## Financia Trading System

- The Financial Trading System (FTS) is a suite of educational software tools and teaching material for high school and university courses in finance, accounting, and economics.
- FTS includes a virtual portfolio management system as well as an interactive trading system for less than half of what you would pay if you acquired them from others.
- The central difference between FTS and other systems is that we focus on building the practical, analytical, and modeling skills of students. Examples of how we do this are below.
- Our academic support is provided by Professors who have taught with the system at top business schools.
- FTS is used by schools that have trading rooms and by many schools that do not.
- It is deployed in over 20 countries.
- FTS software helped create the first educational trading room, the "FAST Lab" at Carnegie Mellon University in the early 1990's. The Smithsonian Institution's Archive of American History made the progressive work of the FAST Lab part of its permanent research collection on innovative information technology and awarded it a Computerworld-Smithsonian medal
- FTS provides the most comprehensive solution available for university trading rooms as well as for those who want to employ realistic and real world simulations in their curriculum.

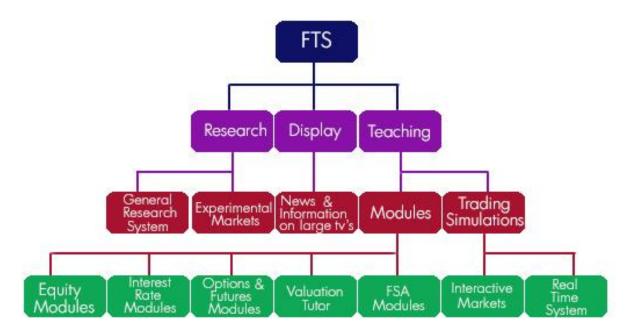


An FTS subscription can be customized to meet fit your teaching needs. There is no restriction on access: students can access the system from home, which allows for widespread use in online courses and distance education.

A quick example of the capabilities of FTS and what your students will achieve is in the following two documents:

- The <u>Student Case Preparation Guide</u> shows you exactly how students learn and develop their analytic and model building skills using the FTS Interactive Markets
- The <u>Value Investing Project</u> is one example of how the real time projects let students develop a deep understanding of financial concepts and their practical application in portfolio management.

The next graphic summarizes the different FTS products and applications; they are described in more detail below. We can customize a package to meet your teaching needs, please contact us at <u>ftsweb@gmail.com</u>.



The FTS system comprises the following, described briefly below (you can get more details on each at <u>www.ftsweb.com</u>):

- Trading systems
  - FTS Interactive Markets
  - FTS Real Time System
- The Interactive Financial Statement Analysis module
- Valuation Tutor
- The FTS Modules
- The FTS Display System
- The FTS Experimental Research System

FTS Real Time	Virtual portfolio management. Students	We provide complete back office
Trading System	manage positions of real-world securities	support, including real time data feeds, a

	at real-time prices. We run the entire back office (including handling the real- time data feeds). With the built in analytical support, it provides a uniquely successful way to bridge theory and practice.	step-by-step <u>teaching guide</u> , access to company filings and publicly available information, built-in analytical support. <b>An example of how students learn is our</b> <u>Value Investing Project</u> .
<u>FTS Interactive</u> <u>Markets</u>	An interactive trading simulation, these are true "markets" where students trade with each other, students get to experience what it is like to be in a dealing room. Specially designed trading cases tie a central function of markets, price discovery, to concepts commonly taught. A variety of microstructure treatments provide a rich framework for understanding liquidity, transparency, market impact, and the dynamic nature of markets.	We provide over <u>30 trading cases</u> and ongoing support for creating customized trading cases. The cases can be used in courses in finance, accounting, economics, and we now have cases covering ethics. This system is also used for experimental research. <b>Students</b> <b>develop their analytical skills and</b> <b>modeling skills in Excel as they prepare</b> <b>for cases, as you can see in the</b> <u>Student</u> <u>Case Preparation Manual</u>
<u>The Interactive</u> <u>Financial</u> <u>Statement</u> <u>Analysis</u> <u>Module</u>	A hands-on way to teach and learn financial statement analysis from first principles. The module includes quick and easy access to a rich set of company filings, from US and international companies. Students can conduct a comprehensive fundamental analysis and gain a deep understanding of financial performance in light of a company's business strategy.	Complete with student and instructor handbooks and a grading capability that lets you quickly see if students have mastered concepts. The self-study data set is especially useful for distance learning and online students.
Valuation Tutor	An interactive and <u>visual presentation</u> of Financial Statement Analysis and Valuation, with a complete <u>textbook</u> , <u>lessons</u> , and <u>case studies</u>	Based on learning via exploration and discovery, Valuation Tutor includes access to interactive SEC filings of the 4000 largest US companies, and lets students analyze and compare companies easily.

<u>Bond Tutor</u>	Covers bond valuation, the term structure of interest rates, interest rate futures, and hedging interest rate risk.	Our unique "interactive textbook," where visual calculators are integrated into the <u>online textbook</u> . You can change the numbers and see what happens.
<u>The Modules</u>	The FTS Modules are "stand alone" teaching tools that allow students to analyze real world problems with real world data. The modules perform calculations that are difficult by hand or in a spreadsheet, and also visually illustrate how techniques and concepts are applied in practice.	The modules are described <u>here</u> . They are stand-alone teaching tools that provide a graphical exposition of concepts, covering portfolio theory, bonds, options, and futures. These are complemented by our online texts on <u>portfolio theory</u> and <u>option valuation</u> .
<u>Experimental</u> <u>Research</u>	The FTS Interactive markets have long been used for experimental research. Contact us for more information.	Experimental research is conducted with the FTS Interactive Markets as well as our general <u>experimental system</u> that allows wide range of experiments to be conducted.
FTS Instructional Support	We provide training on how to use the system effectively in the classroom in any finance or related course.	Our system was designed by Professors John O'Brien and Sanjay Srivastava, and they continue to be deeply involved in sharing their teaching and research experiences over the past twenty years.
FTS Technical Support	We provide technical support all the time; since we operate in over 20 countries, we are well aware of time zones!	Over the years we have seen a large growth in the use of our system in online courses, so we are fully aware of issues with online courses and distance learning courses.
<u>The FTS Display</u> <u>System</u>	The FTS Display System lets you create displays for computers connected to large, high definition display monitors (or televisions). Every part of the display is customizable.	The application consolidates news and information from different internet sources market data charts from FTS data servers to provide a rich display of news, financial news, sports, and entertainment.

FTS was recognized in 1996 when the Smithsonian Institution's Museum of American History made the progressive work of the FAST Lab part of its permanent research collection.

For those who have built or are building trading rooms, it is critically important to develop a strategy for integrating the trading rooms into the curriculum. The investment in such rooms is typically large, and while a trading room can be a showpiece and demonstrate a commitment to technology and real-world education, the effective use of such rooms can be limited by several factors. The foremost is faculty training and a willingness to adapt newer methods into their classes. Another is technical support that makes widespread usage feasible. The investment is hard to justify if either a very small number of

students benefits from it or if it becomes resource that just "sits there" and is essentially a computer lab with flashy displays<sup>1</sup>.

FTS has a broad range of applications, and is used to teach courses in finance, accounting, and economics. Our <u>goal</u> is to link what is taught in standard courses, taken by most students, to real world markets so that all the students see and experience how the concepts they learn are applied and used in the real world. While you can use the system to run specialized courses on trading or market microstructure, our focus and the applicability of the system is much broader.

As a result, FTS is used by schools that have built trading rooms and by schools that have not. It is used for in-class trading exercises as well as by online and distance learning students. Our software was developed by professors for teaching and we place a large emphasis on faculty training. This training is done by professors who have used the system, not by system developers or programmers. Such training typically takes place over several sessions, and includes feedback on course outlines and syllabi (partly to make sure that what is required of students is feasible). With this approach, labor intensive though it is, we have successfully helped many schools with curriculum integration.

Examples of how FTS can be used in your courses are <u>in this document</u>. If you have any questions, or would like a web meeting for a demonstration of the system, please do not hesitate to contact us at <u>ftsweb@gmail.com</u>

Finally, we would also like to mention (independent) published articles that study the effectiveness of the FTS Interactive Markets:

"Market Games In Finance Education," by F. Douglas Foster, Shirley Gregor, Richard Heaney, Terry O'Neill, Alex Richardson, Robert Wood

"Impact Of Computer Based Share Market Simulations On Learning: A Link Between Self-Efficacy And <u>Understanding</u>" by F. Douglas Foster, Shirley Gregor, Richard Heaney, William Northcott, Terry O'Neill, Alex Richardson, Emma Welch, Robert Wood

"<u>Using Trading Simulations to Teach Market MicrostructureConcepts</u>," by Asli Ascioglu, Bryant College Lynn Phillips Kugele

<sup>&</sup>lt;sup>1</sup> For a discussion of some of the issues surrounding trading rooms, see the BizEd article available at <u>http://www.aacsb.edu/publications/archives/jan03/p22-27.pdf</u>