment Analyst (CIIA) is a designation offered by the Association of Certified International Investment Analysts (ACIIA) to professional financial analysts; candidates may be financial analysts, portfolio managers and/or investment advisors.

To be awarded the CIIA, candidates must pass two Common Knowledge Exams and a third National/Regional Exam (examining knowledge of specific markets), and have 3 years relevant experience. The exams are taken twice per year and are written at a postgraduate level.

The exams are implemented by 27 national Associations of Financial Analysts, or Federations of Financial Analysts Associations including Ukraine.

The *Common Knowledge Exams* are divided into two levels – the Foundation and Final Level. Examined are essential skills and knowledge required for professionals working in investment markets common in all countries. Graduates who already have relevant qualifications may be exempt from the Foundation Level exams.

The *Foundation Level Exams* cover the following subjects:

- Exam 1 – Equity valuation and analysis;
- Financial accounting and statement analysis;
- Corporate Finance;
- Exam 2 – Fixed income valuation and analysis;
- Economics;
- Exam 3 – Derivative valuation and analysis;
- Portfolio management.

The *Final Level Exams* are the following:

- Exam 1 – Corporate finance;
- Economics;
- Financial accounting and statement analysis;
- Equity valuation and analysis;
- Exam 2 – Derivative valuation and analysis;
- Portfolio management.

The Common Knowledge Exams can be conducted in Chinese, English, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian and Spanish.

The *National Exam* covers:

- Regulation; – Financial statements analysis;
- National Market structures and instruments.

#### **2.4. The Association of Corporate Treasurers(UK) [4]**

The Association of Corporate Treasurers (ACT) is the international body for finance professionals working in treasury, risk and corporate finance. Through the ACT training personal come together as practitioners, technical experts and educators in a range of disciplines that underpin the financial security and prosperity of an organization. The ACT defines and promotes best practice in treasury and makes representations to government, regulators and standard setters.

Treasury is an integral element of the financial management of a business and as the environment in which companies operate evolves, the role of corporate treasury also changes.

The ACT is the only UK based professional body to offer specialist qualifications in treasury, risk and corporate finance. The membership qualifications, recognized as the global benchmark for treasury education, ensure that the ACT represents a highly qualified community of professionals.

Professional membership of the ACT may be obtained at two levels:

- Associateship; – Membership.

The *Associateship* qualification is set at professional entry level and gives a thorough overview of the fundamentals of treasury management. These concepts are developed further in the Membership examinations.

The *ACT Membership* qualifications:

- AMCT Diploma in Treasury, Risk and Corporate Finance;
- MCT Advanced Diploma in Treasury, Risk and Corporate Finance, and the Certificate qualifications.

There are two levels of papers in the AMCT syllabus Foundation Papers, which are core to the understanding of treasury and accountancy principles; and Associate Papers, which provide the building blocks for the modern treasurer, examining and analyzing the principles of corporate treasury.

An AMCT students study is made up of seven papers, four Foundation Papers and three chosen Associate Papers.

Foundation Papers:

- Financial and Management Accounting;
- Corporate Taxation;
- Economics and Statistical Analysis;
- Business Law.

Associate Papers:

- Liquidity Management;
- Risk Management;
- Corporate Finance and Funding;
- Corporate Finance and Funding FastTrack.
- International Cash Management (Certificate);
- Financial Mathematics and Modelling (Certificate);
- Risk Management for Pensions (Certificate).

Certificate papers may be taken independently of the AMCT qualification and are recognised as qualifications in their own right.

The *Certificate in Financial Mathematics and Modelling* is designed to cover three critical areas of financial risk mathematics: money market calculations, options and portfolio management. The *Certificate in Financial Mathematics and Modelling* is designed to cover three critical areas of financial risk mathematics: money market calculations, options and portfolio management. The *Certificate Paper in Risk Management for Pensions* is designed to enable you to understand, analyse and manage the risks associated with company pension funds.

## 2.5. The Training Center for Actuaries and Financial Analysts (Ukraine) [5]

The Training Center for Actuaries and Financial Analysts started its activity on the base of Kyiv National Taras Shevchenko University in 2006.

The Training Center was organized within the framework of EU Tempus Project IB-JEP-25054 under auspices of consortium of EU Universities, State Commission for Regulation of the Financial Services Markets of Ukraine and Society of Actuaries of Ukraine. The strategic goal of Training Center is assistance in development of actuarial profession in Ukraine through implementation the system of actuarial training on the base of advanced teaching methods. The employees of insurance companies, pension funds, banks, and governmental agencies as well as postgraduate and

graduate students can attend these courses and at this center and prepare themselves for qualifying exams for Ukrainian actuaries have.

Educational programs of Training Center are adapted to the British Actuarial examination system and correspond to EU standards of actuarial training. Very fruitful contacts are established with Institute of Actuaries and Faculty of Actuaries [1] in United Kingdom. An Examination Center for British actuarial exams was created on the base of the Training Center at Kyiv National Taras Shevchenko University. The first group of Ukrainian trainees passed exams in September 2006.

Highly qualified staff of professors and lecturers from the Department of Probability Theory and Mathematical Statistics of Kyiv University delivers the courses in the *Core Technical* (CT) subjects according British actuarial training system:

- CT1 Financial Mathematics;
- CT2 Finance and
- CT3 Probability and Financial Reporting;
- Mathematical Statistics;
- CT4 Models;
- CT5 Contingencies;
- CT6 Statistical Methods;
- CT8 Financial Economics.

Training Center has a good library of actuarial literature, lecture halls and computer equipment. All trainees are provided by necessary teaching materials and have possibility to use library of actuarial literature, which has newest books on actuarial, financial mathematics, stochastic and statistics. The organization of training process is flexible. Lecture and practical studies are delivered in specially equipped computer classes at Kyiv University. These studies are combined with elements of distance education. The realistic timetable for the delivery of courses, which is appropriate for the needs of trainees from Kyiv and regional-based insurance companies are created.

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