Key elements of New Keynesian models:
(based partly on Woodford (2009), Chari, Kehoe, McGrattan (2009) and Gali chapter 8)

- Expectations are
  - important (for consumption, investment, employment, wage and price setting) and
  - should be endogenous
    - model consistent (rational) or perhaps learning, or predictable irrationality
  - communication important part of monetary policy

- Use models with coherent intertemporal general equilibrium foundation
  - consistency between short run and long run issues

- Real disturbances are an important source of economic fluctuations
  - technology (aggregate productivity and investment specific) preferences, government policies, etc.
  - Implies that some fluctuations are efficient (fluctuations in natural levels of output and interest rate)

  - Natural level of output should not be modelled as trend output, nor should output gap be modelled as deviation from trend
  - Not efficient to stabilize the economy completely

- But there are also inefficient fluctuations
  - Associated with sticky prices and wages, (but presumably also other mechanisms)

- Monetary policy can be used to stabilize the economy – in particular inflation, but also dampen fluctuations in output
  - Control of money stock is not necessary as instrument

- Desirable to use econometrically validated structural model
  - More eclectic approach to estimation of model parameters
  - Fairly strong priors from theoretical consistency

Some remaining issues

- Wage and price stickiness is taken as exogenous, given by Calvo framework (time-dependent price setting)
    - Problem – if long time since adjustment, price or wage will be far from optimal value, involving a large efficiency loss due to large effect on output/employment
    - Is this plausible?

- If firms may change price or wage subject to small cost (state-dependant pricing), many of the key features of the model remain, but the welfare implications are changed considerably
    - Firms with large deviation from optimal price will be more likely to change price, which reduces the costs associated with price dispersion and thus also the costs associated with inflation

- An aside – are wage and price stickiness only inefficient distortions?
    - Wage/price rigidity to avoid holdup problems, where one party exploits ex post bargaining position to capture share of return from other party's investment
    - Wage/price rigidity as insurance, e.g. to reduce uncertainty for risk averse workers

- Does labour demand depend on contemporaneous wage?
  - Alternative: implicit contract where
  - employment decisions are intertemporal, depend on present value of marginal revenue relative to present value of wage costs, and where the wage level is smoothed to insure risk averse workers
  - separations are still efficient (i.e. take place when outside option of worker exceeds marginal revenue of firm)

- As New Keynesian theory has aimed for closer correspondence with data, theoretically less appealing features have been introduced
  - Backward indexation of prices to allow for non-zero steady state inflation (is not consistent with evidence on price setting)
  - Introduction of new shocks, like wage markup shock, price markup shock, exogenous spending shock, risk premium shock, etc
    - But aggregate productivity shock is also problematic
  - Taylor-rule is not consistent with past monetary policy setting, because a large random component need be added (Chari et al)

- Importance of the interest rate
    - Interest rate expectations affect important irreversible decisions like real investments, e.g. the purchase of a house or the building of a factory
    - Expectational errors may be extremely costly
    - Suggests that central bank interest rate should be predictable, and also try to avoid large deviations from “normal” levels
- In economies with large wage setters, there will be strategic interaction between wage setting and monetary policy
    - Strict inflation target may lead to lower equilibrium rate of unemployment
        - Wage setters know that high wage growth will make CB set high interest rate
        - Wage setters moderate their wage claims to avoid interest rate hike
        - Reduced wage pressure leads to lower equilibrium rate of unemployment
    - But wage setters’ incentives to coordinate wage moderation may be greater under a more passive monetary regime, e.g. a monetary union