



SOCIETY OF ACTUARIES

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Education

FINANCIAL AND HEALTH ECONOMICS

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ON JULY 1, 2010, the new Financial and Health Economics module became a requirement for FSA candidates on all tracks and was also made available for credentialed actuaries seeking professional development credit. It enhances the previous Financial Economics module by broadening the scope to include applied economics topics and applications that address all areas of practice.

IMPORTANCE OF APPLIED ECONOMICS TOPICS FOR ACTUARIES

An understanding of economics is essential to the management of risk. Macroeconomic theories of inflation and unemployment underlie the modeling and discounting of future cash flows. Microeconomic theories of supply and demand provide insights into the valuation and pricing of risk. Together they support the concepts and techniques for modeling and managing risk. Mastery of these concepts has been established as an important learning objective for our associate level candidates.

At the fellowship level, candidates are expected to demonstrate expert knowledge of the busi-

ness environments within which financial decisions are made. Knowledge and awareness of applied economics increase an actuary's understanding of key business and financial decisions within the insurance industry as well as in general industry and the public sector.

The chart on page 37 illustrates the framework of the new Financial and Health Economics module. The module builds on those areas of microeconomics relevant to financial and health systems management.

Applied economics is of strategic importance to the executive management of various organizations, and includes topics that other professions have traditionally addressed. Broadening the coverage of applied economics will help the actuarial profession remain competitive with other rigorously trained professionals who are increasingly encroaching on our historical areas of practice and newer areas like enterprise risk management. Understanding and applying these key concepts help to position actuaries as well-rounded business professionals.

The learning objectives for the Financial and Health Economics module are particularly well-suited for delivery in an e-Learning environment. The candidates are able to achieve and demonstrate a deeper understanding than can be demonstrated with traditional proctored examination methods by working through complex examples, case studies and spreadsheets. The module also allows interactions that demonstrate how the economic theories actually apply in real-life actuarial situations. Completing the module will help actuaries increase their ability to participate in strategic discussions with other business professionals regarding these topics.

The Financial and Health Economics module provides an important initial exposure to applied economics for many candidates. In practice, many actuaries have determined the need to address these topics independent of the Education System. This module better provides candidates with a foundational understanding of applied economic topics, so they can appreciate and pursue future applied economics professional development opportunities throughout their careers.

FINANCIAL AND HEALTH ECONOMICS MODULE OVERVIEW

The Financial and Health Economics e-Learning module enables candidates to

2009 FSA EXAMINATION CANDIDATE SURVEY RESULTS ARE AVAILABLE ON THE SOA WEBSITE. FIND OUT WHAT THE CANDIDATES HAD TO SAY. VISIT www.soa.org/fsacansurveyresults



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tailor the content to their specific track of study. The module contains several different sections. Some of the sections are required of all candidates and provide high-level exposure to all of the topics addressed in the module. Other sections are track-specific and are required depending on the candidate's chosen track. For example, a more in-depth health economics section is required of candidates following the Group and Health Track. Candidates on other tracks complete the same set of sections, but there is specialty material within the sections tailored to their needs.

While specified sections are required based on a candidate's chosen track, candidates have access to all sections in the module if they desire to learn that material in more depth. For example, a finance track candidate who works in the health industry might be interested in the option to also study the health economics section. A health track candidate, who works in a financial role, consulting on health plan mergers and acquisitions, might also benefit from the more in-depth coverage of financial economics and asset pricing.

CORE TOPICS REQUIRED OF ALL CANDIDATES

The core topics addressed in the new e-Learning module ensure that all candidates, regardless of track, have a background in financial and health economics. There are aspects of these subjects that affect all areas of actuarial practice.

Following are the learning objectives for these core topics:

- Explain that financial economics has a global perspective, tools and analysis that are applicable for all actuaries.

- Explain the dynamics and the basic financial and resource structures that are common to all health economies.
- Demonstrate a basic knowledge of utility theory.
- Explain sources of empirical anomalies.
- Explain modern corporate finance.

GROUP AND HEALTH TRACK TOPICS

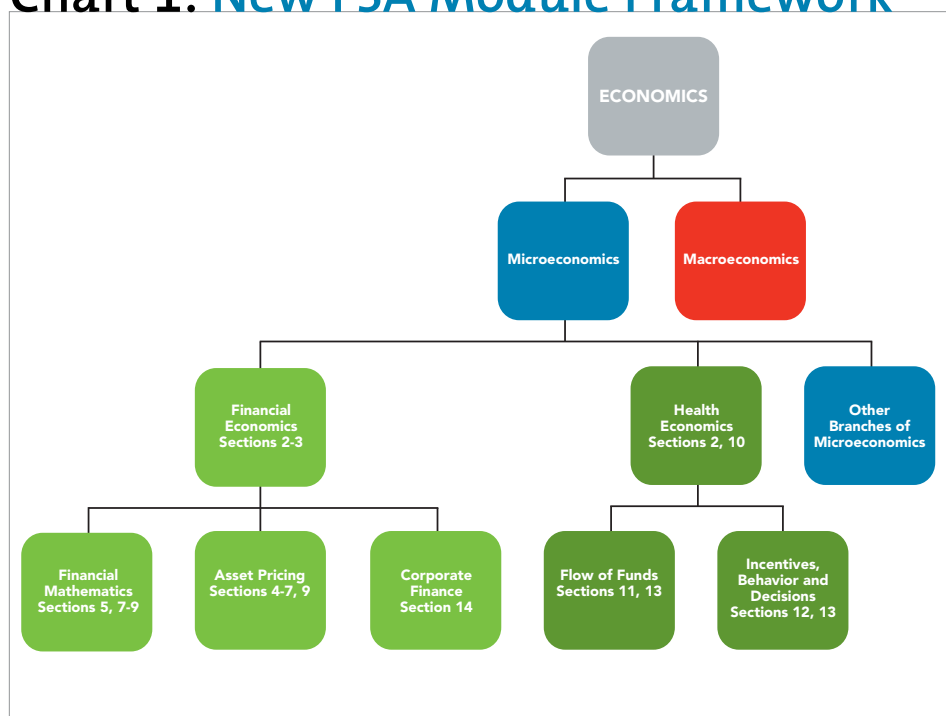
Traditionally, actuaries pursuing the SOA's Group and Health Track initially worked almost exclusively in the health insurance industry. However, over the last 50 years, health economies around the world have grown and evolved in many different ways. As health systems have grown and evolved, actuaries' roles have also evolved, branching into areas such as public sector work, health outcomes research, and organizational productivity.

As a result of these broadening roles, the need to educate actuaries in the health field has also increased. The health economics topics covered in the new module will provide candidates with a broader perspective of the financial dynamics, resource constraints, and overall personal and system-wide risks present in any health system.

Following are the learning objectives for the health economics topics:

- Establish a framework for understanding how funds flow through the health care system.
- Contrast the economic concept of demand versus the medical concept of need.

Chart 1: New FSA Module Framework





“Knowledge of health economics will enable actuaries to better understand the big picture dynamics of health care and how they affect what we

do. In turn, it helps us to make better decisions.” — Dale Yamamoto, FSA, EA, FCA, MAAA

- Analyze cost-benefit and cost-effectiveness of health care alternatives.

FINANCE/ERM, INVESTMENT, INDIVIDUAL LIFE AND ANNUITIES, AND RETIREMENT TRACK TOPICS

Candidates on these tracks will focus more in-depth on the Financial Economics topics. The learning objectives are:

- Describe and discuss the assumptions of mean-variance portfolio theory and its principal results.
- Describe asset pricing models and discuss the principal results, assumptions and limitations of such models.
- Describe derivative securities.
- Explain stochastic models and the behavior of security prices.
- Explain the properties of option prices, valuation methods, and hedging techniques.

OPPORTUNITIES FOR CONTINUING EDUCATION

Like all of the FSA modules, the Financial and Health Economics module is offered as an e-Course for members and reflects 7.5 units of structured continuing professional development. (Study time to complete this course will be greater than 7.5 hours. Additional units of unstructured credit can be earned and are the

individual member’s responsibility to identify and track.)

SUMMARY

All industries are undergoing significant changes. By increasing exposure to topics such as financial economics, health economics, and corporate finance, actuaries will be better prepared to work closely with other business professionals, and support corporate executives as they evaluate and manage risk in an evolving business environment.

A description of the new Financial and Health Economics module can be found at www.soa.org/the.

Questions may be directed to education@soa.org.

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Notice

NOTICE OF DISCIPLINARY DETERMINATION

On March 25, 2010, the Society of Actuaries convened a Discipline Committee to review a matter referred by the Actuarial Board for Counseling and Discipline (“ABCD”). The matter related to work performed by William Lynn Townsend, FSA, in his role as the appointed actuary for a life insurance company for year ends 2004, 2005, and 2006.

The Discipline Committee determined to publicly reprimand Mr. Townsend for material violations of certain Precepts under the Code of Professional Conduct.

- Precept 1 states, “An Actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession’s responsibility to the public and to uphold the reputation of the actuarial profession.”
- Precept 3 states, “An Actuary shall ensure that Actuarial Services performed by or under the direction of the Actuary satisfy applicable standards of practice.”
- Precept 4 states, “An Actuary who issues an Actuarial Communication shall take appropriate steps to ensure that the Actuarial Communication is clear

and appropriate to the circumstances and its intended audience and satisfies applicable standards of practice.”

A violation of Precept 1 related to Mr. Townsend’s failure to stay current with the relevant requirements of the insurance department of the state in which the company was domiciled with respect to statements of actuarial opinion for the subject year ends. The violation of Precept 3 related to his failure to comply with the requirements of the U.S. Actuarial Standards of Practice Nos. 22 and 41. Violations of Precepts 1 and 4 related to his issuance of statements of actuarial opinion indicating compliance with the insurance department’s asset adequacy analysis requirements, and his failure to incorporate the appropriate analyses in providing those statements of actuarial opinion.

All members of the SOA are reminded that when they are faced with potential issues regarding professional conduct, the ABCD is available for counseling.