Mark Carney: From Lincoln to Lothbury – Magna Carta and the Bank of England

Lecture by Mr Mark Carney, Governor of the Bank of England and Chairman of the Financial Stability Board, as part of the Lincoln Lectures 2015, Lincoln, 16 July 2015.

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A burst of inflation. A crisis in the public finances. Public sector bailouts. Infighting in Europe. Not eight years ago, but eight hundred.

That was the economic context for the striking of Magna Carta.

To many today, Magna Carta is a document of profound, almost mythical, significance. It is seen as the cornerstone of the United Kingdom's constitutional arrangements and as a blueprint for the constitutions of many other nations, including the United States. It is credited with establishing the foundations of parliamentary democracy, creating a framework for the rule of law, protecting individual liberty, defending the rights of the innocent, and limiting the role of the State.

It is undoubtedly true that Magna Carta – or more correctly the *idea* of Magna Carta – has played a central role in British political development over the centuries, not least as a banner under which those seeking liberty from oppression have rallied.

But many modern scholars argue that its significance, in and of itself, has been overstated. They characterise Magna Carta as a pragmatic political document that was a product of its time, including the difficult economic circumstances that then prevailed.

As usual with historical arguments, the answer lies somewhere in between.

In what follows, I will spend a few moments on the pragmatic element not only because it plays to my comparative advantage as an economist but also because it ultimately underscores the foundational character of the document itself.

The enduring legacy of Magna Carta is how its strictures on unconstrained power are reflected in our systems of political and economic governance.

I will conclude that both the constitutional and pragmatic perspectives are relevant to modern central banking and the current conduct of monetary policy. Specifically, the costs of inflation were among the key economic catalysts of Magna Carta, and its core constitutional legacy – namely the importance of delegated authority, with clear lines of public accountability – is at the heart of the Bank of England's institutional arrangements. In the spirit of Magna Carta, the Bank of England has been given a great responsibility: to deliver monetary stability for the good of the people of the United Kingdom. Our goal, the 2 per cent inflation target, is set by the Government, and we operate under constrained discretion in its pursuit.

1. The economic and political context

Where did Magna Carta come from?

The political background is one of nearly constant conflict both within the dysfunctional "English" monarchical family, as well as with France over control of Normandy and the rest of Henry II's continental empire.[1]

The England of the 1200s was far from a unitary state. Most matters were administered by local barons, with the King acting as an arbiter in the event of a dispute. The relationship between local (baronial) and central (monarchical) authority was much less deferential, and much more arms-length, than it is today. Indeed, the early Plantagenet Kings of England spent most of their time living at home in Normandy or Anjou, allowing the English barons a considerable degree of autonomy. It was only after King John lost Normandy to the French in 1204 that the King resided full-time in England, breathing down the necks of the barons, who did not much like the closer observation of their activities, and the eyeing of their stockpiles of silver that this proximity entailed.

The relationship between the barons and King John broke down in part because of unsustainable public finances, with John imposing an intolerably heavy and arbitrary tax burden in order to pay for royal extravagance, infighting, and wars with the French. The royal judicial system, whose tendrils extended ever deeper into the barons' lives, was used to extort cash and as an instrument of royal control, rather than to ensure "justice".

What lay behind such unsustainable public finances?

First, and most obviously, the need to pay for constant military protection for the Normandy estates created what modern-day macroeconomists would think of as an ***enormous structural deficit***. If John had let his expulsion from the continent be the end of the matter this financial burden would have extinguished itself. But he did not. His folly was a series of vain attempts to re-conquer Normandy, efforts which finally ended on the eve of Magna Carta.[2]

Second, the monarchic finances had taken a colossal hit in 1193 because of the need to fund a ***gigantic public sector bailout***. Richard I had managed to get himself caught in Germany on his way back from the Holy Land and was held to ransom for £66,000 in silver. Being "Too Big To Jail", the equivalent of two to three times annual crown income was needed to bail him out. In comparison, the government's peak cash support to UK banks in 2007–2010 amounted to a trifling one-quarter of annual UK government revenues.[3]

Third, the need to raise additional cash for the public finances was made much more problematic by the strain of ***inflation***, which accelerated in the early years of the 13th century.[4] The problem was that a large proportion of regular crown income came in the form of "farms", which were fixed rental payments for leases to use the King's land for agriculture. These farms were fixed by custom in nominal terms, whereas the King's expenditures were not. The King's finances were unhedged.

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[1] For an excellent summary, see Vincent, N (2012), *Magna Carta: a very short introduction*, Oxford University Press.

[2] His allies were finally defeated in 1214 at the Battle of Bouvines, which ended the 1202–1214 Anglo-French War.

[3] This would have been bad enough on its own. What was even worse was that it had come only five years after the collection of the "Saladin Tithe", a windfall tax of a similar amount, in order to pay for a campaign to wrestle Jerusalem out of the hands of Salahuddin Ayubi, who had captured it in 1187. That cost the barons one-tenth of all their revenues and movable property.

[4] Latimer (2001) suggests that the inflation was concentrated in the first six years or so of the thirteenth century. See Latimer, P (2001), "The English inflation of 1180–1220 reconsidered", Past and Present, No. 171, pages 3–29.

In fairness to the monarchy, there was not an enormous amount that could be done about this. There was obviously no CPI(H) to which the leasehold rents could be indexed. The UK's statistical challenges have a long history.

The preferred way of hedging the risk was to kick the leaseholders off the land, and bring it into direct demesne management.[5] This is what the barons themselves had been doing with their own land holdings. By taking it into demesne control, instead of receiving a fixed nominal rent, the lord of the manor could take receipt of the real output of the land, which could be consumed, traded, or sold for silver at the going spot price. The consequence was that the richer the baron, the more land he had to exploit, and the greater his potential profits.

The effect was to create a massively wealthy elite of oligarchs, now breaking free both of the middling ranks of the gentry at one end, and of the hard-pressed King (or public sector) at the other. In all of this, the option of demesne management was infeasible for the King, likely because it would have involved destabilising relations with the administrative class of "sheriffs" and other royal officials upon whom the King's political stability depended.[6]

Causes of the inflation

Forget royal infighting, wars or the whiff of revolution, it is inflation that really sets the pulses of central bankers racing. And for good reason because closer inspection suggests that inflation may have been a significant catalyst to Magna Carta.

Historians estimate that prices were rising sharply in the early 1200s. The prices of agricultural goods, including wheat and oxen, probably doubled in that period.[7] Evidence suggests that prices of linen, wax, lead and even palfreys – the Toyota Prius of medieval horses – were also rising rapidly.

Wages were rising as well – and to a greater extent than could have just been the consequence of medieval real-wage resistance. King John was paying his knights almost three times as much as Henry II (even though they weren't as productive on the battlefield).[8] The daily rate for foot-soldiers had doubled. And limited evidence suggests the wages of skilled labourers on the crown estates probably increased by a similar proportion.[9]

With pay growth approaching 20% a year, wages really were fizzing![10]

The underlying causes of this inflation are debated among historians, but the most convincing argument is that the inflation was a monetary one, albeit with a twist. Not

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5 Harvey, P. D. A., (1973), "The English inflation of 1180–1220", Past and Present, No. 61, pages 3–30.

6 Given the countless other abuses of authority that were going on at the time, one wonders why it was so problematic for the rents simply to be "renegotiated" periodically. In part, custom dictated that this was not the done thing. In part, the problem lay with the "sheriffs" in each of England's counties. They were responsible for collecting the fixed farms from the King's assets. In normal years, they made an enormous profit, paying only a small fixed farm to the King, yet raking in a great deal more in terms of the real income of the counties. They were accustomed to keeping this surplus. Any attempt to reform this system, by reducing the imbalance between real income and fixed farm threatened to destabilise relations between the King and the vitally significant administrative class of sheriffs and other royal officials upon whom the King's political stability depended. As a result, the Kings' preference was to find other ways of raising the cash.

7 Latimer (*ibid*.). As Latimer says, "[b]etween 1198 and 1206, sheep prices, wine prices and the price paid by the exchequer for its regular supply of cloth all indicate a steep and sustained increase."

8 Harvey (*ibid*.). Henry II had paid his knights 8d per day: King John was handing over 2s or 3s, an increase of about 275%.

9 Less directly, one can infer from evidence on the exercise by manorial lords of their options to take cash payments from their villeins (peasants), instead of forcing them to work the land, that the going rate for unskilled farm labour must also have increased.

10 Assuming those increases occurred over the six years Latimer identifies as the period of significant inflation.

surprisingly, the quantitative information on the thirteenth century money supply is of very poor quality, imputed, as it has been, from archaeological finds of cash hoards.[11]

Latimer notes that "…between the middle of the twelfth century and the middle of the thirteenth century there was an enormous increase in the quantity of silver coins in England." As well as the possibility of a general increase in the European silver supply (especially with the opening up of the Harz silver mines in eastern Germany), it is likely that silver inflows to England in particular were boosted as the counterpart to a sizeable private trade surplus – probably resulting, especially, from the success of the wool trade with Flanders. Over several decades, these silver inflows were likely to have much more than offset the "public sector deficit" as silver leaked out to pay for the protection of Normandy as well as the occasional trip to the Holy Land. As a result, the balance of payments was probably in surplus for years, with the consequent increase in the silver money supply going unsterilised. Even to a thirteenth century Englishman, global monetary conditions mattered.

Would Britain's constitutional history have been different had King John lamented: A Central Bank! A Central Bank! My Kingdom for a Central Bank!?

He needed one because other factors reinforced monetary developments, including the usual suspect – financial innovation. Specifically, developments in the common law made land an increasingly liquid asset, and therefore one capable for the first time of being used as a store of wealth.[12]

This set a medieval financial accelerator in train (about 750 years before Ben Bernanke coined the term)[13] by providing an alternative to storing one's wealth in silver coin (prone to being whisked away by the King). This led to a reduction in the demand for silver money balances. An increase in money velocity would have followed and with it, all else being equal, price inflation until the transactions demand for silver had risen sufficiently to equal its supply. At the very least, the existence of an alternative store of wealth provided an environment in which money velocity *could* take off, were it to be nudged in that direction.

One possible nudge was the anticipation of the re-coinage of 1204.[14] Re-coinages were good for the King because he benefitted from the seigniorage of the re-minting fee. They were bad for cash holders both because of the re-minting fee and because they had to exchange their clipped coins for what they were actually worth, rather than their face value (a medieval haircut – some of which were appalling). Consequently, there was a strong incentive not to be the one holding the old-issue coins when the music stopped.[15]

So to sum up: a fiscal squeeze exacerbated by accelerating inflation, combined with monarchical ambition and incompetence to stretch and then break relations with the barons.

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[11] In very crude terms, the supposition here has been that we can extrapolate from the quantity of coins found in modern times the number of moneyers and mints that were in operation in the thirteenth century. With this information, we can then work out how many coins each moneyer struck (the only coin in circulation at this time being the silver penny), and then calculate the total money supply.

[12] Palmer, R. C. (1985), "The Economic and Cultural Impact of the Origins of Property: 1180–1220", Law and History Review, 3 No. 2, Autumn, pages 375–396.

[13] Bernanke, B, Gertler, M and Gilchrist, S (1996), "The financial accelerator and the flight to quality", The Review of Economics and Statistics, Vol. LXXVIII, 1, February.

[14] Latimer (*ibid.*).

[15] It is perhaps for this reason – a thirteenth century manifestation of Gresham's Law – that archaeological finds of coin hoards are often thought to contain suspiciously high proportions of freshly minted coins.

2. Constitutional significance

In that context, Magna Carta was a desperate (and probably disingenuous) attempt at a peace treaty that failed almost immediately.

Brokered by the Church, and issued by King John in June 1215, the Charter sought to placate the disgruntled barons. It is doubtful that John ever intended to uphold his side of the bargain, with all the constraints on his authority that this implied. Indeed, within a few months of its agreement, by the end of August 1215, John had convinced Pope Innocent III to annul the Charter on the grounds that it had been issued under duress.[16] The 1215 Magna Carta was never enacted, and England slipped into the First Barons' War.

Charters of this type were not uncommon at that time. It had been fairly routine, in fact, for English kings to attempt to curry favour with the nobles upon whom the stability of their realm depended by rubbishing the reputations of their predecessors and issuing "coronation charters" that demonstrated how virtuous and peace-loving they were by comparison. It was also fairly routine for kings to renege on the promises in those charters, creating fertile ground to begin the cycle anew.[17]

What was novel about Magna Carta was that: (a) it was longer and more detailed than its predecessors; and (b) it was issued not at John's coronation, but under compulsion from a true political opposition, sixteen years into his reign and evidentially too late to serve its purpose.[18]

This brings a second observation. Obnoxious and tyrannical as he might have been, King John was not solely to blame for the aristocratic discontent that led to Magna Carta. His predecessors had reneged on their promises, mismanaged the realm and imperilled its finances. John's administrative and military incompetence were merely the straws that broke the camel's back.

If Magna Carta was such a product of its time, how did it become to be so venerated? And once we cut through the legend, what is its significance for economic governance today?

The revisionist interpretation of Magna Carta as a timeless statement of natural rights and liberties became imprinted onto the minds of the English-speaking world only in the 17th century. In large part, this was due to the work of Edward Coke. As well as being an enormously influential jurist, Coke was also the author of popular English legal textbooks that exported his views around the world. Coke resurrected the long-forgotten Magna Carta from 400 years of obscurity by appealing to its spirit in order to resist the absolutist tendencies of the Stuart Kings James I and his son Charles I – themselves inspired by the continental European model of monarchic divine-right. The Charter, Coke argued, could trace its lineage from an ancient constitution that harked back not just to the time of pre-Norman King Edward the Confessor, but to King Arthur himself (!): an ancient constitution that was now being imperilled – and with it the Englishman's rightful way of life – by the tyrannical behaviour of the Stuarts.

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[16] John had restored himself to favour from excommunication and placed himself under the protection of Innocent by pronouncing himself a papal vassal, and England a papal fief, in 1213 and subsequently by "taking the cross" in March 1215 – i.e., declaring himself a crusader.

[17] The coronation charter of Henry I issued in 1100 (which was also endorsed by Henry II at his own coronation in 1154) is a pertinent example because it was effectively the draft on which Magna Carta was later based, containing several of the clauses now regarded as the most significant. The original text was written in one continuous flow. Its division into clauses is a modern construct.

[18] Moreover it came after a lacuna of sixty years during which the House of Plantagenet had issued no similar conciliatory charters and whose actions in the meantime had caused sufficient damage to the relationship between nobility and monarchy as to make an uprising inevitable.

Despite the efforts of Coke and others, Charles I's rejection of all enterprise to constrain his authority led to the English Civil War and to the king's beheading in 1649. Meanwhile, Coke's unstoppable Magna Carta redux had been set in motion.

In contradiction to their behaviour at home, James and Charles had been busily granting royal charters promising the liberties of Englishmen to the American colonists. Coke himself had been involved in the drafting of the first charter of the Virginia Company in 1606, and similar English liberties were extended in the charters of Massachusetts, Maryland, Connecticut, Rhode Island and Carolina over the next sixty years.

Some have argued that references to Magna Carta, however irrelevant its provisions might by then have been, were used as a way of "drumming up" New World settlers. To this day, 25 US States have extracts from Magna Carta on their statute books; a further 17 have the full text. Goodness knows how the latter intend to enforce the removal of "[a]ll fish-weirs … from the Thames, the Medway, and throughout the whole of England, except on the sea coast" (Clause 33). Of course, sometimes American extraterritoriality literally knows no bounds.

Coke's romantic resurrection of Magna Carta transformed it into part of the backdrop to the American Revolution, with his influence clearly evident in the drafting of the US Constitution.

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We have seen how the economic forces and political developments of the time played a crucial part in the mounting hostilities between King John and the barons that led to Magna Carta and First Barons' War. Given that background, it is not as shocking as it first seems that Magna Carta is very largely taken up with the parochial interests of the rich. It is dominated by three basic themes: taxes; abuses of the "judicial system" with the aim of raising revenue; and the protection of the barons' mercantile interests.

Given how irrelevant those specific concerns now seem, it is hardly surprising that almost all of the Charter's clauses that survived the 1225 re-issue (and therefore made it into the law in the first place) have since been repealed. In fact, only four clauses of the original 66 remain. These stand out as different in character from the others. They are much more general, universal and timeless. They are:

- Clause 1: Freedom for the Church.
- Clause 13: Protection for the "ancient liberties" of the City of London.
- Clause 39: No wrongful imprisonment. Perhaps the most famous clause. "No free man shall be seized or imprisoned, or stripped of his rights or possessions, or outlawed or exiled, or deprived of his standing in any way, nor will we proceed with force against him, or send others to do so, except by the lawful judgment of his equals or by the law of the land."
- Clause 40: Justice is not for sale.

Added to that, the spirit of Clause 12 of the 1215 Magna Carta (dropped from all later reissues), that "no "scutage" or "aid" may be levied in our kingdom without its general consent…", is clearly what would later become "no taxation without representation": to establish a council (the embryonic embodiment of what would later become Parliament) to agree whatever new taxes the King might demand.

Whatever their purpose at the time, the more universal clauses that remain on the statute book certainly resonate today. They in effect encompass the idea of the rule of law and of due process as a means to ensure justice. It is tempting, therefore, to think of *these* clauses as being the enduring legacy of Magna Carta, while at the same time allowing ourselves to patronise the juxtaposition of these apparently fundamental principles alongside so much antiquated gibberish about fish-weirs, the obligation to construct bridges, and the theft of wood for building castles.

This would, I think, be a mistake. The specificity of the clauses animates the general principles. It is because they are detailed and targeted at the concerns of the time that they are a genuine attempt to place a boundary on the authority of the King, rather than relying on vague platitudes.[19]

Magna Carta was nowhere near the first attempt to encapsulate ideas of justice and good government, nor was it the last. Indeed, it was a spectacularly unsuccessful attempt – and it was anyway concerned only with the interests of a very small segment of society. But, largely because King John's heirs were forced into a tight corner and therefore obliged to reissue the charter again and again after 1215 (in 1216, 1217, 1225, 1234, 1253, 1265, 1297 and 1300, to cite only the more famous reissues), it is Magna Carta that has become the icon of the principle that the exercise of authority requires permission from those subject to that authority – and that, once granted, this permission can just as easily be withdrawn.

At its most idealised, Magna Carta makes clear that power derives from the people and constrains the authority of the state. The state can in turn devolve power – to regions – and to independent bodies. But these bodies can never forget from where their power came or to whom they are responsible. Their authority is constrained to that necessary to pursue specific objectives and they are accountable to the people for their performance.

3. Monetary policy outlook

The Bank's current Monetary Policy framework embodies these principles.

It wasn't always the case. The Bank of England was brought into public ownership in 1946. As former Governor Eddie George remarked, for the half century that followed "the Bank operated under legislation which, remarkably, did not attempt to define our objectives or functions." They were, instead, "assumed to carry over from [the Bank's] earlier long history."[20] In that regard, the Bank's "constitution" resembled that of the United Kingdom more broadly, comprising a rich history of law, principle and convention.

All changed with the passing of the Bank of England Act in 1998, which made specific "provision about the constitution, regulation, financial arrangements and functions of the Bank." The Act brought great clarity to the Bank's responsibilities and granted independence to the Bank for the operation of monetary policy. In delegating authority to an independent body in this way, the Act ensured the Bank would operate under what Mervyn King described as "constrained" rather than "unfettered" discretion. The Bank would be accountable to Parliament for operating the *instruments* of monetary policy to achieve the *objectives* of monetary policy, which would be determined by the Government.[21]

The operational independence of the Bank of England is an example of power flowing from the people via Parliament within carefully circumscribed limits. Independence in turn demands accountability in order that the Bank commands the legitimacy it needs to fulfil its mission. By publishing its analysis, giving testimony, and delivering speeches, the Bank explains how it is exercising its powers to achieve its clearly defined policy Remits.

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[19] Even the "fish weirs" clause (33) can be read, in hindsight, as a protection both of the public good (in Roman law terms, *res publica*) and of the freedom of navigation: the same principle for the which the English entered into the Seven Years War of 1756–63, whose costs, in turn, brought about the American Revolution of 1776.

[20] George, E. (2000), "Central bank independence", speech at the SEANZA Governors' Symposium, 26 August 2000.

[21] See, for example, King, M. (2000), "Monetary policy: theory in practice", 7th January 2000. King attributes the "constrained" versus "unfettered" distinction originally to Ben Bernanke and Frederick Mishkin.

To illustrate these points, I will conclude with some reflections on monetary policy. Our objective, given to us by Parliament, is to maintain price stability and, subject to that, to support the economic policy of Her Majesty's Government, including its objectives for growth and employment. Our Remit builds in important accountability and transparency mechanisms. One of which is the requirement for the Governor to write an open letter to the Chancellor if inflation moves away from its 2 per cent target by more than one percentage point.

Inflation developments

I am in the middle of a likely sequence of such open letters – I have another one due next month – on account of the record low inflation the UK is experiencing this year, currently at zero per cent. Such letters must explain, among other things, why inflation has deviated from target and what policy actions the Monetary Policy Committee (MPC) is taking in response.

The "why" is straightforward. The bulk of the shortfall of inflation below target can be explained by the sharp fall in the prices of commodities and other imported goods since last year.

Of these, the single most important factor has been the steep drop in energy prices globally. The rise in the value of sterling has also played an important role in lowering non-energy import prices, which have fallen over the past twelve months. The sum total of these effects has been to drag inflation below target by around 1½ percentage points. This temporary period of below-target inflation has provided a welcome boost to real household income.

Inflation looking ahead

The MPC's intention is to return inflation to target in a sustainable manner within two years. That means setting Bank Rate to eliminate the remaining slack in the economy, bringing about the sustained increase in costs necessary to achieve overall inflation of 2%.

I expect that this will involve raising Bank Rate over the next three years from its current all-time low of ½ per cent. The need for Bank Rate to rise reflects the momentum in the economy and a gradual firming of underlying inflationary pressures – a firming that will become more apparent as the effects of past commodity price falls drop out of the annual inflation rate around the end of the year. It also reflects the lags in monetary policy, given that the peak impact on inflation of a given adjustment in interest rates is likely to materialise around 18–24 months after the change.

As the economy evolves, different factors will become worthy of particular attention in informing the timing, pace and degree of likely Bank Rate increases. At the current juncture, three stand out.

First are the prospects that sustained momentum in economic activity will wring out any remaining slack. This will require sustained growth above its past average of around 0.6 per cent per quarter.[22]

Even though the current recovery has been the slowest since the Great Depression, taking around 1½ years longer to regain lost ground than it did following the recession of the 1930s, the signs are encouraging. Looking through the blip in the first quarter, the economy has now been growing above trend for a year and unemployment has fallen sharply over the past two. Consumer confidence is around its highest level for over a decade. Businesses investment intentions are solid. Momentum in the housing market is showing signs of returning.[23] Survey data point to continued momentum in real activity over the remainder of this year.

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[22] Based on average quarterly GDP growth since 1993.

[23] The impact of Buy to Let changes will be examined in August *Inflation Report*.

To be sure, the international risks to the growth outlook remain. The situation in Greece is fluid, and the on-going slowdown in China could prove more significant. But on balance we can expect the global economy to proceed at a solid, not spectacular, pace.[24]

Second, domestic costs need to continue to firm. After a period of particularly weak wage growth, which reflected a marked expansion in labour supply that is now largely absorbed, wage growth is picking up.[25] The recent growth in wages has been stronger than we had expected in May, though most of the upside news was in bonuses, which are a less reliable guide to firms' future labour costs.[26]

At a minimum, when taken together with survey indicators that continue to point to solid pay growth for new recruits, recent data give welcome reassurance that the risks associated with a deflationary mindset in the labour market have likely fallen significantly.

Further positive wage developments should be supported by a continued tightening in the labour market. Job-to-job flows remain around post-crisis highs and the ratio of vacancies to unemployment is now back to its pre-crisis average.

However, what matters for inflation is not wage growth in isolation but wage growth relative to productivity. Put simply, firms are less likely to raise their prices if higher wages reflect more output per hour worked. Along with faster wage growth, there have been signs of faster productivity growth since the turn of the year. This may well mean firms' unit labour costs have not picked up quite to the degree we had expected in our May *Inflation Report*. It's too early to be definitive. Weighing past disappointments and recent indications of a pick-up, it is prudent to recognise that two-sided risks to productivity growth remain.

What is clear is that to return inflation to target, growth in labour costs must pick up further from their current rate of less than one per cent. The extent needed depends on what is happening to other costs. In the decade prior to the crisis, labour costs grew by around 2½ per cent each year on average, with wages and salaries growing at around 4¾ per cent and productivity at 2¼ per cent. Inflation averaged 2 per cent,[27] however, in part because import prices rose only by around ¼ per cent each year at the same time.

The possibility that history might repeat itself points to a third important consideration: the need to monitor developments in firms' costs other than labour. The sum of these is evident in so-called "core" inflation, which are measures of prices that strip out the most volatile determinants of inflation, like energy prices, revealing more persistent trends. In an open economy like the United Kingdom's, those factors include import prices, which are affected by movements in the value of sterling, and which, on past experience, can take a considerable time to pass through to core inflation.[28]

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24 In our May projections, the MPC expected PPP-weighted worth growth of 3 ¼ per cent in 2015 and 3 ¾ per cent in 2016 and 2017, just shy of the pre-crisis average of around 4 per cent.

25 I discussed labour supply developments in the UK in detail last autumn. See Carney, M (2014), Speech to the Trades Union Congress Annual Conference, 9th September 2014.

26 Unlike regular pay, bonuses are closer in spirit to dividend payments, being state-contingent disbursements of profits. That observation may imply bonus payments are a useful cyclical indicator, although interpreting the data is potentially complicated by changes in taxes that shift the incentive to pay bonuses over time.

27 Accounting for the mis-measurement of clothing and footwear prices, which existed until 2010 and biased measured annual CPI inflation downwards by around 0.4 percentage points. See Bank of England (2011), *Inflation Report*, February, box on page 39.

28 One way to illustrate the impact of import prices is to consider measures of core inflation adjusted for import intensity. These measures suggest that the current rate of core inflation is being dragged down by import prices by around 1 percentage point. That is a sizeable effect, and reflects, in part, changes in the value of sterling. The core measure referred to here is CPI inflation excluding food, energy, education, alcohol, tobacco and VAT, and the measure adjusted for import prices weights each component of the core index by the inverse of its import intensity.

Over the past few years, core inflation has been particularly subdued, and it remains less than one per cent. We need to see increases in core inflation to have a reasonable expectation that, in the absence of further shocks, overall CPI inflation will return to 2 per cent within the MPC's stated objective of two years.

Policy strategy

Delivering the growth in activity, the rise in domestic costs and the firming in core inflation measures necessary to return inflation to target requires monetary policy to be set appropriately both now and prospectively. In this regard, one concern has been the constraint imposed on monetary policy by the effective lower bound on policy rates.

In my view, with the healing of the financial sector and the lessening of some of the headwinds facing the economy, that concern has become less pressing with the passage of time. As I made clear in my first open letter in February, were downside risks to inflation to materialise the MPC could decide either to expand the Asset Purchase Facility or to cut Bank Rate further towards zero from its current level of ½ per cent.[29] In the current circumstances there is no need to wait to raise rates because of a risk management approach and run the risk of inflation overshooting target.

At the same time, the timing and pace of prospective interest rate increases need to be put into perspective. Headwinds to growth and inflation remain. Growth in the parts of the global economy that matter most to the UK is running ¾ percentage points below its historic average. Sterling has appreciated around 18 per cent over the past two years and around 7 per cent since the turn of the year. This will exert a drag on inflation both through lowering import costs and by lowering world demand for UK goods. UK fiscal policy is about to tighten significantly. The average annual reduction in the cyclically-adjusted budget deficit is projected by the OBR to increase from around ½ per cent of GDP over the past two years to around 1 per cent of GDP over the next two – and the IMF expects the UK to undergo the largest fiscal adjustment of any major advanced economy over the next five years.[30]

Taken together, these factors suggest that the "equilibrium" real rate of interest – the rate needed to keep the economy operating at potential and inflation on target – which was sharply negative during the crisis, will continue to be lower than on average in the past. It also seems likely that the equilibrium interest rate will move only slowly back up towards historically more "normal" levels. Everything else equal, that suggests a prospective tightening cycle that, once it starts, will be longer and shallower than those of the past. In other words, we expect Bank Rate increases to be gradual, and limited to a level below past averages.

What does that actually mean?

The Bank of England is around half a millennium younger than Magna Carta. To put the limited and gradual expectation in historical context, short term interest rates have averaged around 4½ per cent since around the Bank's inception three centuries ago,[31] the same average as during the pre-crisis period when inflation was at target. The average pace of

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Not only are the effects sizeable, but, on past experience, they are potentially protracted. The impact of sterling's 25% depreciation following the onset of the financial crisis on import prices was one factor that contributed to high inflation throughout 2008–12. The potential for these effects to be persistent highlights their relevance at the policy horizon.

29 To paraphrase one of my predecessors at the Bank of Canada, Gerry Bouey, we didn't abandon the lower bound; the lower bound abandoned us.

30 See Office for Budget Responsibility (2015), *Economic and Fiscal Outlook*, July; and IMF (2015), *World Economic Outlook*.

31 Based on data on short term money market rates, starting 1718. See Hills, S, Thomas, R and Dimsdale, N (2015) "Three Centuries of Data - Version 2.2", Bank of England.

tightening since the adoption of inflation targeting in 1992 was around 50 basis points per quarter.

It would not seem unreasonable to me to expect that once normalisation begins, interest rate increases would proceed slowly and rise to a level in the medium term that is perhaps about half as high as historical averages. In my view, the decision as to when to start such a process of adjustment will likely come into sharper relief around the turn of this year.

That said, the path is much more important than the precise timing of the first rate increase. And I am conscious of several important considerations which mean the actual path almost certainly will not be mechanical, linear or pre-determined. First and foremost, shocks to the economy could easily adjust the timing and magnitude of interest rate increases. Second, the largest cumulative tightening in the UK since inflation targeting was adopted was 1 ½ percentage points, compared to an average cycle of 3 percentage points for the US Federal Reserve over the same period. This likely reflects in part the greater sensitivity of UK household balances sheets in the medium term to floating interest rates, something that could be particularly relevant in our still heavily indebted post-crisis economy. Over a half of UK mortgagors would pay higher rates in a year's time, and close to three-quarters of mortgagors in two years' time, were interest rates to evolve according to current market rate expectations. That is in stark contrast to the US, where even over a two-year period, less than 10 per cent mortgages would be affected directly by a change in rates. We will learn more about the importance of these sensitivities as interest rates increase. Third, developments in the exchange rate have been important for UK inflation and activity, and in particular we have experienced persistent exchange rate pass-through to headline inflation.[32] This risk is particularly relevant at present when the monetary policy stance of our largest trading partner is diverging with ours.

Most fundamentally, there are broader macroeconomic considerations, particularly the UK's large external imbalances. With the largest current account deficit in the advanced world, the right policy mix leans towards tighter fiscal, more accommodative monetary and tighter macroprudential policies.[33]

Given these considerations, the MPC will have to feel its way as it goes, monitoring a wide range of indicators and adjusting the pace and degree of Bank Rate as it learns about the effects of higher interest rates on the economy. There is, in fact, a wide distribution of possible outcomes around any expected path for Bank Rate, reflecting the inevitability that the economy will be buffeted by shocks and that monetary policy will have to adjust accordingly.

After all, as the story of Magna Carta shows, history rarely proceeds in a straight line… why should monetary policy?

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32 The MPC expects to refine its estimates of these effects in future *Inflation Reports*.

33 See Carney, M (2014), Speech at the Lord Mayor's Banquet for Bankers and Merchants of the City of London at the Mansion House, London, June.