A well-functioning financial system solves asymmetric information problem (moral hazard and adverse selection) so that capital is allocated wot its most productive uses.

Financial frictions: which act as a barrier to efficient allocation of capital.

A financial crisis: occurs when information flows in financial markets experience a particularly large disruption, with the result that financial frictions increase sharply, and financial markets stop functioning. The economic activity collapses.

Credit boom and bust : the seeds of a financial crises are often sown when an economy introduces new types of loans or other financial products, known as financial innovation, or when countries liberalization, the elimination of restrictions on financial markets and institutions.

Financial liberalization has a dark side; in the short run, it can prompt financial institution may not have the expertise, or the incentives, to mange boom. Lenders may not have the expertise, or the incentive to manage risk appropriately in these new lines of business.

With less capital, these financial institutions cut back on their lending to borrower-spenders, a process called deleveraging; With less capital, banks and other financial institutions become risker, causing leaner-savers and other potential lenders to these institutions to pull out their funds.

When financial institutions stop collecting information and making loans, financial frictions rise, limiting the financial system’s ability to address the asymmetric information problem of adverse selection and moral hazard.

As loans become scarce, borrower-spenders are no longer able to fund their productive investment opportunities and they decrease their spending, causing economic activity to contract.

Fundamental economic values, their values based on realistic expectations of the asset’s future income stream. The rise of asset prices above their fundamental economic values is an asset-price bubble.

When the bubble bursts and asset prices realign with fundamental economic values, stock and real estate prices tumble, companies see their net worth decline, and the value of collateral these companies can pledge drops.

The asset-price bust also causes a decline in the value of financial institutions’ assets, thereby causing a decline in the institutions’ net worth and hence a deterioration in their balance sheets

With information hard to come be in a period of high uncertainty, financial frictions increase, reducing lending and economic activity.

Stage Two: banking crise. If server enough, these factors can lead to a bank panic in which multiple banks fail simultaneously. The source of the contagion is asymmetric information. Uncertainty about the health of the banking system in general can lead to runs on banks, both good and bad, which forces banks to sell off assets quickly to raise the necessary funds.

These fire sales of assets may cause their prices to decline so much that more banks become insolvent and the resulting contagion can then lead to multiple bank failures and a full-fledged bank panic.

Increasingly severe adverse selection and moral hazard problems in financial markets deepen the financial crises, causing declines in asset prices and the failure of firms throughout the economy that lack funds for productive investment opportunities.

Stage three: Debt deflation. The economic downturn leads to a sharp decline in the price level, the recovery process can be short-circuited.

Debt deflation occurs when a substantial unanticipated decline in the price level sets in, leading to a further deterioration in firm’s net worth because of the increase burden of indebtedness.

In economies with moderate inflation, which characterizes most advanced countries, many debt contracts with fixed interest rates are typically of fairly long maturity, ten years of more. B/c debt payments are contractually fixed in nominal terms, an unanticipated decline in the price level raise the value of borrowing firms; and household’s liabilities in real terms but does not raise the real value of their assets. The borrower’s net worth in real terms (the difference between assets and liabilities in real terms) thus declines.

The substantial decline in the real net worth of borrowers caused by a sharp drop in the price level creates an increase in adverse selection and moral hazard problems for lenders.

2007-2009 financial crisis by examining three central factors: financial innovation in mortgage markets, agency problem in mortgage markets, and the role of asymmetric information in the credit-rating process.

Structured credit products that paid out income streams from a collection of underlying assets, designed to have particular risk characteristics that appealed to investors with differing preferences.

Collateralized debt obligations, the most notorious of these products.

Special purpose vehicle (SPV) which buys a collection of assets such as corporate bonds and loans, commercial real estate bonds, and mortgage-backed securities.

Financial derivative, financial instruments whose payoff are linked to previously issued securities, also were an important source of excessive risk taking. Large fee from writing credit default swap (see the FYI box), also drove units of insurance companies, like the United states’ AIG, to write hundred of billions of dollars’ worth of these risky contracts.

The impact of the crisis was most evidence in five key area: the residential housing market, financial institutions’ balance sheets, the shadow banking system, debt markets, and the headline-grabbing failures of major firms in the global financial industry.

This rapid increase in residential housing prices, together with easy mortgage, was experienced in other advanced economies as well.

With housing prices rising, subprime borrowers were also unlikely to default b/c they could always sell their house to pay off the loan, making investor happy b/c the securities backed by cash flows from subprime mortgage had high returns.

The growth of the subprime mortgage market, in turn, increased the demand for houses and so fueled the boom in housing prices, resulting in a housing-price bubble.

Further stimulus for the inflated housing market came from low interest rates on residential mortgages, particularly in the U.S. and Europe. In particular, several economists blamed the easy monetary policy pursued by the U.S. FED for paying the way for the house price bubble.

As housing prices rose and profitability for mortgage originators and lenders grew higher, the underwriting standards for subprime mortgage fell lower and lower.

The value of the house was below the amount of the mortgage. When this happened, struggling homeowner had tremendous incentives to walk away from their homes and just send the keys back to the lender. Defaults on mortgage shot up sharply, eventually leading to foreclosure on millions of mortgage.

The downfall from the crisis was particularly acute in the U.S., where excess housing supply was large than in other countries, mortgage lending standards had been eased more significantly, and households were financially more vulnerable to falling housing prices.

The decline in housing prices led to rising defaults on mortgage. As a result, the values of mortgage-backed securities and CDOs collapsed, leaving banks and other financial institutions holding those securities with a lower value of assets and, thus, a lower net worth.

With weakened balance sheets, these banks and other financial institutions began to deleverage, selling off assets and restricting the availability of credit to both households and businesses.

The sharp decline in the values of mortgages and other financial assets triggered a run on the shadow banking system, composed of hedge funds, investment banks, and other no depository financial firms, which are not as tightly regulated as banks.

These securities were funded primarily by repurchase agreements (repos), short-term borrowing that, in effect, uses assets like mortgage-backed securities as collateral.

Rising concern about the quality of a financial institution’s balance sheet led lenders to require larger amount of collateral, known as haircuts.

Rising defaults on mortgage caused the values of mortgage-back securities to fall, wich then led to a rise in haircuts.

The decline lowered the value of collateral further, raising haircuts and thereby forcing financial institutions to scramble even more for liquidity; causing massive deleveraging that resulted in a restriction of lending and a decline in economic activity.

The unemployment rate shot up, going over the 10% level in late 2009. The recession that started in December 2007 became the worst economic contraction in the U.S. since WWII and as a result is now referred to as the “Great Recession”.

Governments of different countries carried out short-term emergency plans to rescue their respective economies and put in place long-term policies to reform their entire financial system.

Global recession was to draw up emergency plan to avoid deflationary spirals, to stop lower prices from causing ever-decreasing demand and output.

Deficit spending, public debt and borrowings from central banks and international institutions.

In addition to the individual emergency national bailout packages extended to rescue national economies and financial sectors, global leaders simultaneously rushed to build a more stable and robust global financial system

By building up emergency liquidity and foreign exchange reserve buffers and by paying interest to banks and financial institutions for holding legal reserve requirements, especially at times of financial distress.

Fiscal policy, must reduce fiscal debt levels so that additional debt can be taken on in times of stress. Fiscal agents must build up fiscal buffers during periods of economic health that can be used at times of financial distress without the need to unsettle financial markets or use taxpayers’ money

Financial infrastructure, an arena where individuals and institutions plan, negotiate, and perform financial transactions. The development of a solid financial infrastructure will promote financial market growth, facilitate the smooth flow of funds, enable savers and investors to select from a larger array of different risk and return investment opportunities, reduce transaction costs, enhance information and knowledge, and hence assist with increasing capital formation.

Strong customer-deposit insurance schemes, liquidity arrangements, and safety net facilities would help increase trust in the entire financial sector, and this trust cannot be established in the absence of a reliable information infrastructure. In order to enable swift settlement of funds, improvements would need to include provision for modern trading platforms, state-of-art communication, technology networks and reliable clearing houses.

Consumer protection,

Macroprudential and macroprudential policy

Regulatory arbitrage, prevent banks and financial institutions from taking advantage of loopholes in regulatory system that help them to more their operations and financial instruments to locations outside the purview of regulators.