

By Jim Finnegan

**“The internet has changed everything”**

That's a phrase one heard frequently during the euphoria of the NASDAQ (and dot.com) bubble of the late 1990's. "Clicks" would replace "bricks". Old economy "dinosaurs" would succumb to nimble web-based competitors. Physical assets would become low return commodities; value-added would be created through (web-based) franchises, informational content, market-making, and streaming real-time data/video.

In the sober reality of 2002, much of the late 1990's euphoria and predictions may now seem ridiculous. For example, the old economy "dinosaurs" have adopted instead of

becoming extinct; today, these companies are among the most innovative users of the internet for e-commerce. But one prediction from the 1990's hasn't proven wrong: The internet HAS changed everything in terms of competitive business models for the 21st century. We stare at an embryonic yet immensely powerful new means of communication with the awe of knowing how previous revolutions in connecting people- be it the Guttenberg press, telephone, wireless telegraph, radio or television have each transformed society and accelerated change and innovation. Add to the internet the parallel revolutions currently underway in wireless communications, computer hardware and software plus advances in information archiving and retrieval, and the future implications of the internet seem limitless.

Financial engineering is (possibly) uniquely positioned to capitalize on and benefit from this revolution. As an

engineering discipline, its practitioners are not only comfortable with the technologies behind this revolution, they are helping to drive it. As a discipline focused on quantitative finance and financial markets, it can immediately benefit from the real-time qualities and global connectivity among participants that the internet allows. In one respect, continuous time finance has met continuous time informational infrastructure. The consequences are profound. Finally, as a discipline that directly affects the economic needs of all of society's participants (individuals, households, businesses, governments, etc.) it's reach (or potential market) far exceeds most other applications of the internet.

With these thoughts in mind, we at FEN wish we could dedicate a 50 page insert to "Financial Engineering on the Internet". You don't think so? Try searching the web using any major search engine (Alta Vista,

Google, Yahoo, etc.) using the following key words and see how many "hits" you get: "Financial" & "Engineering"; "Quantitative" & "Finance"; "Mathematical" & "Finance". We came up with over 400 unique site "hits". And, this is without including other related key search terms such as "Risk" & "Management".

With this introduction, we present FEN's first annual survey of Financial Engineering on the Internet. Given the challenge of selecting a limited number of sites amongst the total number we identified, our selection process was difficult at best. Let us know if you think we excluded or failed to find important sites you know of. E-mail us at [editor@fenews.com](mailto:editor@fenews.com). We plan to post all the websites we've found (at least the ones we feel are worth visiting) as well as the ones you provide us, at the Financial Engineering News website (<http://www.fenews.com>)

WEBSITE NAME	URL	DESCRIPTION	FEATURES
Association of Investment Management and Research (AIMR)	<a href="http://www.aimr.org/">http://www.aimr.org/</a>	Home site for the Association of Investment Management and Research (AIMR). Related site <a href="http://www.aimrpubs.org">www.aimrpubs.org</a> contains references to two important journals of financial analysis, the Financial Analysts Journal, and the CFA™ Digest. If you hold a CFA™ accreditation, or are working to earn one, this is a key site.	The "Education Central" page contains information of important conferences and webcasts. Also see the "Direct Webcasts" link. In addition, check out and download the pdf file on the Product Catalog page for a full listing of Conference Proceedings, Research Foundation Publications, and AIMR Books, Conferences, Webcasts and Subscriptions.
Courant Institute of Mathematical Sciences: Mathematical Finance Seminars Page	<a href="http://www.math.nyu.edu/seminars/math_finance_seminar.html">http://www.math.nyu.edu/seminars/math_finance_seminar.html</a>	Lists regular seminars scheduled at the Courant Institute of Mathematics at NYU focusing on quantitative and mathematical finance.	Abstracts are provided for both upcoming and past seminars. In addition, the site provides a link to World Scientific, which publishes the proceedings of past seminars.
Crystal Ball Homepage	<a href="http://www.crystalball.com/about_us.html">http://www.crystalball.com/about_us.html</a>	Site maintained by Decisioneering, the makers of (among other software products) Crystal Ball and OpQuest. Crystal Ball is a simulation program that runs on most PC's.	Provides a page to sign up for a free e-mail newsletter called "Tomorrow's Forecast" which features a listing of risk analysis articles, stories, example models, Web resources, software tips for Crystal Ball users, job listings, an events calendar, and speaking opportunities
Espen Gaarder Haug's Homepage	<a href="http://home.online.no/~espehaug/">http://home.online.no/~espehaug/</a>	A site dedicated to the mathematical finance behind options.	An interesting site which includes a number of "freeware" downloads, and published papers, articles and presentations on the topic of option and quantitative finance. Check out the Virtual Reality Options World page, and the Options to the People page where Black Scholes functions are coded in no less than 15 programming languages.
FinCAD	<a href="http://www.fincad.com/">http://www.fincad.com/</a>	Home page of the FinCAD Corporation, makers of integrated family of financial instrument management software products, financial information, application services and development tools to people who work with financial instruments.	FEATURES: The Case Study page provides some interesting examples of FinCAD's use in a variety of financial engineering situations (Hedging Floating Rate Loans with Swaps under FAS 133, etc.)
FinCalc Homepage	<a href="http://homepage.swissonline.ch/FinCalc/Index.htm">http://homepage.swissonline.ch/FinCalc/Index.htm</a>	FinCalc provides tools to build advanced financial functions in Excel. FinCalc covers bonds, money market, futures, options and interest rate derivatives.	FinCalc is offered under three different product forms: (1) A freeware version is available in the download section as an Excel add-in. (2) A fully functional version of this Excel add-in can be ordered. It allows the definition of many discount curves (for instance for multicurrency applications); it contains more exotic option models; its calendar with business holidays covers more financial places. (3) Finally, the VBA source code can also be purchased.



WEBSITE NAME	URL	DESCRIPTION	FEATURES
<b>Global Association of Risk Professionals (GARP)</b>	<a href="http://garp.com/">http://garp.com/</a>	The Global Association of Risk Professionals (GARP) is an independent organization of risk management practitioners and researchers.	Site provides a "Today's Risk eNews" page in addition to a Calendar of Events, Job Board, free Library (of papers, committee reports, presentations, spreadsheet solutions and tools), and information on GARP's FRM exam. (Note: Many GARP members recently quit to form an alternate risk association called "PRMIA".)
<b>International Association of Financial Engineers (IAFE)</b>	<a href="http://iafe.org/">http://iafe.org/</a>	The International Association of Financial Engineers (IAFE) is a professional society dedicated to defining and fostering the profession of financial engineering. Its primary mission is to help establish and promote industry standards and practices relating to financial engineering theory and practice.	Contains a very useful "Education" webpage that covers (1) Courses of Study in Financial Engineering (links to universities worldwide), and (2) The Financial Engineering Core Body of Knowledge. Also has a well organized webpage of links to companies and organizations involved in Financial Engineering. Finally, there a "Playroom" that could be fun, but currently has only one demo available for viewing (Brownian Motion).
<b>Internet Bankruptcy Library (IBL)</b>	<a href="http://bankrupt.com/">http://bankrupt.com/</a>	The IBL includes six subject areas related to large-scale business restructurings targeted to the bankruptcy professional seeking information on the Internet.	For those traders and financial engineers interested in information to assist risk arbitrage strategies, the IBL provides updated information on bankruptcies in process. Also available are a series of newsletters ("Troubled Companies- North America, Europe, Asia) and a Troubled Company Prospector Newsletter (free for 30 days).
<b>Professional Risk Managers' International Association (PRMIA)</b>	<a href="http://prmia.org/">http://prmia.org/</a>	PRMIA is the Professional Risk Managers' International Association. It was formed to meet the needs of the risk management profession for a non-profit global association of risk professionals to advance risk management.	Membership is free. Recently joined forces with the Gloria Mundi website to create a common discussion forum. The subject areas in the discussion forum include (1) VaR, (2) Risk Management for Asset Managers, (3) Credit Risk, (4) Integrated Risk Management, (5) Market Risk, (6) Operational Risk, and (7) Economic or Risk Capital Allocation.
<b>Quantitative Work Alliance for Applied Finance, Education and Wisdom (QWAFEFW)</b>	<a href="http://qwafafew.org/">http://qwafafew.org/</a>	From the site's own pages: "QWAFEFW (pronounced "quaff-a-few") is an equal-opportunity organization and takes great pride in discriminating equally against its members on the basis of race, religion, creed, ethnic origin, investment performance, personal appearance, amount of alcohol consumed, and other proprietary factors."	QWAFEFW is a fun-loving group of quant who meet regularly at chapters in Boston, New York, and Stamford. The web site contains an impressive set of downloadable papers and presentations from past meetings (e.g. "Mean Reversion in Stock Prices", "Out of Sample Accuracy in Conditional Asset Pricing Models"). Membership information and meeting schedules are also posted. Check out the Boston chapter's November 2000 Awards for a good laugh.
<b>Society of Quantitative Analysts (SQA)</b>	<a href="http://www.sqa-us.org/">http://www.sqa-us.org/</a>	SQA is a non-profit organization concerned with the application of new and innovative techniques in finance, with particular emphasis on the use of quantitative techniques in investment and risk management.	Site features the synopses of various papers and presentations given over the past five years. You can't access the entire content of the material, but it nonetheless gives a good overview of interesting topics in the area of financial quantitative analysis. Site also posts upcoming meeting dates and topics (held in New York).
<b>MIT Laboratory of Financial Engineering (LFE)</b>	<a href="http://lfe.mit.edu/">http://lfe.mit.edu/</a>	The Laboratory for Financial Engineering is a partnership between academia and industry, designed to support and promote quantitative research in financial engineering and computational finance.	Contains a free webpage where working papers can be downloaded (e.g. "Trading Volume: Implications of an Intertemporal Capital Asset Pricing Model", "The Psychophysiology of Real-Time Financial Risk Processing", and "Agent-Based Models of Financial Markets"). Also discusses LFE's research efforts in three areas: Financial Technology, Risk Management, and Capital Markets.
<b>John Wiley Webpage of Financial Engineering Publications</b>	<a href="http://www.wiley.com/cda/sec/0,,3017,00.html">http://www.wiley.com/cda/sec/0,,3017,00.html</a>	Publisher John Wiley provides this webpage to review and purchase their publications in the field of financial engineering.	Site currently features over 40 publications. Has links to the related topics of Applied Mathematics in Finance, Institutional Finance, and Trading in Finance and Investments among others.



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<b>Ohio State University (OSU) Virtual Finance Library</b>	<a href="http://fisher.osu.edu/fin/overview.htm">http://fisher.osu.edu/fin/overview.htm</a>	The OSU Virtual Library is a resource that Ohio State's Department of Finance provides to academia and investors alike. It is a "meta-site" for finance in that it collects and documents numerous other sources of specific financial information. It is impressive in its content and scope.	From the home page, click the link "For Educators" or "For Researchers" to discover a huge wealth of information and related links concerning finance, organized alphabetically and covering such topics (in detail) as "Finance Journals", "Links Collection", "Research Centers", "Asset Pricing and Investments", and "Derivatives" just to name a few.
<b>INFORMS College on Simulation</b>	<a href="http://www.informs-cs.org/index.html">http://www.informs-cs.org/index.html</a>	The College on Simulation is organized and operated exclusively for educational and scientific purposes: (a) to encourage the development and dissemination of knowledge in the area of simulation; and (b) to promote communication and interaction among individuals and organizations who share an interest in simulation.	Clicking on the links for previous conferences provides free access to the full text of papers given at these events (downloadable as pdf files). A wide variety of topics and papers are available. Subjects include "Agent Based Modeling and Simulation", "Tips for the Successful Practice of Simulation", etc.)
<b>Anthony's VBA Homepage</b>	<a href="http://www.geocities.com/WallStreet/9245/">http://www.geocities.com/WallStreet/9245/</a>	Provides examples in VBA for Excel. Some of the examples used at this website involve advanced topics in finance and statistics. If you have an interest in learning VBA for Excel, this site is a great start.	Examples (with VBA code provided) include Monte Carlo integration, Black Scholes option pricing, non-parametric bootstrapping, binomial option pricing, multivariate probability distributions, and portfolio optimization.
<b>Term Structure and Interest Rate Derivatives (compiled by Don Chance)</b>	<a href="http://www.cob.vt.edu/finance/faculty/dmc/Derivs/IRDLit.htm#A">http://www.cob.vt.edu/finance/faculty/dmc/Derivs/IRDLit.htm#A</a>	A compilation of the literature on modeling the term structure and pricing interest rate derivatives designed to reflect the modern approach, which has as its basis the no-arbitrage or risk-neutral principle.	An alphabetically organized bibliography of papers, publications, articles and books covering the subjects of term structure and interest rate derivatives. Very comprehensive.
<b>Centre for Analytical Finance (CAF)</b>	<a href="http://www.caf.dk/">http://www.caf.dk/</a>	The main purpose of CAF is to strengthen the research in both theoretical and applied finance in Denmark. Both mathematical modeling and empirical analysis in finance are rapidly expanding areas, and draw attention from researchers from a wide spectrum of disciplines, ranging from mathematics and statistics over operations research to economics and business management.	Has an interesting set of research papers, most of which are available for downloading (as .pdf files) on a range of subjects of interest to financial engineers. Also contains an interesting bibliography of databases which are available on historical financial asset and derivatives prices.
<b>The Derivative 'Zine</b>	<a href="http://www.margrabe.com/">http://www.margrabe.com/</a>	Designed and maintained by the William Margrabe Group, Inc., this website is based mainly on visitors posing questions regarding a variety of financial engineering topics (market and credit risk, derivatives pricing, etc) which Mr. Willam Margrabe himself answers on-line. The answers are usually quite detailed and often very humorous.	There are several other sites operated by the William Margrabe site including AskDrRisk.com, DerivativesDigest.com, RiskManagementDigest.com, and FreeOptionPricing.com. The last one offers "freeware" downloads of option pricing software.
<b>GloriaMundi</b>	<a href="http://www.gloriamundi.org/">http://www.gloriamundi.org/</a>	Gloria Mundi is taken from an old Latin idiom, "sic transit gloria mundi" (loosely translated, fame is temporary). GloriaMundi was conceived and created by Barry Schachter in 1996 to collect information on the latest developments in Value at Risk for a research project of his own.	This site is the "must visit" and (re-visit) site for anyone interested in learning about (and improving their knowledge of) Value at Risk (VaR). It contains a vast range of VaR resources such as a Discussion Forum, Teaching Materials, VaR Patents just to name a few.)
<b>International Swaps and Derivatives Association (ISDA)</b>	<a href="http://www.isda.org/index.html">http://www.isda.org/index.html</a>	ISDA is the global trade association representing leading participants in the privately negotiated derivatives industry, a business which includes interest rate, currency, commodity and equity swaps, as well as related products such as caps, collars, floors and swaptions.	A great site for up to date news on regulatory and legal news in this field. ISDA is the lobbying organization for major swap and derivative firms.
<b>Internet International Securities Education Corporation</b>	<a href="http://www.iisec.com/">http://www.iisec.com/</a>	IISEC offers a wide selection of educational resources designed specifically for securities industry professionals.	Educational programs include Quantitative Finance Seminars, Live Online Tutorials, Online Self-Study Modules, Certificate & Diploma Programs. Analytical software (for Excel) is also for sale at the site. Self study modules in a variety of topics (Constructing Volatility Surfaces, Repo Tail Trading, Tax Arbitrage to name a few) are downloadable.



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<b>International Financial Risk Institute (IFCI)</b>	<a href="http://risk.ifci.ch">http://risk.ifci.ch</a>	This site is dedicated to the important official documents in financial regulations and risk management. The documents are drawn mainly from the Bank for International Settlements (BIS), International Organization of Securities Commissions (IOSCO), Group of Thirty (G30), Derivatives Policy Group (DPG) and Futures Industry Association (FIA).	Site contains the following pages and links: Case Studies in Risk Management, Key Concepts in Risk Management, Glossary of Terms, a Risk Library, a Risk Forum and a Links Page.
<b>Phillippe Jorion's Orange County Case</b>	<a href="http://www.gsm.uci.edu/~jorion/oc/case.html">http://www.gsm.uci.edu/~jorion/oc/case.html</a>	The site presents a real case study to explain how a municipality can lose \$1.6 billion in financial markets. The case also introduces the concept of "Value at Risk" (VaR), which is a simple method to express the risk of a portfolio.	A step by step analysis through the disastrous failure of the Orange County, CA in December, 1994 due to the inappropriate use of derivatives in a municipal investment fund.
<b>Zvi Wiener's Research Homepage</b>	<a href="http://pluto.msc.huji.ac.il/~mswienner/zvi.html">http://pluto.msc.huji.ac.il/~mswienner/zvi.html</a>	Zvi Werner is head of the finance department at the School of Business, Hebrew University of Jerusalem. The site focuses on his areas of expertise including VaR, financial engineering, structured products, and bargaining theory.	The research webpage at this site contains some interesting papers on derivative valuation problems (freezeout options, the term structure of interest rates using the Hull-White trinomial tree approach, etc). All these are downloadable in .pdf format.
<b>Paul Wilmott's Homepage</b>	<a href="http://www.wilmott.com/">http://www.wilmott.com/</a>	In the past several years, Paul Wilmott has emerged to become a one man "franchise" in the field of quantitative finance. This web site mirrors the inimitable humor and no nonsense approach one finds in his books (e.g. Quantitative Finance).	Registration is free, and allows users to access a host of features including Technical Articles (detailed but understandable without a PhD in Applied Math), a Jobs Board, Quizzes, a very well visited Forum, a Bookshop, and Columns.
<b>Campbell Harvey's Homepage</b>	<a href="http://www.duke.edu/~charvey/fintb.htm">http://www.duke.edu/~charvey/fintb.htm</a>	Campbell R. Harvey is the J. Paul Sticht Professor of International Business at the Fuqua School of Business, Duke University. He is also a Research Associate of the National Bureau of Economic Research in Cambridge, Massachusetts. His site includes 7,200 Word Hypertextual Finance Glossary, a Finance Toolbox, a Java Financial Tools box, and sections on Country Risk Assessment, Global Asset Allocation, Supplementary Research Results, International Cost of Capital, and Performance Evaluation.	Some sections of this site provide web-based calculators for derivatives and financial assets. In addition, there's a neat page on designing your own web page, and another where you can observe the efficient frontier based on historical data for over 25 international financial markets. In addition, click on his "Links" hyperlink for an impressive listing of sites that are concerned in some way with risk, finance, and investments.
<b>Office Of The Comptroller Of The Currency</b>	<a href="http://www.occ.treas.gov">http://www.occ.treas.gov</a>	The Office of the Comptroller of the Currency (OCC) charters, regulates, and supervises all national banks. It also supervises the federal branches and agencies of foreign banks.	The best way to explore this site is to use its search engine at the home page. Entering Financial Engineering yielded 12 articles, paper and press releases. Entering the word "Derivatives" yielded the OCC's Quarterly Bank Derivatives Report, a rich source of information regarding the quarterly reported activities of banks in this sector.
<b>Hedge World</b>	<a href="http://www.hedgeworld.com">http://www.hedgeworld.com</a>	Hedge World bills itself as the first source for information on hedge fund information and investments. It serves investors, intermediaries, managers and service providers to the hedge fund industry.	The site provides access to the TASS+ database, the hedge fund industry's comprehensive hedge fund performance database, where information on more than 2,200 funds is updated daily. Data can be obtained on a pay-per-view or annual subscription basis.
<b>Hedge Fund</b>	<a href="http://www.hedgefund.net">http://www.hedgefund.net</a>	HedgeFund.net is a free listing of hedge fund information and performance that currently encompasses 31 different strategies. Its growing membership includes over 2,000 of the world's most talented hedge fund managers and more than 15,000 investors.	The site provides detailed fund screeners based on 31 investment strategies, and ranks funds based on approximately a dozen separate criteria.
<b>Prentice Hall Finance Center</b>	<a href="http://www.prenhall.com/financecenter/">http://www.prenhall.com/financecenter/</a>	Website of Prentice Hall, a leading publisher of financial books and texts.	In addition to highlighting finance texts, also has an interesting "Tech Tools" page. The site is especially helpful if you're a finance teacher or instructor looking for tools and teaching materials.



WEBSITE NAME	URL	DESCRIPTION	FEATURES
<b>Financial Pipeline</b>	<a href="http://www.finpipe.com">http://www.finpipe.com</a>	The Financial Pipeline is an internet site dedicated to financial education and understanding. From the website: "Most of the standard assumptions underlying investment forecasting and portfolio management are wrong. They fail to take into account the emotional and psychological biases of those practicing the investment arts. Fear, greed, risk seeking and aversion, peer group pressures all play a role in the underperformance of many investment managers relative to their objectives."	Contains pages on Bonds, Derivatives, Fund Raising, Consumer Finance, Mutual Funds, Real Estate, Technology, and Retirement.
<b>FASB 133</b>	<a href="http://www.fas133.com">http://www.fas133.com</a>	FAS133.com is an unrivaled web resource devoted to helping treasurers, risk managers, accountants and their advisers implement and maintain on-going compliance with the FASB's new derivatives and hedging standard.	Include Alerts and News, Executive Briefs, Articles and Case Studies, Reports and Guides, (etc.) all concerning FAS 133.
<b>Rutter Associates</b>	<a href="http://www.rutterassociates.com">http://www.rutterassociates.com</a>	The website of Rutter Associates, an advisory and educational firm specializing in risk management.	The webpages on "Publications and References" contain an interesting set of papers (downloadable) on Credit Portfolio Management, Market Risk Management, and Firm-Wide Risk Management.
<b>Free Credit Derivatives</b>	<a href="http://www.freecreditderivatives.com">http://www.freecreditderivatives.com</a>	Savvysoft, a leading provider of OTC derivatives analytics is the owner of this website which provides market implied default rates for a variety of industries and credit qualities.	Free information is provided for a set of four industries (Financial, Utilities, Industry, and Bank) across a range of credit quality ratings. Site also has an interesting webpage called "White Papers" covering a range of topics involving financial derivatives authored by Rich Tanenbaum.
<b>Chicago Mercantile Exchange (CME)</b>	<a href="http://www.cme.com">http://www.cme.com</a>	The website of the Chicago Mercantile Exchange. The site provides invaluable information on the full variety of financial instruments traded on the Chicago "Merc".	The "Getting Started" webpage is a great start for novices. The "Quotes" section provides daily pricing, and the "Products" section describes all the Merc's products, including Chemical, Commodities, Currency, Interest Rate, Index and Weather derivative.
<b>Chicago Board of Trade (CBOT)</b>	<a href="http://www.cbot.com">http://www.cbot.com</a>	The website of the Chicago Board of Trade, the site provides invaluable information on the full range of products traded on the CBOT.	The "Quotes and Data" section provide current and historical pricing data on the full range of CBOT's products. Another interesting area is the "Knowledge Center" where the following topics are covered: Glossary of Terms, Getting Started, Educational Programs, For Academics, Mini-Contracts, Rules and Regulations, Publications, etc.
<b>Chicago Board Options Exchange (CBOE)</b>	<a href="http://www.cboe.com">http://www.cboe.com</a>	From the website "From the world's leading option exchange comes the Premier Portal for Options Information"	The Trading Center includes an Options Calculator and Equity Research Center. The Institutional Section includes White Papers and a link to OneChicago, LLC ( <a href="http://www.onechicago.com">www.onechicago.com</a> ), the new joint venture exchange between the CME and CBOT for single stock futures.
<b>Capital Market Risk Advisors Website</b>	<a href="http://www.cmra.com">http://www.cmra.com</a>	Capital Market Risk Advisors (CMRA) is a leading financial advisory firm specializing in risk management, due diligence, portfolio construction and risk attribution.	There are a wide range of risk management articles, presentations and speeches available for free. Topics include value-at-risk, model risk, operational risk, risk management for institutional investors, stress-testing, corporate risk management, general risk management, credit risk management, etc.
<b>In The Money</b>	<a href="http://www.in-the-money.com">http://www.in-the-money.com</a>	The website of Mark Rubinstein, Paul Stephens Professor of Applied Investment Analysis at the Haas School of Business at the University of California at Berkeley.	Demo and trial versions of Rubenstein's Option Calculator can be downloaded (it can be purchased too) which handles valuations on a broad range of standard and exotic option contracts. Site also has numerous links to the Haas School, and an interesting Riddles and Paradoxes section.



# FINANCIAL ENGINEERING ON THE INTERNET

A SURVEY OF FINANCIAL ENGINEERING ON THE INTERNET



WEBSITE NAME	URL	DESCRIPTION	FEATURES
<b>eRisks</b>	<a href="http://www.erisks.com">http://www.erisks.com</a>	ERisk is a provider of strategic solutions for risk and capital management. Their areas of expertise include analytics, consulting and risk transfer.	The site features a valuable References page (articles like "The Risk Jigsaw", "Why Risk Models Can't Be Trusted, and "The Humbling of Credit Lyonnais", plus a Risk Encyclopedia). In addition, there is a Credit Risk archive of articles and papers, plus a listing of papers and articles on Risk Transfer and Management.
<b>Axone-Tradition Financial Terminology Database</b>	<a href="http://tradition.axone.ch/default_index.cfm">http://tradition.axone.ch/default_index.cfm</a>	This glossary with over 5,000 financial terms can be used free of charge for non-commercial use on a query-by-query basis. The service is a co-operative effort of Axone Services and Developpement SA and Viel Tradition Group.	The Glossary can be accessed in four languages: English, French, Italian, and German.
<b>Asia Pacific Financial Association</b>	<a href="http://www.buseco.monash.edu.au/SIG/APFA/">http://www.buseco.monash.edu.au/SIG/APFA/</a>	The Asia Pacific Finance Association (APFA) was created in 1993 to promote academic financial research (especially relating to the Asia Pacific region) to disseminate its findings and to facilitate the exchange of information, ideas and staff among educators and between business executives and academics through conferences and publications.	Kind of a "meta-site" in finance for the Asia Pacific region. A great place to start if you're looking for Conferences, Journals, Books, Research Links, Academic Departments, and Other Associations specializing in Asia Pacific finance.
<b>Financial Management, Analyst, and Planning Designations</b>	<a href="http://www.financial-designations.8m.com">http://www.financial-designations.8m.com</a>	From the website: "Welcome to the famous list of all of those designations for financial service professionals."	Again, from the website: "It is confusing when you meet a broker, investment advisor, financial consultant, financial advisor, insurance (financial planning associate) or whatever title they have, and then, you see all the letters after their name. Well, we can help you understand what those letters mean and if they are proof of any intelligence."
<b>Center for Financial Engineering/National University of Singapore (NUS)</b>	<a href="http://cfe.nus.edu.sg/">http://cfe.nus.edu.sg/</a>	The web site for the Centre for Financial Engineering, a multidisciplinary centre at NUS spearheading research and development, and executive education in the area of financial engineering.	A fairly lengthy list of research papers is included (albeit only abstracts, not full content), a page dedicated to AFES (Association of Financial Engineering, Singapore), and a Links page that details a number of other programs in Financial Engineering worldwide.
<b>Global Investor</b>	<a href="http://www.finance-netwatch.com/">http://www.finance-netwatch.com/</a>	Global-Investor.com offers an integrated suite of resources to financiers.	Contains informative sections on Conferences and Courses, Markets, a Financial Glossary, Freebies, and a Bookshop; all these focus on finance.
<b>Futures and Options Bibliography</b>	<a href="http://www.fiu.edu/~daiglerr/bib.htm">http://www.fiu.edu/~daiglerr/bib.htm</a>	The Futures and Options Bibliographies in The Journal of Futures Markets lists articles with new information in futures, options, and certain other derivatives. Each bibliography covers a separate topic area, such as interest rate futures, commodity futures, regulation, stock index futures, cash options, options on futures, etc.	Within each topic area the articles are segregated by subtopics (four to 20, depending on the topic). Most of these articles are from academic journals, although books and important magazine articles are also listed.
<b>Mark's Financial Pages</b>	<a href="http://www.cix.co.uk/~msukhija/">http://www.cix.co.uk/~msukhija/</a>	Self described as the definitive guide to finance and financial related resources on the web.	A well organized "meta site" that contains links (by region of the world) organized in the following categories: Accounting, Banking, Brokerage, Conferences, Glossaries, Bonds, Calculators, Commodities, Software, Taxation and Venture Capital among others.
<b>Financial Data Finder</b>	<a href="http://fisher.osu.edu/fin/osudata.htm">http://fisher.osu.edu/fin/osudata.htm</a>	A site designed and maintained by the Department of Finance, Fisher College of Business at The Ohio State University. Provides a web-based search engine dedicated to topics related to finance.	The search engine includes the following categories: Accounting, Banks, Equities, Fixed Income, Mergers, Risk Management, Derivatives, Personal Finance, International Finance, Consulting, Employment, Real Estate, Markets, Exchanges, Commodities, Venture Capital, Investments and Financial Institutions. In each of these categories, you can search for the following: Historical Data, Software, Links, Quotes, News, Reports, and Research.



WEBSITE NAME	URL	DESCRIPTION	FEATURES
Dakota State University Listing of Financial Resources and Links	<a href="http://courses.dsu.edu/finance/www/resource.htm">http://courses.dsu.edu/finance/www/resource.htm</a>	The website of the Dakota State University of Business and Finance.	Lists over 50 categories of topics, each with links to other websites including Convertible Securities, Credit Risk, Risk Management, Technical Analysis, and the Psychology of Markets.
Vinod Kathari's Securitization Homepage	<a href="http://www.vinodkothari.com/">http://www.vinodkothari.com/</a>	Vinod Kothari, based in Calcutta, India is an author, trainer and expert on securitisation. This is his personal website dedicated to the topic of financial securitization and claims to be the web's most comprehensive securitization resource.	Sections of the site are dedicated to the following topics (all related to financial securitization): News, Conferences, a Newsletter (free subscription), Laws, Case Studies, A Glossary of Terms, an Encyclopedia of Securitization, a Primer, Training Courses, Articles and Web Links.
Oxford Financial Research Centre (OFRC)	<a href="http://www.finance.ox.ac.uk/index.shtml">http://www.finance.ox.ac.uk/index.shtml</a>	Oxford University has an exceptionally extensive research base in finance. It extends across the Department of Economics, the Math Faculty, the Physics Department and the Said Business School. The Oxford Financial Research Centre brings together all of these interests in finance in seminars, workshops, conferences, working papers and research projects.	The Papers section of the website features a rich variety of downloadable papers in three areas of interest: Mathematical Finance, Financial Economics, and EconoPhysics. The site also contains links to the Nomura Centre for Quantitative Finance, the Oxford Centre for Computational Finance (OCCF) and the Mathematical Finance Group.
Finance Wise Website	<a href="http://www.financewise.com/">http://www.financewise.com/</a>	FinanceWise is the first search engine to focus specifically on financial-only content. FinanceWise is a subsidiary of the Risk Waters Group.	FinanceWise doesn't aim to index the Internet in its entirety, only sites which possess content of interest to the financial world. Every topic, from risk management to syndicated finance and equities is indexed in depth, with the contents of each site evaluated by the editorial staff before sites are allowed into FinanceWise's search index.
The Finance Professor Website	<a href="http://financeprofessor.com/">http://financeprofessor.com/</a>	Great for students, professionals, professors, or just people who want to learn about Finance. Finance made fun!	Has a great free weekly e-mail newsletter that touches on the current events and news relating to finance.
The Programmer's Oasis	<a href="http://www.netti.fi/~simos/oasis/">http://www.netti.fi/~simos/oasis/</a>	A website dedicated to programmers and code writers. While not restricted to financial engineering topics, a valuable resource for programmers in this field.	Contains a glossary of programming languages, and sections on Algorithms and Data Structure, Software Engineering, Windows Programming, and Links to other programming sites.
Laurent Gauthier's Real Options Website	<a href="http://www.geocities.com/wall-street/2143/">http://www.geocities.com/wall-street/2143/</a>	Applications of Exotic Options in Real Option Theory. This place is dedicated to mathematical finance, and more precisely the use of exotic options to model rational investment decisions.	The Research Page hyperlink contains a wealth of information on approaches to apply the mathematical methods one usually finds in exotic options to the modeling of investment decisions, in the framework of real option theory.
Real Options in Petroleum Website	<a href="http://www.puc-rio.br/marco.ind/main.html">http://www.puc-rio.br/marco.ind/main.html</a>	This site is dedicated to real options approach to investments in general and especially in petroleum exploration and production (E&P).	An amazing site with numerous instructional and tutorial pages on the use of mathematical finance and exotic options pricing theory for evaluating difficult investment (real asset) investment decisions.
RiskGrades Website	<a href="http://www.riskgrades.com/retail/index.cgi">http://www.riskgrades.com/retail/index.cgi</a>	RiskGrades is the new retail version of RiskMetrics from the former JP Morgan unit.	Allows calculation of a RiskGrade <sup>(tm)</sup> measure that allows for a comparison of investment risk across all asset classes, regions, and currencies. The site also has a comprehensive technical description of the RiskGrade methodology (downloadable as a .pdf file).
Robert's Online Applications	<a href="http://www.intrepid.com/~robertl/option-pricer.html">http://www.intrepid.com/~robertl/option-pricer.html</a>	Dr. Robert Lum's website containing mainly Java based on-line applications relating to finance (with one or two exceptions).	Among the on-line applications are Derivatives, Loans, Options, Tax and Commissions Pricers. There is also an Options Strategy Visualizer, and an Historical Stock Volatilities Application.
Society for Financial Studies	<a href="http://www.sfs.org/">http://www.sfs.org/</a>	Contains nearly all of the papers and articles published in the Review of Financial Studies (RFS) journal going back to 1988.	Papers and articles are downloadable for free in .pdf format.



WEBSITE NAME	URL	DESCRIPTION	FEATURES
<b>Tommy Flynn's Microsoft Excel VBA Examples</b>	<a href="http://www.mindspring.com/~tflynn/excelvba.html">http://www.mindspring.com/~tflynn/excelvba.html</a>	From the website: "The intent of this page is to show some useful Excel VBA (Visual Basic for Applications) examples that I have picked up in the process of creating my own applications."	While not dedicated to financial engineering, this site contains many useful VBA utilities and common subroutines. It also has a neat "Links" page to other websites that provide useful Excel VBA information and downloads.
<b>FinMath @ Chicago</b>	<a href="http://finmath.com/">http://finmath.com/</a>	Very comprehensive website with a great listing of books, links, events and journals all dealing with mathematical finance.	Check out the listing of book sales to gauge which of the many books on display (and for sale) are most popular.
<b>MathFinance</b>	<a href="http://www.mathfinance.de/">http://www.mathfinance.de/</a>	MathFinance is the webpage of MathFinance Consulting Its goal is to enhance the understanding of mathematical finance. It addresses students of mathematics, physics, computer science, statistics and economics, researchers in the area of mathematical finance, traders and risk managers.	Nice features include a formula catalog, option calculator, training courses, job exchange, academic links, and events and societies. MathFinance also has a regular newsletter.
<b>Econometrics Links</b>	<a href="http://www.feweb.vu.nl/econometriclinks/">http://www.feweb.vu.nl/econometriclinks/</a>	A very comprehensive links page sponsored by the Journal of Econometrics On-Line.	Includes pages on software, code and data, books, people and departments, conferences and summer schools and journals to name a few.
<b>Numa Financial Systems</b>	<a href="http://www.numa.com/">http://www.numa.com/</a>	Self described as "The Internet's home page for financial derivatives", this site is a very valuable resource for professionals and students interested in the topic of derivatives.	Directory of Financial Software Companies, Derivatives Links Index, Calculators (for options, compound options, warrants, and convertible bonds some of which are downloadable), a directory of derivatives software companies, an Employment Index, plus the usual features (Conferences, Financial Glossary, etc.). It also features the Numa Derivatives Discussion Forum
<b>The QuantLib Project</b>	<a href="http://quantlib.org/">http://quantlib.org/</a>	The QuantLib project is aimed at providing a comprehensive software framework for quantitative finance. QuantLib is a free/open source library for modeling, trading, and risk management in real-life.	QuantLib offers tools that are useful both for practical implementation and for advanced modeling, with features such as market conventions, yield curve bootstrapping, solvers, PDEs, Monte Carlo, exotic options, VaR, and so on. More complex tools such as interest rate models are next on the to-do list.
<b>Financial Minds</b>	<a href="http://www.financialminds.com">http://www.financialminds.com</a>	Financial Minds is a website of books for the financially minded. It is owned and operated by Pearson Education.	Subject areas include General Finance, Corporate Finance, Investments, Markets, Risk-Management and Financial Services. A page to sign up for several free newsletters (Financial Minds, MathFinance, etc.) is also available.
<b>Stuart School of Business Financial Links</b>	<a href="http://www.stuart.iit.edu/fin/finlinks.htm">http://www.stuart.iit.edu/fin/finlinks.htm</a>	Another useful "meta-site" of information and links to a variety of financially oriented websites.	Has a set of interesting links to sites that provide Stock Market Games/Simulations. Also contains a well documented set of links to nearly every major (and some minor) equities, commodities and derivatives markets.
<b>iVolatility</b>	<a href="http://www.ivolatility.com/home.j">http://www.ivolatility.com/home.j</a>	A website dedicated to options and stock traders, analysts, and anyone wanting to use options as part of their investment strategy.	The basic site is FREE, although registration is required. This will give access to basic features like options analysis for a stock, basic ranker, commentary, forum. Other advanced features are available by paid subscription. These include Data Downloads, Advanced Options Analysis Worksheets, Access to Data on Foreign Equities and Options (Canadian, European).
<b>Goldman Sachs Quantitative Research</b>	<a href="http://www.gs.com/qs/">http://www.gs.com/qs/</a>	Features a series of articles and research papers on the topic of quantitative finance, all authored or co-authored by Emanuel Derman.	All the papers and articles are downloadable as Adobe Acrobat files (.pdf).
<b>Did we miss your site, or a site you think belongs here? Let us know at <a href="mailto:editor@feneews.com">editor@feneews.com</a>!</b>			