Introduction

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In the aftermath of the inflation and recessions of the 1970s and early 1980s, from the early 1990s onwards there was a major upswing in most advanced countries. In the UK it was the longest period of economic expansion on record. But it came to an abrupt end in 2007, with the freezing of the interbank markets and the collapse of Northern Rock, followed in 2008 by Bear Stearns and Lehman Brothers.

Before the crisis, many economists had begun to call this period of upswing the Great Moderation; and, echoing developments in other disciplines, such as political thought, some openly wondered whether we had found the answer to the questions that had perennially been posed by 'boom and bust'. But given the magnitude of the shocks that hit the global economy in the crisis period of 2007–08 (and since then in a number of countries) the apparent reduction in macroeconomic volatility of the earlier period now appears, with the benefit of hindsight, to have been largely illusory. We therefore argue that the period 1992–2007 can more accurately (and less ambitiously) be described as the Long Expansion – hence the title of this volume.

It is now clear that many of the problems that have occupied policy-makers during the global financial crisis were being incubated during this period. And so with the twin aims of encouraging more policy-focused research on the UK, and to encourage policy debate, in the aftermath of the financial crisis and the prolonged economic recession, we commissioned 10 papers from leading UK-based researchers to look at the issues that arose during the Long Expansion and its aftermath.

The chapters in this collected volume originate in papers presented at a conference held at Clare College, Cambridge on 19–23 September, 2013.[1] The papers have been peer-reviewed and thoroughly revised since the initial versions presented at the conference. They offer a

1 The papers and previous three conferences can be viewed at: http://www.econ.cam.ac.uk/MMPM/.

comprehensive overview of the UK economy over this period in a form that we hope will offer an authoritative and enduring perspective on the British economy in the early years of the twenty-first century. We are grateful to the Bank of England, the INET Fund and the Money, Macro, Finance Research Group for support in hosting this conference. We thank Chris Harrison and Phil Good for sponsoring the modern macroeconomic policy-making series, published by Cambridge University Press. Finally, we thank Jagjit Chadha for his support in organising and thinking of this conference and book.

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The volume opens with ‘Prospects for UK growth in the aftermath of the financial crisis’, by Nicholas Oulton (London School of Economics). This chapter starts by documenting the remarkable performance of the UK economy during the period 1990–2007 – the ‘Long Expansion’[2] of the title of this book. By any standards – but particularly relative to what came before (and afterwards) – the productivity performance of the UK economy during this period was excellent, and looked set to continue. On the basis of pre-crisis data, using a two-sector growth model, Oulton argues that a plausible projection of the future growth rate of GDP per hour in the market sector would have been around 2½% p.a.

However, since the onset of the financial crisis and the Great Recession in the UK in spring 2008 such an optimistic projection has looked increasingly unlikely to be fulfilled. At the time when the chapter was finalised (in early 2014) both GDP and GDP per hour had fallen, and the latter was still below the level reached at the peak of the boom. The chapter shows that this fall in productivity was pervasive throughout a broad range of sectors of the UK economy. In the rest of the chapter Oulton investigates competing explanations for how this can have occurred, and then reflects on the implications for the future.

The chapter examines a wide range of hypotheses that have been proposed as an explanation of the productivity collapse: sectoral shifts; mismeasurement of banking output; overheating during the boom (with consequent overstatement of potential output); lower inputs of both physical and/or human capital input; hoarding of labour and capital; so-called “zombie firms”;[3] and fiscal austerity (the impact of which Oulton concludes has been overstated). Indeed, the common feature of each of these

2 With thanks to Jagjit Chadha for this phrase to describe the period from the early 1990s to the Great Financial Crash.
3 This popular term has come to refer to firms that are just about able to meet their debt obligations to banks but are not investing.

explanations, Oulton concludes, is that none of them works: the productivity collapse remains, at the time of writing, a puzzle.

In considering future prospects the chapter considers the likely impact of the financial crisis and the 'Great Recession'. Will its impact be entirely transitory? (i.e. with productivity reverting to its previous trend). Or permanent in terms of the level of productivity? Or (in the worst case scenario) permanent both in its impact on the level and growth rate of productivity? To address this question, Oulton uses a cross-country panel dataset of 61 countries over 1950–2010 to attempt to estimate the impact of financial crises, particularly banking crises, on productivity, capital, TFP and employment. He argues that banking crises generally have a long-run impact on the level of productivity, but not necessarily on its long-run growth rate. He estimates that the permanent impact on the level of GDP per worker resulting from the crisis could be a substantial reduction of around 5½%. But, more positively, the UK can eventually be expected to return to the growth rate that would have been predicted prior to the crisis.

Oulton cautions, however, that this (relatively optimistic) prediction is conditional on the UK continuing to follow good policies in other respects, in particular not allowing the ratio of government debt to GDP to rise excessively (the final chapter of this volume, by Paul Johnson, deals with this issue in considerably more depth).

Chapter 2, 'Labor market and monetary policy reforms in the UK: a structural interpretation of the implications', by Francesco Zanetti (Oxford), examines the sources of the stability both of the growth rate of the UK, and of the macro environment more generally, during the Long Expansion. Compared to the 1970s and 1980s, GDP and inflation were less volatile, and the level of inflation decreased markedly. Zanetti identifies two possible causes: first, the labour market reforms under Mrs Thatcher, which both weakened union power and reduced the replacement ratio of unemployment benefits; and second, the use of an explicit inflation target as a nominal anchor since 1992, which culminated in a new statutory framework for price stability in the form of the Bank of England Act in 1998. He attempts to assess the impact of these changes by posing two counterfactual questions: would the introduction of these policy changes have produced a similarly favourable economic outlook if they had been accomplished in the earlier decades? And, if so, to what extent, if at all, might each of these two changes have played a role?

To assess this, using data from the earlier period 1971–91, he estimates (and for some parameters calibrates) a New Keynesian model with optimising behaviour by households and firms, where firms face a cost of adjusting nominal prices, and the labour market is characterised by search frictions and job-matching. The model also incorporates a central bank that conducts policy with a Taylor-type rule by setting the nominal interest rate in reaction to deviations of inflation from its target and output from its long-run equilibrium. Unlike the explicit inflation-targeting framework introduced in 1992, where the target of inflation is constant, during the 1970s and 1980s, monetary policy can be represented by a time-varying inflation target which changed in reaction to exogenous disturbances. In contrast, from 1992 onwards, it is assumed that the inflation target was constant, with an increased weight assigned to inflation for the monetary policy objective.

Since it is the deep preference and structural parameters, as well as the policy parameters that are estimated, the model is intended to be immune to the Lucas critique, and thus is used to draw inferences about counterfactual scenarios. These examine whether the labour market reforms and changes to the monetary policy framework would have changed the economic outlook if they had been introduced in the earlier period. Utilising these policies in the estimated model suggests that labour market reforms would have eased the transition to lower inflation for most but not all of the period, via its impact on the real wage, and hence marginal cost. But the impact is very small: the counterfactual inflation rate never reduces by more than ½%. At the same time the volatility of inflation and output growth significantly increases, so that the effects of changes in the monetary policy framework would have been mixed. A stronger reaction to inflation deviations from target would have lowered the volatility of inflation and output growth, but the introduction of a constant inflation target or a monetary policy that reacted strongly to output fluctuations would have increased volatility, so that the net effect is virtually unchanged. A potential conclusion to be drawn from these results is that the economy was simply inherently more volatile in the 1970s and at least the early 1980s, and thus that there may have been little scope for stabilisation policy to improve matters.

In the next chapter, 'Property income and the balance of payments', by Tomas Key, Varun Paul, Martin Weale and Tomasz Wieladek (Bank of England), the authors explore another puzzling feature of the Long Expansion: how the United Kingdom was able, despite a current account trade deficit and apparent net external liabilities, both to earn a positive balance of net income from abroad almost every year and to improve its net external position during the Long Expansion. The puzzle is that the current account deficit, particularly in the 10 years leading up to the financial crisis, does not square with the stability of net external assets over that period, unless there were higher systematic capital gains on the UK's assets compared with its liabilities. Indeed, between 1997 and 2012 the UK seems to have earned a total of capital gains or unidentified income worth nearly 20% of 2012 GDP despite the fact that its net asset position is shown as a debtor.

The authors carefully analyse this question by exploiting a recently constructed dataset on capital gains and asset returns. Earlier studies had suggested that the composition of UK assets as compared with liabilities is biased towards high-yielding asset classes (the composition effect). In contrast, the authors' new dataset shows that the UK, like the USA, enjoyed favourable returns on investment categories that were broadly similar for assets and liabilities. The authors note that the data do not reveal whether investors in UK foreign assets are more skilled than those investing in the UK, or whether they merely run greater risks.

This result motivates a study of the factors that may have led to this favourable position, and in particular whether the net income balance was influenced by changes in the regulatory environment. It is possible that the attractiveness of a country to foreign investors depends on the extent to which markets are regulated. In addition, the UK's capacity to borrow more cheaply than it lends might be a function of regulation. The authors study this possibility using a Bayesian Panel VAR for 13 OECD economies, which evaluates the interaction between consumption growth, inflation, the interest rate, net foreign income and the exchange rate, and allows for parameters that depend on the regulatory environment. This builds on earlier work which has shown that the way in which countries respond to shocks depends on their regulatory structure. The latter is measured using indices that represent exchange rate flexibility and financial, labour and product market deregulation. The panel approach has the usual advantage that there is more variation in the data, which makes it possible to determine the effects of regulatory changes with greater statistical significance. The Bayesian approach that is used for estimation is fairly novel in macroeconomics, and allows for the estimation of Bayesian shrinkage – the weight put on the prior covariance matrices of the time-varying parameters, which direct whether the econometrician puts more weight on the model structure or more weight on the data.

The results show that a substantial component of the improvement in the net income flow between the early 1990s and the middle of the next decade appears to have been a consequence of regulatory changes. In particular, the improvements due to financial regulation appear positive, while those due to product market regulation are negative. However, further analysis using the steady state of the VAR leads the authors to caution against accepting these results without more careful consideration. While the substantial offsetting effects from product market regulation and financial market regulation may be explained by the former having encouraged foreign investment in the UK, leading to an outflow of income, and the latter having benefited the growth of a financial sector that can earn more from foreign investments than the cost of finance, the authors note that it is more difficult to understand why labour market deregulation should lead to increased steady state income. They suggest that while the regulatory environment may have been beneficial, the upward trend of the regulatory variables may have led to an overstatement of their effects.

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Given the prominence of the financial crisis at the onset of the recession that brought the Long Expansion to a dramatic close, the organisers of the conference were particularly keen to see research into the financial sector, both during the expansionary phase, and in the downturn that followed. The next three chapters all address the role of the financial sector, money and credit in the Long Expansion and the subsequent crisis, albeit with quite distinct emphases.

In Chapter 4, 'UK broad money growth in the Long Expansion 1992–-2007: what can it tell us about the role of money?' Michael McLeay and Ryland Thomas (Bank of England) subdivide their investigation of the role of money into three parts. The first is a survey of the literature that covers many different approaches to the role of monetary aggregates in the economy, together with an overview of broad trends. The authors show that money and credit both grew faster than nominal GDP throughout the Long Expansion (and during the decade before) and that credit grew faster than money. The second part of the chapter reports the results of the estimation of a long-run structural vector autoregression (SVAR) model and decomposition of factors driving money, lending, GDP and inflation. The SVAR is estimated using quarterly data over a long period (1967–-2012) which includes both the Long Expansion and the onset of the crisis and the Great Recession. It uses a decomposition of predictive errors into structural shocks to aggregate demand, aggregate supply and monetary policy, but with the key addition of shocks arising from the banking system. These are the cost of intermediation, the cost and availability of wholesale funding, and a variable to capture bank risk taking. They also try to identify a risk premium shock that originates in the non-bank financial sector. The estimation strategy both identifies the shocks and distinguishes between those that have permanent and temporary effects.

The impact of the standard shocks is much as would be expected. Demand shocks, for example, move output and inflation in the same direction, while supply shocks move them in opposite directions. As for the banking shocks, the cost of intermediation shock has effects on money, credit and asset prices, but no significant effect on real activity. In contrast, the wholesale funding shock has effects on credit spreads and lending, and this in turn does affect real activity. The bank risk-taking shock affects money, credit and asset prices temporarily, but has no real effect on output in the long run (by assumption).

The authors find that over their long sample, supply shocks appear to play a bigger role in driving GDP than demand shocks, in contrast to traditional macroeconomic models which have tended to put most emphasis on demand shocks. This finding may be a product of the identifying assumptions used to distinguish demand and supply shocks, but it does add support to something closer to a real business cycle approach, where technology shocks are key drivers of fluctuations, as opposed to more Keynesian approaches where aggregate demand shocks are the main source of volatility. They also provide an interesting insight into the financial crisis of 2007, which they find was preceded by credit growth originating from wholesale funding of the banking system. This result is consistent with stories about the global savings glut, the narrowing of risk premia on a wide class of assets and the 'ferocious search for yield' that helped drive the credit and housing bubble prior to the US sub prime crisis. In effect, the UK banks' 'customer funding gap' was filled by an abundance of funds channelled through the wholesale interbank market, much of which originated overseas. These flows rapidly reversed when the interbank markets froze in 2007–08 with the onset of the financial crisis.

In the third part of the chapter, the authors estimate a model of disaggregated money holdings for three specific sectors. These sectors are: other financial corporations (OFCs), proxied by insurance companies and pensions funds; private non-financial corporations (PNFCs); and households. The model is estimated for the period 1987–2008 on quarterly data. Key results are that the money growth in the OFCs sector from 2005 was linked to around 25% of the build-up in asset prices, which in turn boosted consumer spending; while the growth of money within PNFCs is sufficient to explain business investment. The authors estimate that the combined impact of these two effects added around 3% to GDP in 2005–07. In contrast, household money holding had little further informational content at this time.

The following chapter, 'An old-fashioned banking crisis: credit growth and loan losses in the UK 1997–2012' by Alistair Milne and Justine Wood (University of Loughborough), examines the origins of the financial crisis in the banking sector, focussing on the expansion of credit in the UK over the years 1997–2007 and the subsequent loan losses on UK sterling lending.

The authors provide evidence of a substantial credit expansion, especially in lending secured on property. Yet they show that this led to only relatively modest losses for UK banks on residential mortgage lending in the crisis period of 2008–13. Instead, most losses on UK bank sterling lending were associated with commercial property lending. The authors consider parallels with the two previous episodes of large-scale UK loan losses in 1973–75 and 1991–93, both of which they revisit, and draw out similarities between the most recent banking crisis and these earlier events.

The chapter also considers the role of ‘shadow’ banking in this boom and bust. The authors introduce a careful distinction between ‘old’ and ‘new’ shadow banking. The former takes funds from the established banking system, while ‘new’ shadow banking uses the modern tools of securitisation and credit risk transfer in order to create money-like substitutes for traditional bank deposits and hence disintermediate entirely from the established banks. The authors find that, in contrast to the pattern in the USA, ‘new’ shadow banking played only a minor role in the UK credit expansion. There was some ‘old’ shadow banking, with real estate investment trusts and other specialised real estate funds investing in commercial property. Securitisation of residential mortgages also helped fund what now, with hindsight, appears as an unwise extension of credit into other more risky areas of lending, notably commercial property. Otherwise, the authors conclude, this was a very old-fashioned banking crisis.

The third chapter focussing on the financial sector, ‘Household debt and spending in the United Kingdom’ by Philip Bunn and May Rostom (Bank of England), examines another aspect of the build-up to the crisis. It is commonly thought (rightly or wrongly) that household debt played an important role in the boom and bust of the 2007–08 financial crisis. The authors of this chapter examine this question with evidence from a panel study using household level data drawn from the ONS Living Costs and Food Survey (LCF), which covers a sample of 6,000 households on a regular basis. The data include detailed information for each household on income, spending (disaggregated by types of goods and services purchased) and debt.

The focus of this study is entirely on the influence of secured mortgage debt (which is over 80% of the total debt) on spending pattern variations across different households and over time. Mortgage debt is clearly always linked to house purchases, but there is no evidence available in this data about the role of housing net worth. There is, however, some presumption that households with high debt to income ratios will also have a high debt to wealth ratio.

The authors find evidence to show that the build-up of mortgage debt prior to the financial crisis was (unsurprisingly) linked to house price rises. However, the focus of the chapter is mainly on the extent to which high levels of secured debt affected household spending patterns. They find that higher debt households had higher consumer spending in the run-up to the 2007 crisis, and that these same households cut back spending more sharply once the crisis broke. However, while statistically significant, these effects were not substantial and provide only a small part of the explanation of consumer spending trends in general.

Three hypotheses are posed as to why high-debt households cut back more than others after the crisis: first, that high debt restricted borrowers' access to future credit; second, that high debt may have raised worries about the ability to make future interest payments; and third, households with high debts may have made larger adjustments to expectations of future income. The authors conclude that the data provide some support for the first two of these explanations, but not the third.

The implication of these results is that high levels of secured debt made consumer spending more volatile over the business cycle, as those with high debt tended to spend more during the upturn, but also cut back more during the downturn. The authors conclude that policymakers responsible for financial and macro stability should, therefore, be concerned to ensure that debt levels do not become too high and too widespread in the household sector.

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The period of the Long Expansion overlaps with that of the operational control of monetary policy in the UK passing to the Bank of England through the decisions of the Monetary Policy Committee (MPC). Since 1997 interest rate-setting and, more recently, non-traditional monetary policy actions in pursuit of inflation stabilisation have been carried out by this group independently of the government of the day. The Long Expansion also saw considerable stability in inflation around its target level. The next two chapters examine the activities of the MPC over this period from two quite distinct angles; while the following chapter considers the impact of global developments on UK inflation

Chapter 7, 'MPC decision-making, the Long Expansion and the crisis: integration with the global economy, heterogeneity and network dynamics', by Arnab Bhattacharjee (Heriot-Watt University) and Sean Holly (University of Cambridge), examines the conduct of monetary policy through the voting records of individual members of the MPC over the period of the Long Expansion and the financial crisis. The authors estimate a model of MPC decision-making that allows for heterogeneity and network interactions amongst members, using a panel dataset that includes both voting records and a range of macroeconomic indicators. The authors use their estimated model to show how the nature of monetary policy-making by the MPC changed over this period. They chart three distinct stages of transition: expansion from June 1997 to June 2003; the final pre-crisis stage of expansion to September 2006; and the crisis period to October 2011. Their results show an increasing influence of international developments and integration of the UK in the global economy. They also show how uncertainty and expectations of future inflation and output growth also had an increased effect on decision-making in the crisis period compared with earlier periods. This is matched in their results with better network connections and influence of external members (non-Bank of England staff) on the MPC over the crisis period.

Bhattacharjee and Holly frame their analysis in terms of a two-equation model of inflation and output growth where the monetary authorities choose the interest rate to minimise an inter-temporal loss function and that members of the MPC are assumed to follow, in their voting decisions, heterogeneous versions of the resulting interest rate rule because of factors such as differences in views of the state of the economy, varying beliefs about the size of parameters such as the effect of interest rates on inflation and the output gap, and heterogeneity in the extent of and degree of uncertainty. On top of this, interactions between the members of the MPC are allowed to include differences in the extent to which individual members influence each other.

Using the voting records of individual MPC members from 1997–2011, the authors estimate individual decision rules conditioned on a range of variables, including unemployment changes, the state of asset markets (including housing, equity and foreign exchange markets), global GDP growth, US interest rates and the standard deviation of output growth. These reaction functions are allowed to differ across the three periods identified above. The estimates are then used to generate kernel density estimates of the implied cross-sectional distributions of response coefficients in the individual decision rules. Bhattacharjee and Holly present plots of the distributions for each response for each regime. The plots for the response of monetary policy to inflation expectations across the three regimes show that MPC members were more concerned with inflation in the post-2004 period. Strikingly, increased uncertainty in output growth had a bigger impact on decision-making