FMB 605
(Course Introduction)

Consequences of the GFC

- PIMCO (Pacific Investment Management Company) introduced “New Normal“ in its Annual Secular Forum in 2009: “DDR”
  1. Balance Sheet **deleveraging**
  2. Financial **de-globalization**
  3. Government **reregulation**
- In real economy, the crisis hinders the 3 main ingredients of economic growth
  1. By reducing the supply of credit and compressing sales, crisis depresses investment and thus productivity
  2. The crisis leaves prolonged high unemployment: some long-term unemployed workers lose their skills, and have a difficulty to find job again
  3. Crisis impairs innovation and the efficiency by interrupting the supply of capital to high-growth firms by reducing R&D

Great Moderation Revisited?

- If you look at what is going on financial markets in US recently, you may not realize there had ever been a financial crisis
- Instead you may pretend to think that the Great Moderation has been coming back again
  - Credit spreads are low
  - House prices are rising and takeovers are booming
  - 2 main stock indices in US, the Dow and the S&P 500, remain record high
  - Volatility is also extremely low
  - Interest rates have been close zero in advanced economies for 5 years now
- After sharp falls in prices of broad asset classes all over the world in response to an indication of tapering of QE in 2013, the markets have been remarkably stabilized even with actual implementation of tapering in US

Changing roles of central banks

- After the financial crisis, the role of the central banks has changed substantially
  - **Lender of last resort** ⇒ **Lender of first, last and only resort**
  - New role: **Investor of last resort**
  - Create artificial markets for unwanted assets: *Crisis Economics* by Roubini and Mihm
  - The size of the Fed's B/S: $0.9 trillion at the end of 2007 ⇒ $4.4 trillion in July of 2014
  - The quality of assets held by CBs has deteriorated sharply
  - Agustin Carstens, Governor of Bank of Mexico, " If you look at the B/S of CBs in some advanced countries, it looks like the B/S of the largest hedge funds in the world"
  - There is a blurred line between domain of monetary policy and that of fiscal policy: CBs are supporting unviable financial institutions by providing indirect subsidies
  - Given fiscal weakness of many advanced economies, CBs' monetary policy has been a major policy tool to boost economy

Increasing influence of public sector on financial system (1)

- An interesting symbiotic relationship between governments and banks in the euro-zone
  - Government bailed out banks
  - Banks financed government budget deficits
  - Downgrading credit ratings of sovereign debts causes deterioration of asset value held by banks, thereby liquidity problems of banks
- Financial markets in most advanced economies are "nationalized" in the following ways:
  - CBs are the biggest players in government bond markets
  - Market participants in equity market only look at what CBs are doing: the market becomes bullish only when CBs announce new measure such as QE or operation twist to increase money supply
  - Banking systems are reliant on implicit and explicit government support
  - Wholesale funding is replaced by CB lending such as ECB's L-T Refinancing Operation (LTRO)

Increasing influence of public sector on financial system (2)

- Bond market has never been freed of CB influence
  - CBs are putting downward pressure on bond yields
  - Yields reflect CB's policy stance more than other fundamental factors
  - As a result, it is extremely difficult to figure out what message the markets are sending
- Banks have also been big players of government bond market because of the carry trade
  - Borrow S-T money from CB and purchase government bonds

Increasing hostility towards FIs (1)

- Many people including politicians become increasingly hostile to FIs

"***Financial markets, and particularly the big players within them, need fear. Without it, they go crazy"*** **Martin Wolf**

"Bankers believe in capitalism when it comes to pocketing the profits and socialism when it comes to paying for the losses"

"The bad news is that bankers had lost a lot money recently. But the good news is that it was other people's"

- There are some legitimate reasons for this and there was something wrong in financial industry
- Although the "Occupy Wall Street" and "Occupy London" movements and their variants have passed, their legacy of anger and criticism lives on
  - There is anger at bankers, brokers, money managers, mortgage brokers, derivatives producers, and so on

Increasing hostility towards FIs (2)

- The potential public resentment and skepticism at advanced financial solutions to the world's problem remains, and will likely produce new outbreaks of visible discontent

- At the same time, many banks have been set to pay their settlement over their past wrongdoing with regulators
  - The deals will resolve government investigations on banks' wrongdoing during the GFC
- This reminds us what J. P. Morgan Junior said

  "Since we have not more power of knowing the future than any other men, we have made many mistakes, but our mistakes have been errors of judgment not of principle"

  "The banker must at all times conduct himself so as to justify the confidence of his clients in him"

Bank settlement with US authorities

Bank	Settlement, $B	Date	Cause
Bank of America	16.65	Aug. 2014	MBS
JPMorgan Chase	13.0	Oct. 2013	MBS
Bank of America	11.8	Feb. 2012	Foreclosure
Bank of America	11.6	Jan. 2013	Mortgage repurchase
Bank of America	9.3	Mar. 2014	MBS
BNP Paribas	8.9	May 2014	Violating sanctions
Wells Fargo	5.3	Feb. 2012	Foreclosure
JPMorgan Chase	5.3	Feb. 2012	Foreclosure
JPMorgan Chase	5.1	Oct. 2013	MBS/mortgage repurchase
Bank of America	2.9	Jan. 2013	Foreclosure
Credit Suisse	2.6	May 2014	Aiding tax evasion

Financial regulatory reform (1)

- When Franklin Roosevelt took office in 1933, his first order of business was to arrest the banking collapse that was plunging US ever deeper into depression
  - As part of the plan for doing so, he signed into law the first federal insurance scheme for deposits, reshaping US financial system
- Roosevelt did so at the behest of Congress, had deep reservations
  - He worried: deposit insurance would make the US gov't liable for the mistakes and errors of individual banks, and put a premium on unsound banking in the future
- He was right to worry
  - As intended, deposit insurance made banks less prone to runs: depositors trying to withdraw their money before everyone does
  - But it also reduced depositors' incentive to monitor banks' behavior
  - With less market discipline, a heavy-handed system of regulation evolved

Financial regulatory reform (2)

- Over time the scale of the government safety net grew, reaching new dimensions during the financial crisis of 2007-08
  - That did not involve many runs on conventional deposits
  - But it did feature a flight from short-term investments that had come to resemble bank deposits, such as money-market funds and asset-backed CP
  - When these “non-bank” creditors began running for the exits, the federal government’s bail-out was extended well beyond deposits
- In line with the growing government safe net in financial system after the crisis, the authorities have imposed stronger regulations and heavier oversight on the financial system
- Hot debate is going on whether these reforms have made finance safer
  - But few deny that any improvement in the soundness has come at the price of hugely intrusive regulation

Financial regulatory reform (3)

- If recent financial regulatory reforms make financial system safe, then question becomes: Are there any costs associated with stricter regulations?
- In fact, some critics raise questions about sustainability of the current regulatory reform because of the high costs associated with tightened regulations
  - Many of the reform measures rely too heavily on financial sector taxation in the forms of capital regulation and capital surcharges on SIFIs
  - This may lead to a substantial increase in the cost of capital and may jeopardize economic growth
  - Also intrusive regulation on banks' activities in financial markets may make the markets less efficient, by hampering price-discovery function
  - For example, the Volcker Rule, which intends to prevent banks from making certain types of speculative investments that contributed to the 2008 financial crisis, could possibly hamper price-discovery function
- Nevertheless, it remains to be seen whether costs of the reforms outweigh benefits so as to make the reforms unsustainable

Fundamental questions after the GFC (1)

- It has been 6 years since the collapse of Lehman which triggered the GFC
- The recent GFC has raised so many fundamental questions regarding money and finance
  - Why do we need FIs at all?
  - What should be the appropriate roles of FIs?
  - What went wrong with regulations and supervisions of FIs in the run-up to the crisis?
  - What is systemic risk?
  - What is and causes pro-cyclicality of financial system and how to mitigate it?
  - How to make distinction between illiquidity and insolvency?
  - What are SIFIs and their problems in financial system and how to tackle moral hazard risk posed by SIFIs?
  - What is the shadow banking system and why does the industry have grown very rapidly?

Fundamental questions after the GFC (2)

- What are roles of derivatives? Are they financial WMD?
  "***Increasingly complex financial instruments have contributed to the development of a far more flexible, efficient, and hence resilient financial system than the one that existed just a quarter century ago"***
  Alan Greenspan, 2005
- How effective unconventional monetary policy instruments such as QE and Operational Twist?
- Why market is so nervous after the announcement of the Fed's planning to implement "tapering" of asset purchase by CB?

Implications of the crisis on money and banking (1)

- What a dynamic world!
  - From "the Great Moderation" to "the Great Crash"
  - From "banking crisis" to "sovereign debt crisis"
  - From "Quantitative Easing" to "Tapering of QE"
  - Aldous Huxley: "The charm of history and its enigmatic lesson consist in the fact that, from age to age, nothing changes and yet everything is completely different."
- The financial crisis clearly demonstrated: a wider gap between our economic theories and economic realities particularly in money and banking
  - Two crucial assumptions on transmission mechanisms of monetary policy:
    1. Effects of MP take place through interest rates and asset prices
    2. All interest rates and asset prices are linked through arbitrage
  - Financial sector reflected in macroeconomic model
    - Steve Cecchetti of BIS: The model reflects financial sector in the 1960s
    - Donald Kohn: we did not know what is going on inside the financial intermediation

Implications of the crisis on money and banking (2)

- Arbitrage or the law of one price, a key assumption in financial economics, does not appear to work
  - In July 2008, BOK's annual monetary policy contest
  - An analysis based on "covered interest parity"
  - My question: relationship between arbitrage and deleveraging
- After the GFC, there is a growing skepticism about efficiency of financial markets and pricing models of financial assets
  - A key assumption of asset pricing has been challenged
  - Sovereign debt crisis: sovereign debts provide "return-free risks instead of risk-free return"
- If this is the case, questions become:
  - Do we need to forget about the existing economic theories?
  - What are alternative economic theories?

Implications of the crisis on money and banking (3)

- Although the existing economic theories cannot explain economic realities very well, we need to have analytical tools
  - You cannot blame the mirror for your ugly face
  - Issac Newton's lament after losing money from his investment on the South Sea Company: "I can calculate the motions of heavenly bodies, but not the madness of people"
- What we can do is very clear: to fill the wide gap between theories & realities
  - But this task is very difficult and challenging
  - A good starting point: to raise as many questions as possible about the existing analytic tools, in particular basic assumptions
  - Voltaire, "Judge a man by his questions rather than by his answers"

Implications of the crisis on money and banking (4)

- Need to make a clear distinction between uncertainty and risk
  - Donald Rumsfeld, "…there are known known; there are things we know. We also know there are known unknowns; that is to say we know there are something we do not know. But there are also unknown unknowns—the ones we don't know we don't know."
  - Frank Knight (1885~1972): ***Knightian uncertainty*** is risk that is immeasurable, not possible to calculate
- Also, we need to bear in mind:
  - "There is no one-size-fits-all solution"
  - "The devil is always in the detail"

Course Introduction

- Against this background, this course will explore key issues concerning money and finance in the macroeconomic context
  - Starts from roles of money and finance in the economy with the ultimate goal of understanding monetary system and financial system
  - Discuss each segment of FMs with a particular emphasis on their roles and functions in the context of the whole financial system
  - Cover the determination of price variables in the FMs, i.e. interest rates and stock prices
  - Discuss issues concerning financial intermediaries covering both banking and non-bank FIs
  - What are the purposes and roles of central banks?
  - How money and credit are created in financial system?

Textbook, requirements and grading

- **Textbook:**
  - Thomas Bishop,2013, *Money, Banking and Monetary Policy*, Second edition, Jiphil Media
  - Frederic S. Mishkin and Stanley G. Eakins, 2012, *Financial Markets and Institutions* and other materials
- **Requirements:**
  - 1 final exam
  - Group presentations to facilitate class discussions
  - Read a book related to finance and submit a written report based on the book
  - Suggested books:
    1. "Finance and the Good Society", by Robert Shiller
    2. "Manias, Panics, and Crashes: A History of Financial Crises", by Charles Kindlberger and Robert Aliber
- **Grading policy: your final grade will be based on:**
  1. **60% on your final exam**
  2. **15% on your group presentation**
  3. **15% on your written report on an assigned book**
  4. **10% on your class participation**
  5. **Bonus point**

Some Notes on English Course

- Uncomfortable truth about English course:
  - English is **not** our native tongues
  - For me, it is extremely difficult to find an expert to invite
  - But **English** is **only common language we can communicate** each other at least in this class
- My policy in English course
  - English is only language in this class
  - Please make sure: I am not responsible for teaching English language per se
  - Instead, to provide a good foundation for contents
  - Contents are more important than the language itself
  - If you have any difficulty to understand my language, please feel free to ask questions
  - In my lecture note, I will provide as many contents expressed in English as possible
- Please keep in mind: If you cannot avoid something, you have to enjoy it

Uncertain financial markets (1)

Euro-zone

- After the euro-zone crisis in 2012, the worst case scenario appears to be over
  - Both consumer and business confidence have been returned
  - Investors have been returned to the troubled economies in peripheral Europe
  - The economies continued to recover from the double-dip recession, but euro-zone as a whole recorded zero growth in Q2 2014
- However, there are some worries on sustainability of the recovery in euro-zone
  - They include weakness of the upturn, onset of extremely low inflation and continuing fragility of over-indebted economies and their banks
  - For example, recent crisis at Banco Espirito Santo, one of Portugal's biggest banks, illustrated how swiftly market sentiment could turn and how fragile euro-zone remained

Uncertain financial markets (2)

- Renewed worries about banks have coincided with some gloomy economic statistics
  - GDP across euro-area was flat in Q2 2014, after 0.2% growth in Q1 2014, on a Q to Q basis
- Another worry about the recovery is that it has been so uneven
  - Recent recovery was driven by Germany while French economy stagnated and Italy's economy contracted
  - In Q2 2014, GDP in Germany contracted on a Q to Q basis
  - Most recent unemployment rate in Germany was 6.7%, compared with 12.3% in Italy and 24.5% in Spain
- More serious concern for over-indebted economies is very low inflation
  - Inflation is stuck around 0.5%: In July 2014, inflation was only 0.4%
  - Consistently low inflation has prompted fears that Europe will soon slide into deflation

Uncertain financial markets (3)

- In fact, prices are already falling in Spain and 3 other euro-zone countries

- Deflation could be a serious threat to euro area because both private and public debt is so high in many of 18 member-countries
  - Even if inflation is positive but stays low, it hurts debtors, as their income rise more slowly than they expected when they borrowed
- Uneven weak recoveries in euro-zone countries pose vulnerability of euro and could possibly lead to renew the euro-zone crisis
- Poor GDP figures will intensify pressure on ECB to do more
  - In June 2014, ECB lowered its policy rate to just 0.15% and became the first big CB to introduce negative interest rate: ECB is charging banks for deposit at ECB
  - That has helped bring short-term wholesale interest rates close to zero and has also weakened the euro

Uncertain financial markets (4)

- But, unlike other major CB, ECB has resisted QE
  - The policy creating money to buy financial assets has been used by CBs of US, UK and Japan to fight deflation and stimulate economies weakened by the financial crisis of 2008
  - Yet ECB still avoid QE, treating it as a weapon of last resort
- One reason to doubt the efficacy of QE in euro area is that banks rather than markets dominate the provision of credit there
  - In contrast, US companies raise much of their funding in bond markets
  - One of the main ways that QE boosted US economy is by lowering corporate borrowing costs
  - As the US Fed bought Treasuries and gov't-guaranteed mortgage securities, pushing down their yields, investors turned to corporate bonds, in turn driving down their yields
  - This effect would necessarily be weaker in euro zone

Uncertain financial markets (5)

- But the real reason for ECB's reluctance to QE seems to be its unique status as a super-national CB setting monetary policy for countries that retain fiscal autonomy
  - Private-asset markets in euro zone are not big enough for purchases to have much impact
  - So ECB would have to buy lots of gov't debt
  - But unlike other major CBs, ECB would be buying the debt of 18 different countries, possibly in an amounts linked to the respective sizes of their economies
  - These purchases would have a much bigger impact in peripheral Europe, where credit ratings are poor, than Germany, which retains AAA status
  - Bundesbank in particular fears: QE would relieve the pressure on less creditworthy countries to overhaul their economies and to keep deficit in check
  - And it would mutualize within ECB the risk of holding dodgy sovereign debt
- But it remains to be seen whether ECB will adopt QE

Uncertain financial markets (6)

Tapering of QE and interest rate hike

- After aggressive use of quantitative easing, the Fed has implemented what they call “Tapering”
  - “Tapering” is a term that Fed may taper or reduce the size of the bond-buying program
  - This was made public by warnings made by Ben Bernanke in May and his press conference immediately after the June FOMC in 2013
  - In December 2013, tapering talk turned to action
  - On the day of Ben Bernanke's last press conference as chairman of the Federal Reserve the FOMC finally decided it would scale down its $85B a month asset purchase
  - US monetary authorities would reduce purchases by $10B to each month
  - Currently, the consensus estimate is that the Fed will continue to reduce the size of its QE program through 2014 and end it up by the end of 2014

Uncertain financial markets (7)

- Furthermore, after 6 years of interest rates near zero, the tension between CBs' responsibility for output and inflation on one hand and financial stability on the other is growing
  - In June 2014, the Bank of England hinted it would pursue new measures to curb ever-climbing property prices
  - Ms. Yellen fretted about the "reach for yield" and subdued volatility, a sign of investors' complacency
- This tension leads to some analysts to speculate that CBs could raise interest rate much sooner than expected
  - In fact, Mark Carney, the Governor of the BOE, told that rates could rise sooner than markets currently expect
  - Also the Fed faces ever louder calls to abandon the pledge that it intends to keep interest rates near zero at least until 2015
- Risk is that premature monetary tightening could push the economy back into recession and turn inflation to deflation as evidenced by Japan in 2000

Uncertain financial markets (8)

Abenomics

- Japan introduced what is called “Abenomics”: the mix of bold monetary easing, fiscal stimulus and structural reform (3 arrows)
- So far, the “Abenomics” has been successful in pushing up stock prices and improving business sentiment and consumer confidence
- But the spike in bond yields is continuing to scare investors
- The essence of the problem is that the BOJ’s twin aims—generating inflation and bringing down yields—are somewhat contradictory
  - Holders of low-yielding government bonds, who believe that the BOJ will achieve its inflation target of 2% in 2 years, may respond by selling
  - Their sales have pushed up nominal yields far more quickly than the BOJ expected

Uncertain financial markets (9)

- A particular fear is that higher volatility could provoke a repeat of the value-at-risk shock of 2003, when market-risk models spurred further selling once volatility triggers had been breached
  - The worst case scenario is that bond-market volatility could focus attention on Japan's public debt, which stands at nearly 250% of GDP
- Moreover, the success of the "Abenomics" in the long-run depends critically on the "third arrow": implementation of structural reform
  - An increase in sales tax on April 1st 2014 led to the biggest contraction of GDP in Q2 2014, -6.8% at an annual rate
  - The tax is scheduled to increase again, from 8% to 10%, in October 2015
- If structural reform in Japan is timid, the effect of "Abenomics" will be short-lived and bond market will pay more attention on Japan's public debt, similar to what happened in PIIGS

Uncertain financial markets (10)

Rapid growth of shadow banking in China

- At the same time, a rapid expansion of shadow banks poses bigger danger in China
  - After several years of excessive credit, much of it in the shadows of the banking system, China's FIS stopped lending to each other in June 2013
  - On June 20th 2013, interbank interest rates briefly soared to 25%
  - The crunch seemed horribly reminiscent of US financial crisis in 2008, from which it has yet to recover full
- 2 questions emerged from this:
  1. Is China's economy in as much trouble as US economy was in 2008?
  2. Have the authorities done the right thing?
- The answer to both is: probably not, but a lot depends on China's efforts to push through reforms

Uncertain financial markets (11)

- China's economy certainly has some worrying excesses
  - Credit has been rising much faster than GDP
  - Property prices have been soaring
- That is often a sign of trouble
  - Sharp rises in lending, accompanied by property booms, set the stage for a crisis in US in 2008 and many others
  - In those cases, when rash investments turned sour, banks went bust, lending stalled and confidence evaporated
  - Governments had to step in, recapitalizing some banks and urging others to resume lending
- Yet, China's situation is different in important ways
  - China has an extraordinarily high saving rate
  - Unlike US in 2008, the country as a whole is living well within its mean
  - Its banks are subject to pretty stringent rules: their loans cannot exceed 75% of deposits: China already implemented Basel 3
  - The state already owns the biggest banks

Uncertain financial markets (12)

- That has its drawbacks such as: Too many loans have gone to state-favored firms
- But advantage is: When those loans turned bad, the state does not need to nationalize anything: They are already nationalized
- The government can tell the banks to keep lending while it decides how to allocate the loss and when
- In effect, China's state can serve as a bankruptcy judge for the economy, keeping creditors in check, spreading pain in an orderly fashion and, above all, preserving the value of the economy as a going concern

Deleveraging in US

- Economists trying to explain the feeble pace of US recovery regularly blame deleveraging, multi-year process of paying off the debts accumulated before the crisis
- Recently, deleveraging of HHs has stopped
  - Mortgage debt bottomed out in the middle of 2013 and are rising rapidly
  - Student and car loans are rising vigorously

Uncertain financial markets (10)

- Only home-equity and consumer loans continue to decrease
- In absolute terms, HH debt is rising again
- Relative to HH income, it peaked at 135% in 2007, fell to 109% at the end of 2012, and has roughly stabilized around that level

- Banks are increasing lending
- The rising borrowing comes no surprise
- 2 studies, one by Carmen and Vincent Reinhart and one by McKinsey Global Institute, found that prior episodes post-crisis deleveraging lasted 6 to 7 years on average
- In theory, deleveraging should end when debts are at sustainable level, which is difficult to measure
- Recent working paper by 3 economists at ECB points out that debt consumers can bear varies with interest rates, house prices, rate of home ownership, share of the population aged 35-54 and foreclosure rate
  - US HH debt exceeded the equilibrium level by 25% of HH income at the start of the recovery

Uncertain financial markets (11)

- Since then, an improvement in many of these variables has raised the equilibrium and HH debt has fallen, bringing the two into line

- Nevertheless, the end of deleveraging has not rekindled the economy as much as economists hoped
  - There may be a lag
  - And, although consumers are no longer cutting back, the public sector is beginning to tighten its belt and businesses have stopped adding to their debts
  - According to Richard Dobb of McKinsey, overall deleveraging, including firms and government, could go on for another 4 or 5 years

Next potential epicenter of financial crisis

- Since the late 1990s, the world has coped with economic meltdown in South-East Asia, the dotcom boom and bust, the US housing bubble and subsequent banking collapse

Uncertain financial markets (12)

- The place that regulators are worried about now is the fund management industry
- To a certain extent, their worries are the consequence of the policy responses to the GFC, including tightened regulation
  - Banks now have to hold more capital than before, so they are less willing to lend money to companies or to act as market-makers in the corporate bond market
  - Companies are now more dependent on the bond markets for finance
  - Investors have accumulated corporate bonds, because CB policy has pushed down returns on gov't bonds
  - As a result, average yield of speculative or junk bonds has decreased to 4.5% from 8.1% in October 2011
- This has led to over-loaded positions in a market where liquidity has declined by 70% since the pre-crisis period, according to one estimate

Uncertain financial markets (13)

- The bond market is inherently less liquid than equities, because it is so heterogeneous
  - GE has 5 classes of equity but has issued 1,014 different types of bonds
  - According to RBS, only 3 of the most widely held bonds have a market value of more than $1B, a level well below the minimum needed for a stock to qualify for S&P 500
  - Around a fifth of all corporate bonds never trade at all
- Corporate-bond funds are popular at the moment, because of extra yield they offer in an era of ultra-low interest rates
- But it is easy to imagine a scenario in which prices start to fall, prompting redemption of by clients, leaving asset managers to sell into illiquid market
  - Asset managers do not like to under perform their peers, so they would rush to sell

Uncertain financial markets (14)

- Prices could plunge, forcing the corporate-bond market to close

- Regulators are worried that if everybody tries to sell, the absence of willing buyers could cause:
  1. Prices to tumble
  2. The cost of finance for companies to shoot up
  3. The corporate bond market to close in effect

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