

AMS 691 Special Topics in Quantitative Finance

This course consists of a class on Mondays and a seminar on Wednesdays that will feature a speaker from academia or industry. The Monday classes will be devoted to the current analysis of the financial markets and will train students to utilize the quantitative and qualitative tools that the professional community uses to forecast and interpret the markets. Students will learn how news, economic events, and technical and fundamental factors impact the financial markets. Wednesday seminars will feature a guest who will speak about his or her current research in quantitative finance. Attendance is required for all classes and absences must be excused by the instructor.

The course will utilize a number of outside sources, most free of charge:

Economic Data: www.newyorkfed.org, www.briefing.com, www.wsj.com, and Barron's all provide comprehensive calendars of upcoming economic releases. Briefing.com is well organized and provides consensus estimates for upcoming releases and historical releases.

Economic Indicators: The Conference Board (www.conference-board.org) publishes global economic indexes including the Conference Board Leading Economic Index (Coincident and Lagging Indexes as well). The data is released once a month and utilizes components that are released separately (see Economic Data).

Earnings, Splits, IPO's: Briefing.com provides a good and comprehensive earnings calendar as well as consensus estimates and prior comparisons.

Liquidity: The Investment Company Institute (www.ici.org) provides weekly money flows for different types of funds (long-term funds, mutual funds, money market funds, ETF's). Since March 11, 2009 \$327 billion has flowed out of money market mutual funds (ICI) leaving \$3.58 trillion, down from \$3.92 trillion in January. During the October 2007 peak, money market mutual funds held \$2.91 trillion. The stock market's capitalization is about \$10.35 trillion (estimate from ICI based on stock mutual funds, ETFs and UITs), or about 34%. During the 2007 peak this number was 19% and in late 2002, before the bull market began, it was 29%. Cash earns almost nothing. These are the factors that investors look at when they make claims of a liquidity driven bull market.

Equities: We will generally focus on the performance of major global equity indices. The S&P 500, VIX Index, Dow Jones Industrial Average, NASDAQ, Russell 2000, MSCI Indices, found at the following sites with current and historical data free of charge:
www.msccibarra.com/products/indices/stdindex/performance.html
www2.standardandpoors.com
www.russell.com
www.djaverages.com

Historical data may also be obtained on Yahoo!Finance using the tickers ^SPX, ^VIX, ^DJI, ^IXIC, ^RUT

Equity futures such as the S&P 500 futures (SPU09.CME on Yahoo!) trade prior to the U.S. market open and provide information about how markets may open. Futures are affected by many factors including news and earnings released after the close, overnight performance of Asian and European markets, and premarket news (many economic indicators are released at 8:30AM).

Yield Curve: Daily yields may be obtained on www.ustreas.gov. The U.S. treasury market one of the largest and most important markets in the world. Demand for U.S. Treasury securities is closely watched through the government auction of notes and bonds. Foreign investors (governments) make up a large portion of the demand (about half of the \$6.7 trillion treasuries market) and overseas consumption is important as the U.S. raises its estimates for total deficit for the next decade to \$7.1 trillion from \$2.7 trillion (OMB). The fear is that foreign governments pull back their purchases (or sell their current holdings) just as U.S. borrowing needs increase. If this happens, government funding costs will rise (less demand or selling drives down prices and pushes yields up). The yields on treasuries of different yields are tied to borrowing costs like mortgage rates and will push up borrowing costs for businesses and consumers in the U.S., impeding the recovery. Treasury auction information is available through www.treasurydirect.gov. The ten year treasury note yield is an important indicator of funding costs in the U.S. and can be tracked on Yahoo! Using the ticket ^TNX.

Commodities: The best known commodities index is the Goldman Sachs Commodities Index (GSCI), but this index is dominated by crude oil. The October crude oil contract ticker is CLV09.NYM (Yahoo!).

Review of Financial Market Performance

S&P 500, VIX, DJIA, Russell 2000, MSCI EAFE, U.S. treasury yield curve, commodities (NYMEX light sweet crude oil), NYMEX gold

News this week (in addition to the calendar):

The calendar is light this week except for the employment report on Friday, but this is a big item that is already beginning to move markets overseas and in the U.S. See Shanghai.

09/01/09 (Tues): “Cash for Clunkers” program boosted new vehicle sales in August over July (4.2 million trucks and cars sold). Economists are projecting seasonally adjusted rate of 12.9 million units for August.

The consensus thinks construction spending fell 0.2% in July, but Forward Capital is looking for a 0.2% rise, citing a small rise in residential construction and a larger rise in public construction spending.

National Association of Home Builders releases its pending-homes sales index for July

09/03/09 (Thurs): Freddie Mac reports on weekly mortgage rates. The retail industry reports same-store sales for August. Results are expected to improve over July.