

**Summer 2021**

**FINA 7361**

## **Financial Risk Management Course Syllabus**

**Prof. Kenneth Hogan**

What drives a market? People. They move and influence things in profound ways. Regardless of the technology behind them, markets are the financial reflection of emotions - - fear, greed and uncertainty chief among them. In this course, you will learn how to navigate the financial markets by recognizing, quantifying and mitigating the financial risks facing both buy- and sell-side market practitioners with an emphasis on Foreign Exchange. Upon the culmination of this course, you will be able to make sound decisions regarding the financial risks faced by corporate practitioners.

### **Major Topics Covered:**

- 1. A History Lesson on the Financial Markets**
  - a. Beginning of money and credit
  - b. Formation of the Capital Markets
  - c. Bretton Woods
  - d. The Evolution of the Foreign Exchange Market
- 2. Price Discovery**
  - a. What is it?
    - i. Bloomberg, Reuters, WSJ
  - b. Contributed Rates
  - c. FX in the 1970s
  - d. Your Price vs. Bloomberg
    - i. Relationships and Credit
  - e. Understanding the true meaning of the Bid/Ask Spread
    - i. Euro-Denominated vs. USD-Denominated
- 3. Financial Risk Modeling and Forecasting**
  - a. Black-Scholes
  - b. VaR and CFaR
    - i. Using PV Options as Predictive VaR Vehicles
    - ii. Binomial Option Pricing Methodology
  - c. Capital Budgeting Rates
  - d. Bloomberg: FXMX & FXFC
- 4. Analytics**
  - a. Fibonacci
  - b. 20-, 50-, 200-DMA
  - c. Risk Reversals
- 5. Market Drivers**

- a. FOMC
  - b. Economic Data
  - c. News
- 6. How Crisis Impacts Markets**
- a. Lehman Brothers
  - b. How a Banking Crisis Triggers a USD Crisis
  - c. LIBOR/OIS Spreads
  - d. Safe-havens and Associated flows
  - e. Sovereign Credit Default Swaps
- 7. Basic Hedging Products**
- a. Spots
  - b. Interest Rate Differentials
  - c. Forwards and NDFs
  - d. Swaps
  - e. Options and Basic Greeks
  - f. Structured Products
- 8. Hedge Ratios**
- a. Proper  $R^2$
  - b. Establishing a Corporate Hedging Policy
  - c. Hedge Accounting
  - d. Hedge documentation
- 9. Misuse of Financial Products**
- a. Comercial Mexicana
  - b. Cemex
  - c. Gruma
  - d. JBS Brasil
  - e. Off-Balance Sheet Transactions
- 10. Synthesis: Putting it All Together**
- a. Quick analysis of any financial risk product
  - b. Pricing financial products (sell-side)
  - c. Generating your own custom forecasting model
  - d. Using Bloomberg to quantify risk
- 11. Please Note: This is a critical thinking class! Intellectual curiosity and demonstrating a solid grasp of the basic principles of Financial Risk Management are paramount. As you will see, there is no certainty in Financial Markets, so you must be comfortable with the fact that there are no “right answers,” but rather choosing the best strategies with imperfect information. Most of all, do not be afraid to ask questions. And continue to ask until you are absolutely sure that you understand.**

## **Grade Determination & Meaning**

- **Global Financial Market Updates: 10 points**
- **Classroom Discussion and Participation: 20 points**
- **Major Project: 30 points**
- **Final Exam: 40 points**
- **Maximum Possible: 100 points**

<b>Grade</b>	<b>Point Range</b>	<b>Description</b>
A	95 - 100	Excellent, superior achievement
A-	90 - 94	
B+	85 - 89	
B	80 - 84	Good, exceeding all requirements
B-	75 - 79	
C+	70 - 74	
C	65 - 69	Average, satisfactorily meeting all requirements
C-	60 - 64	
D+	55 - 59	
D	50 - 54	Poor, Passing
D-	45 - 49	
F	< 45	Failing or withdrawal while doing failing work
I		Incomplete
NR		Not reported
S		Satisfactory
U		Unsatisfactory
W		Withdrawal

## **Deliverables:**

**Send all deliverables electronically by 10pm to [ken.hogan@cadencebank.com](mailto:ken.hogan@cadencebank.com).**

- **Market Updates**
  - **7/14/21**
  - **7/21/21**
- **Major Project**

- 8/2/21
- **Final Exam**
  - **Tuesday, 8/9/21**

## **Contact Information and Office Hours**

Personal cell: 713.252.8266

For urgent matters, feel free to call or text between the hours of 6:30am – 10:00pm each day

e-mail addresses:

Personal: [hogankenneth@gmail.com](mailto:hogankenneth@gmail.com)

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I will respond to you as quickly as possible. During market hours, however, I may be a bit delayed as I run a trading desk.

I am happy to meet with you to help in any way that I can. Please call me at 713-252-8266 and we can arrange a time to meet via Zoom.

## **Optional, but highly suggested reading:**

*Foreign Exchange Options and Risk Management: Market Dynamics, Models and Human Behaviors* by Demetri Papacostas and Francesco Tonin

*The Ascent of Money: A Financial History of the World*, by Niall Ferguson

*Reminiscences of a Stock Operator*, by Edwin Lefevre

## **Key Terminology:**

**AI** Artificial intelligence

**AOCI** Accumulated other comprehensive income

**ATM** At-the-money

**ATM** Automated teller machine

**ATMF** At-the-money forward

**AUM** Assets under management

<b>BFIX</b>	Bloomberg FX fixing rate
<b>BIS</b>	Bank for International Settlements
<b>Bp</b>	Basis point
<b>CFaR</b>	Cashflow-at-risk
<b>CFETS</b>	China Foreign Exchange Trade System
<b>CME</b>	Chicago Mercantile Exchange
<b>CV</b>	Cumulative value
<b>CVaR</b>	Conditional VaR
<b>DTCC</b>	Depository Trust & Clearing Corporation
<b>EaR</b>	Earnings-at-risk
<b>EBS</b>	Electronic Broking Services
<b>ECB</b>	European Central Bank
<b>ERM</b>	Exchange Rate Mechanism
<b>ETF</b>	Exchange-traded fund
<b>Euribor</b>	Euro Interbank Offered Rate
<b>FDI</b>	Foreign direct investment
<b>FICC</b>	Fixed income, currency and commodity
<b>FSB</b>	Financial Stability Board
<b>FX</b>	Foreign exchange
<b>G10</b>	Group of 10
<b>GAAP</b>	Generally accepted accounting principles
<b>GDP</b>	Gross domestic product
<b>GFXC</b>	Global Foreign Exchange Committee
<b>IOSCO</b>	International Organization of Securities Commissions
<b>IPO</b>	Initial public offering
<b>ITM</b>	In-the-money
<b>iVaR</b>	Incremental value-at-risk
<b>KIKO</b>	Knock-in and knock-out
<b>KYC</b>	Know your customer

<b>Libor</b>	London Interbank Offered Rate
<b>LTCM</b>	Long-Term Capital Management
<b>LYON</b>	Liquid Yield Option Note
<b>M&amp;A</b>	Mergers and acquisitions
<b>MARS</b>	Multi-Asset Risk System
<b>MiFID</b>	Markets in Financial Instruments Directive
<b>MTM</b>	Mark-to-market
<b>MVaR</b>	Marginal VaR
<b>NAV</b>	Net asset value
<b>NDF</b>	Non-deliverable forward
<b>NEER</b>	Nominal effective exchange rate
<b>OIS</b>	Overnight indexed swap
<b>OTC</b>	Over-the-counter
<b>OTM</b>	Out-of-the-money
<b>OWS</b>	Occupy Wall Street
<b>PIP</b>	Percent Interest Point
<b>P&amp;L</b>	Profit and loss
<b>PBOC</b>	People's Bank of China
<b>PPP</b>	Purchasing power parity
<b>QE</b>	Quantitative easing
<b>REER</b>	Real effective exchange rate
<b>SBC</b>	Swiss Bank Corporation
<b>SEC</b>	Securities and Exchange Commission
<b>SNB</b>	Swiss National Bank
<b>STP</b>	Straight-through processing
<b>T-bill</b>	Treasury bill
<b>TARN</b>	Targeted accrual redemption note
<b>TCA</b>	Transaction cost analysis
<b>TWAP</b>	Time-weighted average price

**VaR** Value-at-risk