Financial Trading System
Teach with confidence

For finance labs and trading rooms at universities, FTS provides a unique set of resources for students to broaden their understanding of financial markets and deepen their analytical, modeling, and practical skills.

Here is what you can do with FTS.

- ***Interactive Trading Simulations with Price Discovery***
  - You can create a dealing room and let students experience the excitement of a trading floor. This is really the only way to experience these dynamics: students trade with each other and react to the actions of others in real time, which makes this simulation very exciting and interactive.
  - The system is easy to run, scalable, and reliable. You can try out the student experience with our demo: at this link, scroll down to step 2 of the student instructions, click the "**Connect to Demo Market**" button.
  - The simulation can be run with any group of students, including members of a finance club and by an instructor in class.
  - Students can develop trading algorithms in VBA. Besides building their analytical and modeling skills, this also gives them a huge edge in understanding today's financial markets work.
  - Many trading competitions have been run using the system. Trading is based on a "trading case" and we provide over 30 trading cases. It is easy to create your own trading cases.
    - Our ethics case formed the basis of a large scale longitudinal study at Bentley University.
  - Beyond that, a variety of microstructure treatments provide a rich framework for understanding liquidity, transparency, and market impact. Our case preparation manual shows you how the trading exercises help build analytical and modeling skills.

- ***Virtual Portfolio Management***
  - In these simulations, students manage positions of real-world securities at real-time prices. The goal here is to dig deeper than is possible in traditional classroom by learning to apply concepts, techniques, and tool.

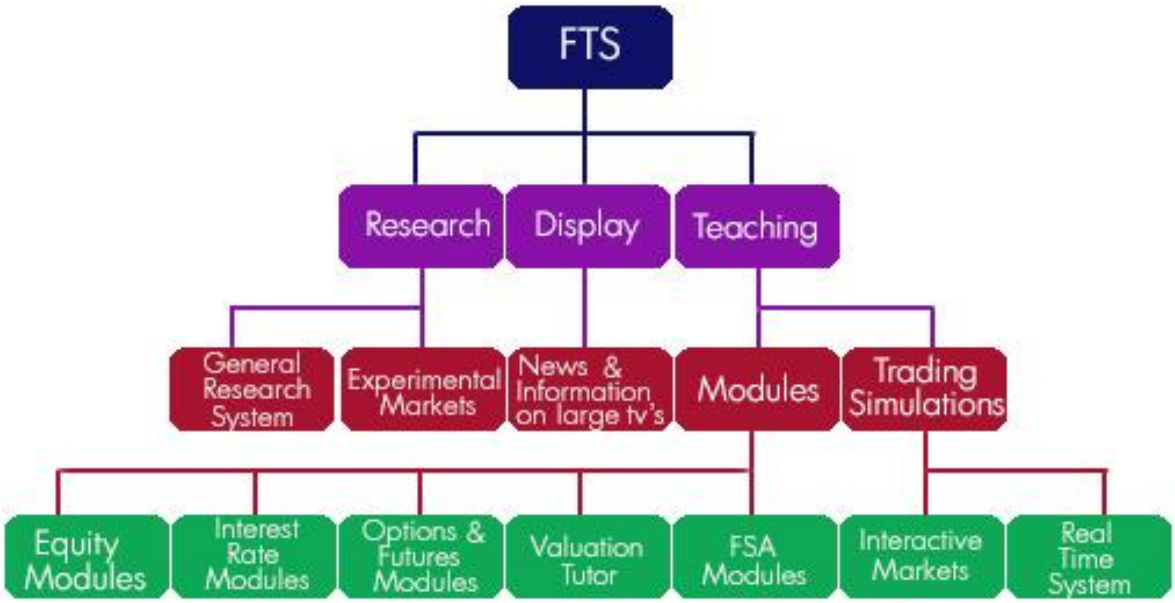
- With its built-in analytical support and projects, the FTS Real Time System provides a uniquely successful way to bridge theory and practice. It includes a step-by-step projects and lessons. An example of how conceptual and practical skills come together is in this Value Investing Project , in The Black-Litterman Model, and the Option Analyzer.
- Our system has a powerful algorithmic trading capability. Advanced students can develop trading strategies in VBA and can test them "live," going forward in time. No one else comes close to this.
  - While some simulations may let students trade more stocks, they do not provide any analytical tools or algorithmic trading tools. In comparing systems, you have to ask whether having a large universe of securities is more important than building the skills that will let students succeed in the environment they will face, not the financial markets of twenty years ago.
- Students can access the system from anywhere with an internet connection, on computers, iPad's and Kindle's, even smart phones. You can try our mobile app as explained in the first step of the instructions.
- We can set up accounts for any group of students: in a class, in a club, or simply those who are interested.
- It is very easy to organize and run trading competitions with the system.
- While we typically handle the back office operations, including managing the data feeds and servers, if you want to, you can run the back office and integrate it with your data feeds.

- ***Research and Analysis***

  FTS provides a series of "modules" as described in each link. These include:
  - **The Financial Statement Analysis Module**
    - A hands-on way to deepen your understanding of fundamental analysis. Students can analyze companies with the built in access to SEC filings. This module has been enhanced to work directly with databases such as Compustat and Morningstar, allowing students to gain a deep appreciation for corporate financial reporting, financial statement analysis, and valuation.
  - **Valuation Tutor**
    - An interactive and visual presentation of Financial Statement Analysis and Valuation, with a complete textbook, lessons, and case studies
  - ***Bond Tutor***
    - Our unique "interactive textbook" on bond valuation, the term structure of interest rates, interest rate futures, and hedging interest rate risk. Visual calculators are integrated into the online textbook. You can change the numbers and see what happens.
  - ***Other Modules and Online Texts***
    - A variety of "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.
    - These are complemented by our online texts on portfolio theory and option valuation.
- **Experimental Research**
    - The FTS Interactive markets are used to conduct experimental market research. Beyond markets, we also provide an experimental research system, where you can run a broad range of experiments, including auctions, game theory experiments, behavioral finance experiments, and so on.
- FTS also includes a simple solution for displaying news and information and a ticker on large, high definition monitors (or televisions). The customizable application provides a rich display of news, financial news, sports, and entertainment. It does not require any proprietary hardware.

The following graphic summarizes the different FTS products and applications. More information on each product or application is available at **our web site.**



Notes on Educational Trading Rooms

Physical Trading Rooms

A physical educational trading room typically consists of a networked classroom with:

- **Data sources**, including
  - Quotes from financial markets
  - Historical data
  - Financial statements
  - Access to company research and analyst reports
- **Computer workstations**
  - Providing access to the data
    - Data access may be restricted to workstations in the room
  - Some may be proprietary data terminals
- **Displays (digital signage)**
  - Tickers (usually displaying delayed data)
  - Data walls, that integrate TV, financial market news on large TV's
- **Software**
  - Front office software
    - For accessing the data
    - For conducting analysis
  - Back office software
    - For creating trading simulations
    - For creating displays

A physical trading room has advantages and disadvantages. The primary advantages are that it can be a showcase, draw attention, attract students and funding, and demonstrate a commitment to providing state of the art resources for financial education. With proper faculty involvement and interaction, it can significantly enhance the curriculum and the skills and knowledge acquired by students. It provides a way to build relationships with the practitioner community, develop specialized academic programs, and enhance the placement opportunities for students. Some issues to consider are the cost of creating and maintaining such a room; the lack of scalability; and the lack of access for online courses, distance learning programs, or courses taught on different campuses. However, there are ways to overcome some of these issues.

Virtual Trading Rooms

A virtual educational trading room does not have a physical space, displays or tickers. It typically does not have the same data resources (specially "closed" data sources that do not allow access over the internet). On the other hand, it costs almost nothing in comparison to a physical room, is enormously scalable, and is accessible by students taking courses online or on different campuses.

Background on FTS

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, 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. Today, the system 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.

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 a resource that just "sits there" and is essentially a computer lab with flashy displays[1].

FTS has a broad range of applications, and is used to teach courses in finance, accounting, and economics. Our goal 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

[1] For a discussion of some of the issues surrounding trading rooms, see the BizEd article available at http://www.aacsb.edu/publications/archives/jan03/p22-27.pdf

what is required of students is feasible). With this approach, we have successfully helped many schools with curriculum integration.

For more information, please do not hesitate to contact us at ftsweb@gmail.com

Click here to go to our new web site